**AN APPRAISAL OF THE IMPACT OF INFLATION ON NIGERIA ECONOMIC ACTIVITIES**

TITLE PAGE

Certification

Dedication

Acknowledgement

Table of Content

List of Tables

**ABSTRACT**

**CHAPTER ONE: INTRODUCTION**

1.1 Background of the study

1.2 Statement of the problem

1.3 Objective of the study

1.4 Research hypothesis

1.5 Significance of the study

1.6 Scope of the study

1.7 Limitation of the study

1.8 Definition of terms

**CHAPTER TWO: REVIEW OF LITERATURE**

2.1 Conceptual Framework

2.2 Theoretical Framework

2.3 Empirical Framework

**CHAPTER THREE: RESEARCH METHODOLOGY**

3.1 Introduction

3.2 Sources of Data

3.3 Identification of Variables

3.4 Estimation Technique

3.5 Model Specification

3.5.1 AprioriExpectation

**CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS**

4.1 Data Presentation

4.2 Data analysis

**CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATION**

5.1 Summary

5.2 Conclusion

5.3 Recommendation

References

Appendix

****ABSTRACT****

This research work is handy in the study of current inflation and economic activities in Nigeria. The inflationary hypothesis aims at finding out if there is any adequate control of inflation in relation to economic activities in Nigeria. In this project we discuss the scopes definition of term and  limitation. We also discuss the definition of inflation and the effect of inflation. The review base in theories and how monetarists maintain that inflation cause by an increase in money supply it also said that monetarist theory is predicated on the assumption that there is full employment of resources and in the classical equation of exchange  (Mv-Pt) there is constant velocity of circulation of money (v) their conclusion is that the arte of inflation can be reduces by controlling of money supply in an economy. In recommendation the stability in the general prices level. For instance prices giving should be avoided as much as possible.  It also recommend that government should moderate  the rate of inflation & should be reverse of those used to encourage full employment.

****CHAPTER ONE****

**INTRODUCTION**

****1.1BACKGROUND****

Inflation can be defined as the persistent or continuous increase in the general price level Mr. Thoney Croft former chancellor of the exchequer (minister of finance)  focuses   defined inflation “too much money chasing few goods” for about three decades now, inflation is a hydro-head problem that is so difficult to eliminate in Nigeria. Infact it has been a topic  of major debate among economist in Nigeria and elsewhere.

Inflation is now a universal phenomenon on both in the developed and less developed countries.  There is a rapid and persistent rise in the cost of living and inflationary pressure now pose the greatest danger to economic growth and development.  In Nigeria the economic sector has been worst affected by the scourge of inflation.

On the other hand, some argued and empirically demonstrated that inflation stimulates investment and growth (Keynessa and Osakwe) 1936:1982) they see inflation as a natural consequence of economic development and that much price increase are necessary for economic growth especially in developing countries.

Therefore, since the real relationship  between real output and inflation is controversial the primary aim of this paper is to examine the relationship statistically using recent data in Nigeria.

Bearing in mind the effect of inflation and its implication in our economy, it became necessary to study the exact relationship between inflation and economic activities in Nigeria.

****1.2STATEMENT OF THE PROBLEM****

As stated in the previous section, this relationship between inflation and real output is controversial.  The effects of inflation in the economy is infact unknown while some economist believe that inflation reduces the level of real output in Nigeria distorts expectation and so on.  Other economists argue that inflation stimulate investment and growth. It is based on this controversy that the study seek to highlight statistically the relationship between inflationary experience and economic growth in Nigeria.

**1.3 OBJECTIVES OF THE STUDY**

The broad objective of the study is to examine the impact of inflation and economic activities in Nigeria. The specific objectives is as follows:

1. To determine the causal relationship between inflation and economic growth in Nigeria.
2. To investigate the short-run and long-run relationship between inflation and economic growth in Nigeria.
3. To determine whether persistent inflation causes decline in an economy.

**1.4 RESEARCH HYPOTHESIS**

The following hypothesis have been formulated for the study

**H0**: Inflation rate has no significant effect on economic growth in Nigeria.

**H0**: Causal relationship between inflation and economic growth in Nigeria is non-existence.

**H0**: There exists no short-run and long-run relationship between inflation and economic growth in Nigeria.

**1.5 SIGNIFICANCE OF THE STUDY**

This study will focus on inflation and economic activities in Nigeria. Hence this study will be significant to policy makers and Nigerian government on the need to work on the economy in other to avoid inflation and its ripple effect on the living standard of citizens.

This study will be beneficial to the academic community as it will contribute to the existing literature.

**1.6 SCOPE OF THE STUDY**

The study will find out determine the causal relationship between inflation and economic growth in Nigeria, investigate the short-run and long-run relationship between inflation and economic growth in Nigeria and determine whether persistent inflation causes decline in an economy.

**1.7 Limitation of the study**

This study was constrained by a number of factors which are as follows:

just like any other research, ranging from unavailability of needed accurate materials on the topic under study, inability to get data

Financial constraint , was faced by the researcher ,in getting relevant materials and in printing and collation of questionnaires

Time factor: time factor pose another constraint since having to shuttle between writing of the research and also engaging in other academic work making it uneasy for the researcher

1.8 **Definition of terms**

**Inflation:** the action of inflating something or the condition of being inflated.

**CHAPTER TWO**

**REVIEW OF LITERATURE**

**INTRODUCTION**

Our focus in this chapter is to critically examine relevant literature that would assist in explaining the research problem and furthermore recognize the efforts of scholars who had previously contributed immensely to similar research. The chapter intends to deepen the understanding of the study and close the perceived gaps.

Precisely, the chapter will be considered in three sub-headings:

* Conceptual Framework
* Theoretical Framework
* Empirical framework

**2.1 CONCEPTUAL FRAMEWORK**

**Concept of Inflation**

Inflation is described as a recurrent rise in the overall level of prices for goods and services. It is measured as an annual percentage increase. As inflation rises, every naira one owns buys one a smaller percentage of a good or service. The value of a naira does not remain constant during inflation. The value of a naira is measured in terms of purchasing power, which is the real, tangible goods that money can buy. When inflation rises, there is usually a decline in the purchasing power of money. Inflation is measured by the consumer price index, which reflects annual percentage change in the cost borne by an average consumer when he or she buys a basket of goods and services that may be fixed or varied from time to time usually on annual basis. The Laspeyres formula is generally used (Anyanwaokoro, 1999[9]). There are a few causes of inflation where aggregate demand rises faster than aggregate supply, thereby increasing the cost of goods and services. The imbalance of aggregate demand and supply is associated with government's deficit, expansion of bank's interest rates and increase of foreign demand. Considering the influence of inflation on economic growth, Hossain, Ghosh and Islam (2012[10]) posit that besides high inflation level which constrains economic performance or zero inflation that actually stagnates it, mild (single digit) inflation rate is sine qua non for economic prosperity. In spite of that the problem posed by inflation is a global phenomenon since it cuts across both developed and emerging economies; therefore, its control remains a “nightmare” to economic policymakers throughout the world. Nowadays in Nigeria, concerns have been raised over the persistent rise in inflation rate with attendant eroding of value of naira and general price instability. In that regard various scholars hold diverse views on inflation and growth relationship some of which are summarized below: Barro (2013[11]) observes that the severity of inflation on growth in the short run is insignificant, but adversely affects living standards. Likewise, Kasidi and Mwakanemela (2013) argue that inflation has a negative impact on growth stressing that there is no long run relationship with growth. Furthermore, Bruno & Easterly (1998[12]) affirm that growth declines significantly during high inflation periods, adding that inflation nevertheless promotes growth when its rate is at lower levels. This means that high inflation does not promote growth; it affects economic growth negatively after attaining a certain threshold (i.e. the level at which effect begins). Jones and Manuelli (2001[13]) trace lull in economic activities cum growth to inflationary pressures, which manifest in several respects: waste in time and resources by individuals and businesses while trying to safeguard their wealth from inflation. This phenomenon likely brings about inefficient allocation of production resources with a general decline in macroeconomic performance. Also, decreased savings brings about decreased investments, which ultimately diminishes growth level. General uncertainty about future price levels discourages investment and likely lower capital formation in the economy. Besides, the returns on investments are reduced by inflation; for this reason investors may invest in short-term capital rather than making long-term investments. Investors would rather invest in assets that can hedge against inflation (property, equity) instead of productive assets such plant and equipment (Jones and Manuelli, 2001). This may further weaken the production capacity of the economy, incessant labour negotiations waste resources and rise in nominal wages resulting in unproductiveness and lower growth. Ambler (2003[14]) posits that higher inflation discourages competitiveness in international trade with trading partners, affecting export-import trading relations, thereby resulting in disequilibrium in the balance of payments in form of a current account deficit. Reduced foreign exchange capacity in any economy over time will limit a country’s ability to enhance its current account deficit. In addition, with the relaxed competition in international markets, profits accruing to merchandise sector will decrease. In essence, resources will move away from the merchandise sector into the non-merchandise sector. Inflation understates the real value of depreciation (i.e. the amount or percentage by which goods or services decrease in value over time, usually one year). In this case, higher profits are declared resulting in higher tax paid on profits. This situation is likely to be unfavourable to companies desiring to make additional investments. Consider an economy where an individual splits his wealth into two parts, namely: capital stock and money. Of course money is earmarked for consumption and investment. A higher inflation level could result in decreased consumption rate, while investment may increase because investment, ceteris paribus, brings in a higher return. However, with the low return on money, the net return becomes low, and because of that investment and capital stock level drop. In consequence, economic growth drops on account of lower consumption, lower investment and lower capital stock. During higher inflationary pressures, there are likely outcomes: First is an increase in the growth rate because, as depreciation rises, the tax paid on capital is reduced. Secondly, there is a decrease in growth rate. As the volume of money enlarges likewise does the nominal interest rate.

Unfortunately, inflation rate creates confusion with regard to buying, selling, borrowing, investing, and so on. For any of these, one needs to anchor one’s decisions on current and future prices. Uncertainty creates confusion about these prices, thereby discouraging investment with accompanying decreased capital stock in an economy. This brings about a higher chance of correctly forecasting shorter-term prices than longer-term ones. However, willing investors will expect to be compensated for their risk due to the increased uncertainty making investing more costly for borrowers.

**Why inflation occur?**

Demand-pull inflation occurs when aggregate demand for goods and services in an economy rises more rapidly than an economy\s productive capacity. One potential shock to aggregate demand might come from a central bank that rapidly increases the supply of money. Everyone knows that national debt is a bad thing. However, did you know that, over time, it can cause high inflation rates? If the national debt increases, the country has two options; raise taxes or print more money to pay off the debt. If taxes are increased, businesses will react by increasing prices in goods and

services. The latter will automatically lead to an increase in inflation as discussed

above.

**How Inflation Is Measured**

How can you measure inflation as a single number when so many different goods and services exist? It\s not easy. The U.S. government has a couple of different methods for calculating the current inflation rate:

Consumer Price Index

Effects of Inflation: How Does It Affect You?

The impact of inflation affects many different groups when it hits. Not every group

is affected the same way. Who benefits from inflation, and who doesn’t? Generally in a period of mild inflation, job-seekers can benefit. Increased spending can mean increased demand, and companies may decide to hire new employees to better manage the new demand. If you have borrowed money from a lender, inflation could be convenient for you. With the currency devalued, what you borrowed a year or two ago is now the equivalent to a lower amount of money. In this assumed manageable level of inflation, businesses that sell goods and services can benefit as well. A healthy amount of inflation is said to increase and incentivize spending more; at its best, that can work in a way that the increased costs are offset by an increase in sales.

An unhealthy, unmanageable level, however, is disastrous for nearly everyone. If inflation spirals out of control, people lose faith in their currency. Financial institutions suffer as people pull their money out of them. Businesses suffer as their goods become too expensive for most people. Those with low incomes and fixed incomes suffer in any level of inflation. The value of a currency goes down, but incomes haven\t necessarily risen. If someone\s yearly income is only $25,000 and the inflation rate from one year to the next is 2%, that salary is now the equivalent to what $24,500 was the year prior. Inflation has a major effect on the entire country\s economy. It impacts not only the government, but the little things in the average person\s daily life. Both a cause and effect of how the economy is doing, inflation has both its fans and detractors. Many think that certain amounts of inflation are good for a thriving economy, but that larger rates raise concerns. It can devalue the currency significantly and, at worse, has been a key component to recessions.

**Types Of Inflation In Nigeria**

Broadly speaking, inflation can be grouped into four types according to its magnitude.

1. **Creeping inflation:**

This occurs when the rise in price is very slow. A sustained annual rise in prices of less than percent per annum falls under this category. Such an increase in prices is regarded safe and essential for economic growth.

1. **Walking inflation:**

This occurs when prices rise moderately and annual inflation rate is a single digit. This happens when the rate of rise in prices is in the intermediate range of 3 to less than 10 percent. Inflation of this rate is a warning signal for the government to control it before it turns into running inflation.

1. **Running inflation:**

When prices rise rapidly at the rate of 10 to 20 percent per annum, it is called running inflation. This type of inflation has tremendous adverse effects on the poor and middle class its control required strong monetary and fiscal measures.

1. **Hyper inflation:**

Hyper inflation occurs when prices rises very fast at double or triple digit rates. This could get to a situation where the inflation rate can no longer be measurable and absolutely uncontrollable prices could rise many times everyday. Such a situation brings a total collapse of the monetary system because of the containous fall in the purchasing power of money. Basically, two causes of inflation have been identified, namely, demand-up and costs push inflation.

1. Demand-pull inflation is caused by an increase in the conditions of demand; these could either be an increase in the ability to buy goods or an increase in the willingness to do so.
2. Cost – push inflation arises from anything that causes the conditions of supply to decrease. Some of these factors include a rise in the cost of production, an increase in government taxation and a decrease in quantity of foods produced.

**Money Supply, Inflation, Exchange Rate and Gross Domestic Product**

Overtime, scholars have lacked consensus on the nexus between inflation and some macroeconomic variables including gross domestic product (GDP), money supply and exchange rate. Based on the relationship between inflation and money supply, the monetarist postulated that increase in the volume of money in circulation leads to a proportionate increase in general price level (Friedman, 1956). In this sense, the monetarists believed that there exists direct relationship between inflation and money supply in an economy. It was also argued that increase in the volume of money in circulation that results from government budget deficit or expansionary fiscal policy of government leads to a rise in the general price level. On the other hand, the monetarists looked into exchange rates, gross domestic product and balance of payments deficit, and argued that balance of payments deficit causes disequilibrium in the domestic money market, as well as excess money supply, which is as a result of government expansionary policy on foreign goods and assets through depreciation of exchange rate. During a fixed exchange rate regime, expansionary policy involves budget deficit financed by drawing on external reserves of the country mainly to close up the gap created by deficit in the budget. However, some investigations violated this theoretical postulation that exchange rate has influence on domestic price level. For example, Chibber & Safik (1991) argued that exchange rate does not have relationship with inflation. The basis for the argument was anchored on empirical studies of selected African countries, which found that devaluation led to increase in the general price level in the short run. They argued further that, the degree at which currency devaluation affects inflation in an economy largely depends on the policy effect on the government expenditure, revenues and monetary policy pursued simultaneously in the economy. Similarly, Sowa & kwakye (1991) explained that exchange rate depreciation does not have significant relationship with the movement of price. In contrast, monetary expansion and exchange rate depreciation results to high inflation in an economy (Elbadawi, 1990).

**Interest Rate**

Okopi (2008) defines interest rates as the rental payment for the use of credit by borrowers and return for parting with liquidity by lenders. Fike other prices, Interest Rates perform a rationing function by allocating limited supply of credit among many competing demands. According to Olusoji, (2013), interest is the payment made by the borrower to the lender of money loan. It is usually expressed as an annual rate in terms of money and is calculated on the principal of the loan. Interest Rate is the price paid for the use of other capital funds for a certain period of time. In the real economic sense, however, interest rate implies the return to capital as a factor of production (Onoh, 2007). According to Kayode (2010), interest rate may be conceived as a price of a money loan, that is liquid capital, which may be borrowed either for production or even for consumption purposes, or the price paid for the productive services rendered by capital, its compensation demanded by the lender of money funds for parting with liquidity. Interest can be defined as the return or yield on equity or opportunity cost of deferring current consumption into the future (Uchendu, 2010).

**Concept of Economic Growth**

Another essential concept that engages the attention of this paper is economic growth. Nell in Munyeka (2014[15]) refers to economic growth as the most important single measure of the performance of an economy. Economic growth connotes an increase in the capacity of a country to produce goods and services by comparing contemporary output level with previous ones. Thus, the comparison may result in a positive or negative growth. Conventionally, it is measured as the percent rate of increase in real gross domestic product, or RGDP. Growth is normally calculated in real terms such as inflation adjusted terms so as to minimize the effect of inflation on the price of an economy’s total production. Jhingan (2002[16]) affirms that economic growth becomes noticeable when an economy’s productive capacity increases, and subsequently used to produce more goods and services. Nigeria’s economy is a mono-product economy because it relies heavily on crude oil production in commercial quantity. This implies that crude oil serves as a major source of government revenue as well as foreign exchange, and thus account for more than 80 percent of the total revenue that accrues to our country. In view of the state of Nigeria’s economy, DMO (2016[17]) asserts: “... the Nigerian economy entered into recession in the second quarter of 2016, the first in over two decades, due mainly to policy uncertainties, foreign currency shortages occasioned by declined crude oil receipts, low power generation and weak investor confidence.” However, following the recent National Bureau of Statistics (NBS) report, Nigeria appears to be experiencing marginal recovery from recession. Unfortunately, this outlook is yet to be felt materially in virtually all sectors of our economy.

**Inflation and Economic Growth**

Phillips (1958) developed hypothesizes, which revealed that high inflation in an economy affect growth of the domestic economy positively by decreasing the rate of unemployment. Similarly, Prasanna & Gopakumar (2010) argued that nations with high inflation experience a decrease in the rate of economic growth; hence, inflation affects economic growth negatively. Kilindo (1997) stated that high inflation, low domestic savings, balance of payments deficits, low agricultural produce, increase in public spending and fall in industrial capacity utilization hinders economic growth of a nation. Fischer (1993) was of the opinion that uncertainty in inflation is the major economic instability indicator, which affects economic growth of a country negatively. However, Dotsey & Sarte (2000) postulated that fluctuations results to economic growth via a precautionary savings motive. According to Awogbemi & Taiwo (2012), persistent rise in the price level of goods and services are the most serious challenges facing every economic unit. In view of this, every nation strives to achieve price stability as the main factor that is required to promote economic growth and development of a nation. They identified some variable determinants of inflation to include monetary policy, fiscal policy and balance of payments position of a country. In their explanation of the monetary policy as one of the determinants of inflation, they argued that inflation results due to increase in money supply. The fiscal policy according to the authors related to fundamental factors that causes inflation in an economy. They argued that fiscal policy involves government budget deficit, which are often financed through money creation in the less developed countries, and hence, fuels inflation. On the other hand, balance of payment position was based on the rate of exchange. If exchange rate collapses, it will bring about inflation that may either be inform of higher import prices or in the form of accelerated wage bill (Akinbobola, 2012). Awogbemi & Ajao (2011) also argued that increase in the cost of goods and services are often considered to be counterproductive, and it has negative effect on an economy of a nation. The most significant influence of inflation is its effect on the public revenue. If the inflation is higher than the past planned, the revenue of the government decreases. Kevin & Liu (2004) stated that inflation stability and output gap have been the major objectives for many central banks all over the world. The main objective of any central bank is to achieve optimal monetary policy rules. In both policy practice and academic research, inflation target being explicit or implicit is almost measured through the standard of living index, the consumer price index, the cost of production index and the producer price index. It was argued that most countries that have adopted an explicit inflation targeting policy targets inflation or its variants than those that are not.

**The Tobin Effect Of Inflation On Economic Growth Of Nigeria**

Tobin, another neoclassical economist, (1965) developed mundell’s model further by following Solow (1956) and Swan (1956) in making money a store of value in the economy. Individuals in this model, substitute current consumption for future consumption by either holding money or acquiring capital. Under this setup, individuals maintain precautionary balances, in spite of capital offering a higher rate of return.Quite simply, the Tobin effect suggests that inflation causes individuals to substitute out of money and into interest earning assets, which leads to greater capital intensity and promotes a positive relationship to economic growth. Tobin (1972) also argued that because of the downward rigidity of prices (including wages), the adjustment in relative prices during economic growth could be better achieved by the upward price movement of some individual prices.At this juncture, it is important to discuss he role of money in the neoclassical economy to appropriately understand subsequent literature.Sidrauski (1967) proposed the next major development, which his seminal work on the context of an infinitely lived representative agent model where money is supernatural super neutrality, as mentioned earlier, holds when real variables, including the growth rate of output, are independent of the growth rate in the money supply in the long-run. The main result in Sidraushi’s economy is that an increase in the inflation rate does not affect the steady state capital stock. As such, neither output nor economic growth is affected. Stockman (1981) developed a model in which an increase in the inflation rate results in a lower steady state level of output and people’s welfare declines. In stockman’s model, money is a compliment to capital, accounting for a negative relationship between the steady-state level of output and the inflation rate.Stockman’s insight is prompted by the fact that firms put up some cash in financing their investment projects.Sometimes, the cash is directly part of the financing package, whereas other times, banks require compensating balances. Stockman models this cash investment as a cash-in-advance restriction on both consumption and capital purchases. Since inflation erodes the purchasing power of money balances, people reduce their purchases of both cash goods and capital when the inflation rate rises. Correspondingly, the steady-state level of output falls in response to an increase in the inflation rate.This theoretical review demonstrates that models in the Neo-classical framework can yield very different results with regards to inflation and growth. An increase in inflation can result in higher output (Tobin Effect) or lower output (stockman effect or no change in output (Sidecuski).

**Implication Of Inflation On Economic Growth**

The traditional Keynesian model comprises of the Aggregate demand (AD) and Aggregate Supply (AS) curves, which aptly illustrates the inflation growth relation sip. According to this model, in the short run, the (AS) curve is upward sloping rather than vertical, which is its critical features. If the AS curve is vertical. Changes on the demand side of the economy affect only prices. However, if it is upward sloping changes in AD affect both prices, and output, Dornbusch, et al, (1991). This holds with the fact that many factors drive the inflation rate and the level of output in the short-run. These includes changes in expectations, labour force, prices of other factors of production, fiscal and /or monetary policy. In moving from the short-run to the hypothetical long-run, the above mentioned factors and its shock on the steady state of the economy are assumed to balance out. In this steady state situation, nothing is changing, as the name suggests. The dynamic adjustment of the short-run AD and AS curve yields an adjustment path which exhibits an initial positive relationship between inflation and growth, however, turns negative towards the later part of the adjustment path. Therefore, even if the prices of goods in the economy have increase, output would not decline, as the producer has to fulfill the demand of the consumer with whom the agreement was made. The aggregate supply-aggregate demand (AS\_AD) framework also postulated a positive relationship between inflation growth whereas growth increased, so did inflation. In the 1970’s however, the concept of stag inflation gained permanence, and the validity of the positive relationship was questioned. Widely accepted at that time, the Philips curve relationship had appeared to not hold. This was evidenced by periods of low or negative output growth, and inflation rates that were historically high. During this period, prices rose sharply, while the economics around the world experienced massive unemployment.

**2.2 THEORETICAL FRAMEWORK**

**Endogenous growth theory:**

Endogenous growth theories describe economic growth which is generated by factors within the production process such as economies of scale, increasing return or induced technological changes; as opposed to exogenous factors such as increase in population. When endogenous growth models are set within a monetary exchange framework of Fucas (1988), Lucas and Stokey (1987), McCallum and Goodfriend (1987), the inflation rate (tax) lowers both the return on all capital and growth rate. According to Gokal and Hamif (2004), a rise in inflation reduces the marginal values of today; last want of consumption equals marginal product of cost of last unit of work.

**Quantity Theory of Money**

Quantity theory of money belief that the quantity of money in circulation is the main factor that determines prices level in any economy. If the quantity of money in circulation changes, it will lead to change in the price level of goods and services. The theory was propounded by Irving Fisher in his famous equation of exchange: MV=PQ, where M is stock of money, V is the velocity of circulation of money, Q is the volume of transactions generated internally, while P is the general price level. Transforming the equation by substituting Y, which is the total amount of goods and services exchanged for money for Q, the equation of exchange becomes MV=PY. The introduction of Y provides the relationship between the monetary and the real side of the economy. However, P, V and Y are endogenously determined internally. The variable M is the policy variable, which is exogenously determined by the monetary authorities. The monetarists argued that change in quantity of money affects price level only or the monetary side of the economy with the real sector totally excluded. This implies that variations in the supply of money do not affect the real output of goods and services, rather, their values or the prices at which they are exchanged. The main trust of the monetarists’ model is its focus on long run supply side properties of the economy as against the short run dynamics (Dornbusch, Fischer & Kearney, 1996).

**The Keynesian Theory of Money**

The Keynesian theory countered the postulation of the monetarists of direct and proportional links between the quantity of money and price level. The school of thought argued that the nexus between changes in the quantity of money and price level is never proportionate and indirect via interest rate. The Keynesian theory is famous due to its integration of monetary theory; and the theory of output and employment through the interest rate. Keynesian theory argued that when the quantity of money rises, interest rate will fall resulting to increase in the volume of investment and aggregate demand; which in turn, raise output and employment in an economy. In contrast, the theory saw a relationship between the real sector and the monetary sector of the economy as an economic phenomenon that explains equilibrium relationship between the commodity and the money markets. Other important aspect of the Keynesian theory is that they looked into the relationship between the quantity of money and price level in both the unemployment and the full employment situations. Accordingly, as long as unemployment, employment and output exists, it will always change in the same proportion as the quantity of money changes, while there will be no change in prices. At full employment, however, change in the quantity of money induces a proportionate change in price level. Olafin (2001) argued that, the approach emphasizes that the objectives of full employment and price stability may be unachievable.

**The Neo-Keynesian Theory of Money**

This theory combines both aggregate demand and aggregate supply. The theory assumes a Keynesian view in the short run and a classical view in the long run. Therefore, the approach adopted in the theory explained that a change in public expenditure or nominal money supply, which is expected to produce inflation, is zero. As a result, aggregate demand increases with real money balances and therefore, decreases with the price level. The Neo-Keynesian theory focuses on productivity; this is because, a decline in productivity leads to diminishing returns to scale and consequently, results to inflationary pressures which widened output gap.

**2.3 EMPIRICAL REVIEW**

Folorunso(2019) examined the effect of inflation on economic growth in Nigeria utilizing annualized data covering the period 1986 – 2015, which were obtained from the Central Bank of Nigeria (CBN) Statistical Bulletin of various issues. This study employed ex-post research design because the variables were based on events that had already taken place, which the researcher could neither control nor manipulate. Some preliminary tests were performed to ensure data stationarity, and also ascertain how well the series were distributed. While Augmented Dickey-Fuller (ADF) was adopted for the former, descriptive statistics explained the latter. Ordinary Least Square (OLS) technique was used to estimate the variables. Real Gross Domestic Product (RGDP) formed the dependent variable, Inflation Rate (INFR), Interest Rate (Interest Rate) and Exchange Rate (EXCHR) made up the independent variables. Statistical outcomes were interpreted based on a 5 percent level of significance. The regression results indicated that INFR had a positive and non-significant effect on economic growth (measured by RGDP) in Nigeria for the period studied. The study recommended that government should adopt tight monetary policy measures to stabilize tide of inflationary pressures on our economy. It also recommended that political leaders should minimize unjustified public spending and promote fiscal prudence.

Bakare, Kareem and Oyelekan (2015[19]) assessed the effects of inflation rate on economic growth in Nigeria using annualized time series data for the period 1986 – 2014. The secondary data were sourced from CBN Statistical Bulletin. The ADF econometric technique was used to determine the stationarity of the series, while Granger causality test was employed to ascertain the causal direction of dependent and independent variables. The study found out that inflation rate related negatively and significantly with economic growth. Also, the finding test indicated that GDP granger caused inflation, and inflation did not granger cause GDP. Regarding policy implication of the result, it was recommended that productive activity should be intensified in the economy so as to reduce and stabilize prices of goods and services for the purpose of promoting economic growth.

Chughtai, Malik and Aftab (2015) investigated the impact of major economic variables like inflation rate, interest rate and exchange rate on economic growth of Pakistan. Secondary data spanning the period 1981 – 2013 were utilized for this study. Findings from multiple linear regression revealed that both inflation and interest rates related negatively with economic growth, whereas exchange rate had significant positive effect on the economy.

Semuel and Nurina (2015) analyzed the effect of inflation, interest rates and exchange rates on GDP of Indonesia. There was a significant negative relationship of inflation and interest rates on GDP and a significant positive relationship of the exchange rates on the GDP, while inflation had a non-significant influence on GDP.

Agwu (2015) explored the factors that contribute to economic growth in Nigeria. For the purpose of realizing the research objectives, Vector Error Correction Mechanism (VECM) was applied in order to ascertain the short-run and long-run dynamics of economic growth. The long-run estimate indicated that government expenditure and oil revenue boosted economic growth, while interest rate and inflation rate had significant negative effects on economic growth. The paper suggested stiffer measures to lessen incidences of corrupt practices in the economy.

Agalega, and Antwi (2013) examined the impact of macroeconomic variables on GDP in Ghana covering from 1980 – 2010. Annualized time series data were obtained from Bank of Ghana publications and bulletins, Ghana Statistical Service, the Institute of Statistical, Social and Economic Research (ISSER). The study applied multiple linear regressions to prove that there existed a fairly significant positive correlation between GDP, Interest rate and inflation, but inflation and interest rate could only achieve causation in GDP by mere 44 percent. The paper also proved that there existed positive relationship between inflation and GDP, while interest rate was negative. It was suggested among others that the government together with the Bank of Ghana should develop and pursue prudent monetary policies that could target lowering and stabilizing both the micro and selected macroeconomic indices in order to positively drive the economy.

Kasidi and Nwakanemela (2013) studied the impact of inflation on economic growth in Tanzania. Annual time-series data for the period 1990 - 2011 were employed for analysis. Correlation coefficient and cointegration technique established the relationship between inflation and GDP and coefficient of elasticity were used to measure the degree of responsiveness of change in GDP to changes in general price levels. Findings indicated that inflation had a negative effect on economic growth. The study further established that there was no co-integration (absence of long-run relationship) between inflation and economic growth in Tanzania within the period studied.

Osuala, Osuala and Onyeike (2013) examined the impact of inflation on economic growth in Nigeria utilizing annualized time series data sourced from the Central Bank of Nigeria Statistical Bulletin covering the period 1970 – 2011. Preliminary tests for stationarity of the variables were ascertained using Augmented Dickey Fuller (ADF) and Philip-Perron (PP) techniques. Also, the Granger causality test was conducted to determine direction of causality between inflation and economic. The findings indicated a statistically significant positive link between inflation and economic growth. On the contrary, the scholars discovered that there was no prominent variable in the relation between inflation and economic growth. In that regard, the authors concluded that the impact was contemporaneous.

Umaru and Zubairu (2012) applying ADF and Granger causality techniques studied the effect of inflation on economic growth and development in Nigeria for the period 1970 – 2010.The ADF test determined the stationarity of the variables while Granger causality tested causal relationship between inflation and GDP (proxy for economic growth and development). Result of the study affirmed a unidirectional causal link between GDP and inflation rather than between inflation and GDP. This means that GDP influences inflation and not the other way round. The policy implication is that inflationary pressure can be put in check in an economy by boosting productivity so as to curb prices of goods and services. In other words lower inflation rate can solely be achieved by increasing productivity.

Prasanna and Gopakumar (2010) examined the relationship between inflation and GDP growth in India. Empirical evidence was established based on the co-integration and error correction tests conducted using annual data sourced from the Reserve Bank of India. Empirical result showed that there was a long-run negative relationship between inflation and GDP growth rate in India. Inflation was damaging rather than being supportive to economic growth.

Doguwa’s study (2017) focused on the reality and level of inflation threshold in the link between inflation and growth in Nigeria employing three distinct methods, which suggest suitable styles for estimating the threshold level and conclusion. The three techniques cited in Doguwa include: (i) Sarel (1996) presented a threshold point estimate of 9.9 per cent that was not well identified by the data, (ii) Khan and Senhadji (2001) assumed a 10.5 per cent inflation threshold as statistically significant to substantiate the inflation-growth relationship in Nigeria, and (iii) Drukker, Gomis-Porqueras and Hernandez-Verme (2005) proposed a two threshold point model with 11.2 and 12.0 per cent as the fitting inflation threshold points. These findings suggest that the threshold level of inflation above which inflation is damaging to growth is estimated at 10.5 to 12 per cent for Nigeria. Using the estimated two threshold point model, this study did not muster sufficient reasons to accept the null hypothesis of the super-neutrality of money, and therefore, suggest that there is a threshold level of inflation above which money is not super-neutral. Having closely examined the foregoing studies, it appears the following lacuna still exist in the literature with regard to the problem under investigation. First, there were conflicting empirical results: while Hussain, et al. (2016); Chughtai, et al. (2015 established significant negative effect of inflation rate on GDP, Agalega, et al. (2013) indicated significant positive influence of inflation rate on GDP. Secondly, more of the works reviewed were carried out in other jurisdictions, but just a few were conducted in Nigeria. Thirdly, in terms of currency of data, our study made use of data that extended to 2015, whereas none of the studies reviewed met that standard, and fourthly, this study sought to either validate or invalidate previous studies relevant to our paper.

Javed et al. (2010) sought to examine the validity of cost-push and monetarist diagnoses of inflation in the economy of Pakistan from 1971 to 1972 and 2006 to 2007. Quarterly data on consumer price index , wholesale price index , Gross Domestic Product , exchange rate, wheat support price, annual wage in the perennial industries , value of imported raw materials , narrow money supply , broad money supply and dummy variable that assumed a value of 1 when natural disaster occurs and a value of zero (0) when otherwise. Two OLS regressions were performed. One was to show the behaviour of consumer price index when exposed to supply-side or cost-push (wage and profit) influences and the other was to determine the response of consumer price index to changes in money supply and the lagged value of consumer price index. The results showed that exchange rate, annual wage in the perennial industries, value of imported raw materials, dummy for natural disasters, the lagged value of broad money and the lagged value of consumer price index all influenced consumer price index in the Pakistani economy.

Perry & Cline (2013) investigated the causes of the “great inflation moderation” of the period 1982 to 2006 in the US. The results of this study can be interpreted to mean that the variables that caused the inflation moderation can also cause inflation aggravation. Following the postKeynesian tradition, data on consumer price index, Taylor rule differentials as captured by the deviation of target interest rate from the target rate in moderating the output gap, exchange rate, import prices and wages were collected. A Vector Autoregression (VAR) model was used to determine the effects of innovations in Taylor rule differentials, oil prices, exchange rate, import prices and wages on consumer price index. The results of the impulseresponse and the variance decomposition showed that the great moderation was caused by declining wages and import prices.

Lye & McDonald (2006) used a standard Philips curve range model to show that in the 1970s Australia, there was increased union power ( union density ). During this period, owing to the favourable disposition of the Arbitration Commission towards labour due to increased union density, labour was able to garner increased unemployment benefit (which was the reservation wage or reference wage upon which bargained wages were based). This caused the inflation barrier to shift to a higher rate of unemployment. In the 1980s, due to reforms in the labour market, union power waned and this shifted the inflation barrier to lower levels of unemployment.

Ogundipe & Egbetokun (2013) sought to determine the effect of exchange rate shocks on consumer prices in Nigeria. Collecting data on the nominal effective exchange rate, the real official exchange rate, the money supply and the consumer price index, Structural Vector Autoregression was used to determine the response of consumer price index to a one standard deviation shock to nominal effective exchange rate, the real official exchange rate, the money supply. The results showed that exchange rate pass-through in the country is fairly large. Audu & Amaegberi (2013) evaluated the effect of exchange rate fluctuation on inflation targeting in the Nigerian economy from 1970 to 2012. Using error correction model, they showed that interest rate and exchange rate explained inflation in the country. Akinbobola (2012) investigated if longrun relationships exist between monetary growth, exchange rate and inflation in Nigeria over the period 1986 to 2008. He utilised a Vector Error Correction Mechanism model to demonstrate that inflationary pressure in Nigeria is as a result of exchange rate and monetary policy, although real output has some positive effect in the longrun.

Boamah (2013) examined the extent and speed to exchange rate pass-through to inflation in countries of the proposed West African Monetary Zone (WAMZ). Monthly data on average bilateral exchange rate against the US dollar, consumer price index as proxy for import prices “as there are no available data on import prices” ( Boamah, 2013; p.76) were collected. Monthly data on inflation in the US were also collected. Vector Autoregressive Model was used to determine the extent and speed of exchange rate pass-through to inflation in these countries. The results of the impulse-response function showed that a high and fast exchange rate passthrough suggested that monetary policy may not do much to stabilise real exchange rates as changes in nominal exchange rate is immediately reflected in domestic consumer prices although Nigeria (the largest economy in the proposed union) has the lowest exchange rate pass-through and the extent of the pass-through is almost negligible. The results of the variance decomposition which highlighted the relative importance of the different variables in explaining domestic inflation, showed that the largest share of variation in domestic prices is explained by changes in prices itself and it revealed that Nigeria adjusted relatively quickly to restore the equilibrium relation when there is a short-term deviation from the long-run pass-through compared to other countries.

Holmes (2006) investigated the degree of pass-through from the US dollar exchange rate to consumer prices in the European Union (EU). Monthly data on consumer price index, the nominal exchange rate (domestic price of foreign currency) and foreign price index on 12 EU countries were collected. Panel data cointegration technique was used to measure whether there was longrun pass-through from the US dollar exchange rate to consumer prices in the EU. The results showed that the extent of exchange rate pass-through from US dollars to EU consumer prices declined and one of the reasons for this was ascribable to the credibility of monetary policy.

Maku & Adelowokan (2013) examined the macroeconomic determinants of inflation rate in Nigeria between 1970 and 2011. Autoregressive model was used to show that real output growth, broad money supply growth and previous inflation exerted positive influence on current inflation rate in Nigeria since independence till 2011 fiscal year. Ezeabasili et al. (2012) looked at the effect of fiscal deficits on inflation in Nigeria using a data that spanned 36 years i.e. from 1970 to 2006. They used Vector Autoregression model to show that there exist a positive but insignificant relationship between fiscal deficit and inflation but were able to show that there is a positive longrun relationship between money supply and inflation in Nigeria.

**CHAPTER THREE**

**RESEARCH METHODOLOGY**

**3.1 Introduction**

In this chapter, we described the research procedure for this study. A research methodology is a research process adopted or employed to systematically and scientifically present the results of a study to the research audience viz. a vis, the study beneficiaries.

**3.2 Sources of Data**

Secondary data was obtained mainly from the Central Bank of Nigeria Statistical Bulletin for the period under study.

**3.3 Identification of Variables**

The variables used in the study are:

* + - Economic Growth Rate (EGR) which is the dependent variable. Economic growth is the rise in the inflation- adjusted market value of goods and services produced in an economy within a time period. Economic growth rate refers the geometric annual rate of growth in GDP between the first and the last year over a period of time. It is traditionally measured as the percentage rate of increase in real gross domestic product. The increase in the production of these goods and services overtime is what lead to economic growth. The economic growth rate of nations is commonly compared using the ratio of the GDP to population or per capita income.
    - Real Gross Domestic Product (GDP) represents the total market value of all the goods and services provided in an economy within a specified period, conventionally, a year. It helps to measure the market size of an economy and assist in accentuate the economic performance of a country. An increase or improvement of GDP influences the status of unemployment in a country because it shows an improvement in economic activities hence changes in the productive sector, therefore, GDP has an inverse relationship with unemployment.
    - The independent variables include: Inflation Rate (INF) which is usually expressed as a percentage. Inflation indicates a decrease in the purchasing power per unit of money (or of a nation's currency). The inflation rate is a measure of price inflation, the annualized percentage change in the general price index, usually the CPI overtime. Depending on the macroeconomic stance, it can either affect the economy positively or negatively.
    - Unemployment Rate (UNEMP) has a negative effect on the economic wellbeing of the citizens hence impact negatively on the economy as a whole. Increase in unemployment lead to a decrease in national output
    - Gross Fixed Capital Formation(GCFC) is a flow value, measured by the total value of a producer’s acquisitions less disposal of fixed assets during the accounting period plus certain additions to the value of non-produced assets realised by the productive activity of institutional units. Gross fixed capital formation (GFCF) is the net increase in physical assets (investment less disposals) within the measurement period. It does not account for the consumption (depreciation) of fixed capital, and also does not include financial assets. The most important exclusion from GFCF is the sales and purchase of land because that only reflects a change of title of an existing land but it includes the value of land improvement. GFCF is expected to have positive and significant effects on Economic growth (EGR).

**3.4 Estimation Technique**

To examine the long run effect of inflation on economic growth, Vector Error Correction Mechanism (VECM) which incorporates both the long run and short run effect simultaneously was used. The beauty of VECM is that once variables are non-stationary but co-integrated, the estimates from VECM are more efficient than either the Ordinary least Square or orthodox VAR estimates. The VECM is also free of the associated endogeneity problem and the existing spurious inferences associated with OLS estimates. The OLS method is chosen because it’s computational abilities and BLUE properties. It is fairly simple and it is also an essential component of most other estimation techniques (Green, 2010). The data are estimated with E-views 10.

**3.5 Model Specification**

Following the empirical model stated in the theoretical framework, the economic growth-inflation nexus is specified as:

EGR = EGR = ƒ(INF, UNEMP, GFCF, RGDP) (1)

Economic growth rate (EGR) is the dependent variable while, inflation (INF), unemployment (UNEMP), gross fixed capital formation (GFCF) and real gross domestic product (RGDP) are the independent variables.

Transforming the functional model above into an explicit econometric model in their natural log form implies that the constant and the error terms are introduced into the model, thus;

EGRt = β0 + β1INFt + β2UNEMPt + β3InGCFCt + β4InRGDPt + st  = (2)

Where;

EGR = Economic growth rate

INF = Inflation Rate

UNEMP = Unemployment Rate

GCFC = Gross Fixed Capital Formation (GFCF)

RGDP = Real Gross Domestic Product (RGDP) is the constant of the model, and β1…β5 are the coefficients of independent variables measuring the effects of a unit change in the value of the independent variable on economic growth rate.

**3.5.1 Apriori Expectation**

The expected relationship among the variables of the study is thus stated below using the parameters of each variable. The apriori expectation is thus;

β1<0, β2<0, β3 >0, and β4 >0,

**CHAPTER FOUR**

**PRESENTATION OF RESULT**

**4.1 Descriptive Analysis**

The result of the descriptive analysis in Table 1 indicates that Real Gross domestic product (GDP) has an average value of 1.710000 billion naira while unemployment rate (UNEMPR)) has an average value of 6.37%. Inflation rate (INF) has an average value of 18.76%. The Gross Fixed capital Formation (GFCF) has an average value of 2.260 billion naira. Economic growth recorded an average value of 5.38% between 1990 and 2016. Inflation has the highest standard deviation value of 17.75 over the period under study which is an indication of inflation variability in Nigeria though its deviation from mean is very low. The result shows that all the distributions are positively skewed with the exception of unemployment (UNEMP) that is negatively skewed.

The value of kurtosis less than three is called platykurtic which means the distribution produces fewer or less extreme outliers than does the normal distribution. Thus, the Real Gross Domestic Product (RGDP), Unemployment Rate (UNEMP), Gross Fixed Capital Formation (GFCF) are platykurtic since their kurtosis values are less than three: 2.39, 2.47 and 2.40 respectively. On the other hand, values greater than three are called leptokurtic which means that the distribution produces more outliers than the normal distribution. The Inflation Rate (INF) and Economic Growth Rate (EGR) are leptokurtic given the kurtosis values of 5.42 and 13.87 respectively. The result of the Jaque-Bera test indicated that most of the data sets are normally distributed. The minimum and maximum values of the variables show that RGDP within the period under study has a minimum value of 1.580 billion naira and maximum of 5.680 billion naira. The minimum and maximum values of UNEMP were 4.3% and 7.6% respectively between 1990 and 2016.Further analysis shows that the minimum and maximum values of INF are 5.38% and 72.84% while the minimum and maximum values of GFCF are 2.020 billion and 8.570 billion naira. Lastly EGR recorded -1.620 minimum growth rate and 33.740 maximum growth rate between 1990 and 2016.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | RGDP | UNEMP | INF | GFCF | EGR |
| Mean | 1.710000 | 6.374074 | 18.76926 | 2.260000 | 5.380370 |
| Median | 6.770000 | 6.800000 | 12.22000 | 6.130000 | 4.410000 |
| Maximum | 5.680000 | 7.600000 | 72.84000 | 8.570000 | 33.74000 |
| Minimum | 1.580000 | 4.300000 | 5.380000 | 2.020000 | -1.620000 |
| Std. Dev. | 1.840000 | 0.932982 | 17.75316 | 2.890000 | 6.594497 |
| Skewness | 0.992033 | -0.806368 | 1.914774 | 1.085600 | 3.034457 |
| Kurtosis | 2.394498 | 2.470022 | 5.424036 | 2.404756 | 13.87932 |
| Jarque-Bera | 4.841047 | 3.242019 | 23.10906 | 5.701981 | 174.5902 |
| Probability | 0.088875 | 0.197699 | 0.000010 | 0.057787 | 0.000000 |
| Sum | 4.61000 | 172.1000 | 506.7700 | 6.100000 | 145.2700 |
| Sum Sq. Dev. | 8.78000 | 22.63185 | 8194.537 | 2.170000 | 1130.672 |
| Obs. | 27 | 27 | 27 | 27 | 27 |

Table 1: Descriptive Analysis

Source: Author Computation (2023) using Eviews 10.0

**4.2 Correlation Analysis**

Table 2 shows the result of the correlation analysis which shows the degree of associations between dependent variable economic growth rate (EGR) and the independent variables (UNEMP, GFCF, INF and RGDP). The correlation result is indicative of a negative relationship between INF and EGR (-0.27138). This is consistent with the theoretical relationship that exists between inflation and economic growth that is, inflation has a destabilizing effect on EGR. This also suggests that as inflation reduces, the economy is expected to grow while the economy declines in the presence of increased inflation rate. Most of the empirical studies have confirmed the negative and non-linear impact of inflation on economic growth especially beyond a certain threshold level (Khan and Senhadji 2001; Gillman and Kejak 2005). However, GFCF also has a negative correlation with EGR (-0.05852). This could be as a result of low rate of capital accumulation hence, it’s not able to impact on economic growth positively. Meanwhile, UNEMP has a positive relationship with EGR (0.221161). This implies that all the independent variables have negative relationship with EGR except Unemployment (UNEMP).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | RGDP | INF | GFCF | EGR | UNEMP |
| RGDP | 1 | -0.36806 | 0.988929 | -0.01869 | -0.25062 |
| INF | -0.36806 | 1 | -0.32274 | -0.27138 | 0.000331 |
| GFCF | 0.988929 | -0.32274 | 1 | -0.05852 | -0.29102 |
| EGR | -0.01869 | -0.27138 | -0.05852 | 1 | 0.221161 |
| UNEMP | -0.25062 | 0.000331 | -0.29102 | 0.221161 | 1 |

Table 2: Correlation Analysis

Source: Authors Computation (2023) using Eview 10.0.

**4.3 Unit Root Test**

This study commenced its empirical analysis by first testing the properties of the time series used for analysis. This is imperative because most macroeconomic time series exhibit non-stationary behaviour in their level form, which often poses a serious problem to econometric analysis, leading to spurious result if appropriate measures are not taken (Johansen, 2011). Thus, the properties of the variables were tested using the Augmented Dickey-Fuller (ADF) test developed by Dickey and Fuller (1981). The DF Test is based on the following Equation

t = a + t-l + Ut (3)

Given the unit root null hypothesis, the coefficient of t-l will not be statistically different from zero (i.e., = 0). If there is no unit root, the series t is said to be stationary in levels or integrated of order zero (denoted as I(0)). If there is a unit root, but differencing the series once makes it stationary, then it is said to be integrated of order one (denoted as I(1))(Gujarati,2005). Before the empirical results, a correlation analysis was performed to ascertain the correlation between the independent variables and the dependent variables.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Variables | ADF Statistic | Probability Values | 5% MacKinnon Critical Values | Order of Integration |
| EGR | -4.200135 | 0.0031 | --2.981038 | I(0) |
| GFCF | 2.323492 | 0.0403 | -3.029970 | I(1) |
| UNEMP | -2.250963 | 0.0347 | --2.981038 | I(1) |
| INF | -4.083748 | 0.0043 | -2.986225 | I(1) |
| RGDP | -4.073518 | 0.0044 | -2.986225 | I(1) |

Table 3: Unit Root Test Authors Computation, 2023

The ADF results in Table 3 shows that Real Gross Domestic Product(RGDP), Gross Fixed Capital Formation (GCFC), inflation (INF)and unemployment rate (UENMP) are stationary at first differenceI (1) while Economic growth (EGR) is stationary at levelsI(0).

**4.4 Co-integration Test**

Following the ADF findings in 4.3 above which indicates that most of the variables of interest are of I(1), there is need to test for co-integration among the variables used in the study. The Johansen multivariate co-integration technique was used instead of the Engel-Granger techniques. This was based on two reasons. First, most of the variables for analysis are I(1) series, which is a precondition for the adoption of the Johansen technique and secondly, the model is multivariate model as specified in equation (1 and 2) above, consequently there is the possibility of having more than one co integrating vector in the model. This is against the Engel-granger technique which is only suitable for testing co- integration between two variables.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.\*\* |
| None \* | 0.777058 | 109.2121 | 88.80380 | 0.0008 |
| At most 1 \* | 0.755616 | 73.19184 | 63.87610 | 0.0067 |
| At most 2 | 0.502725 | 39.37544 | 42.91525 | 0.1081 |
| At most 3 | 0.475681 | 22.60875 | 25.87211 | 0.1209 |
| At most 4 | 0.256493 | 7.113036 | 12.51798 | 0.3329 |
| Trace test indicates 2 cointegratingeqn(s) at the 0.05 level  \* denotes rejection of the hypothesis at the 0.05 level  \*\*MacKinnon-Haug-Michelis (1999) p-values | | | | |

Table 4: Johansen Co integration Test Results.

The co-integration test showed that the null hypotheses of no co-integration between the variables are rejected, which implies that there is co-integration between Inflation (INF) and the components of the independent variables; Unemployment (UNEMP), Gross Fixed Capital Formation (GCFC), Economic Growth (EGR). From the result, there are at least two co integration equations among the variables.

**4.5 Short Run and Long Relationship between Economic Growth and Inflation Rate**

Given the existence of co integration among variables as indicated in Table 4, the dynamic Vector Error Correction model (VECM) was considered appropriate for the analysis of the long run effect of inflation rateon economic growth. The VECM result in Table 5 has two parts. The first part indicated the long run effects estimates while the estimates of the short run dynamic interaction that exists among the variables is indicated in the second part. The Second part is also linked with first part (long run relation) by the ECM. The speed of adjustment of the short run relation to unexpected shocks is measure from the ECM. It is measured as the effects of residual from the long run model. This long run feedback effect is indicated by significant ECM terms while the short run causality is measured by the significant coefficient on the individual variables.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Vector Error Correction Estimates Date: 02/28/19 Time: 09:45 Sample (adjusted): 1992 2016  Included observations: 25 after adjustments  S.E in ( ) & t-stat. in [ ] | | | | | |
| CointegratingEq: | CointEq1 |  |  |  |  |
| EGR(-1) | 1.000000 |  |  |  |  |
| INF(-1) | 0.069819 |  |  |  |  |
|  | (0.31889) |  |  |  |  |
|  | [ 0.21894] |  |  |  |  |
| UNEMP(-1) | -45.62564 |  |  |  |  |
|  | (6.78851) |  |  |  |  |
|  | [-6.72101] |  |  |  |  |
| GFCF(-1) | -1.77E-09 |  |  |  |  |
|  | (1.5E-09) |  |  |  |  |
|  | [-1.16844] |  |  |  |  |
| RGDP(-1) | 2.61E-10 |  |  |  |  |
|  | (2.4E-10) |  |  |  |  |
|  | [ 1.08126] |  |  |  |  |
| C | 282.9006 |  |  |  |  |
| Error Correction: | D(EGR) | D(INF) | D(UNEMP) | D(GFCF) | D(RGDP) |
| CointEq1 | -0.073006 | 0.078357 | 0.007533 | -2.06E+08 | -1.22E+09 |
|  | (0.05407) | (0.08878) | (0.00465) | (4.5E+07) | (2.4E+08) |
|  | [-1.35019] | [ 0.88259] | [ 1.61952] | [-4.62344] | [-5.18817] |
| D(EGR(-1)) | -0.450813 | 0.097301 | -0.006730 | -1.44E+08 | -3.81E+08 |
|  | (0.19903) | (0.32679) | (0.01712) | (1.6E+08) | (8.7E+08) |
|  | [-2.26506] | [ 0.29774] | [-0.39305] | [-0.87536] | [-0.43879] |
| D(INF(-1)) | 0.013595 | 0.108066 | 0.024979 | -39777567 | -2.62E+08 |
|  | (0.12816) | (0.21043) | (0.01103) | (1.1E+08) | (5.6E+08) |
|  | [ 0.10607] | [ 0.51354] | [ 2.26565] | [-0.37642] | [-0.46887] |
| D(UNEMP(-1)) | -0.757446 | 4.210718 | 0.041372 | -9.14E+08 | -3.15E+09 |
|  | (1.29184) | (2.12111) | (0.11113) | (1.1E+09) | (5.6E+09) |
|  | [-0.58633] | [ 1.98515] | [ 0.37228] | [-0.85777] | [-0.55971] |
| D(GFCF(-1)) | 4.25E-10 | 4.31E-10 | 7.81E-12 | 1.269581 | 6.578967 |
|  | (4.9E-10) | (8.0E-10) | (4.2E-11) | (0.40301) | (2.13200) |
|  | [ 0.86867] | [ 0.53762] | [ 0.18579] | [ 3.15026] | [ 3.08582] |
| D(RGDP(-1)) | -1.09E-10 | -6.82E-11 | -1.77E-12 | -0.318038 | -1.546808 |
|  | (9.8E-11) | (1.6E-10) | (8.4E-12) | (0.08052) | (0.42599) |
|  | [-1.11924] | [-0.42541] | [-0.21118] | [-3.94958] | [-3.63107] |
| C | 0.738799 | -0.511081 | -0.036460 | 4.89E+09 | 2.57E+10 |
|  | (1.84099) | (3.02278) | (0.15837) | (1.5E+09) | (8.0E+09) |
|  | [ 0.40131] | [-0.16908] | [-0.23022] | [ 3.22239] | [ 3.20545] |
| R-squared | 0.278366 | 0.228034 | 0.360758 | 0.605095 | 0.647827 |
| Adj. R-squared | 0.037821 | -0.029289 | 0.147677 | 0.473461 | 0.530436 |
| Sum sq. resids | 1188.361 | 3203.757 | 8.794438 | 8.08E+20 | 2.26E+22 |
| S.E. equation | 8.125273 | 13.34116 | 0.698985 | 6.70E+09 | 3.54E+10 |
| F-statistic | 1.157232 | 0.886179 | 1.693057 | 4.596773 | 5.518546 |
| Log likelihood | -83.74165 | -96.13851 | -22.41401 | -596.9996 | -638.6460 |
| Akaike AIC | 7.259332 | 8.251081 | 2.353121 | 48.31996 | 51.65168 |
| Schwarz SC | 7.600617 | 8.592366 | 2.694406 | 48.66125 | 51.99297 |
| Mean dependent | -0.040000 | 0.107600 | -0.036000 | 2.46E+09 | 1.51E+10 |
| S.D. dependent | 8.283429 | 13.14998 | 0.757122 | 9.23E+09 | 5.17E+10 |
| Determinant resid covariance (dof adj.) | | 7.60E+43 |  |  |  |
| Determinant resid covariance | | 1.47E+43 |  |  |  |
| Log likelihood | | -1419.820 |  |  |  |
| Akaike information criterion | | 116.7856 |  |  |  |
| Schwarz criterion | | 118.7358 |  |  |  |
| Number of coefficients | | 40 |  |  |  |

Table 5: Long Run and Short Run Analysis. Source: Author’s Computation Using Eview

The results showed that the value of F-statistics is 1.157232, with a probability value less than 0.05. This demonstrated that the joint influence of the explanatory variables such as GFCF, INF, UNEMP and RGDP on Economic

Growth (EGR) is statistically significant. The result also revealed that the value of the computed coefficient of multiple determination (R2) is 0.27, which implies that 27% of the variations in EGR are explained by the independent variables.

In the estimation, the results showed that the relationship between the variables satisfy the apriori expectation of the study, thus satisfying the stability condition of the study. This implies that the estimation results have the desired negative sign for each of the equation, and that the value or error correction model (ECM) is less than one which implies that it falls within the accepted region.As the estimates show in the long run, inflation has a long run relationship with economic growth. The estimates show from the adjustment coefficients that the previous year’s deviation is corrected at a speed of 7.3percent. Furthermore, holding other variable constant, a percentage change in inflation (INF) will on the average lead to 0.01 percent increase in economic growth in the short run. Meanwhile, holding other variables constant, a percentage change in unemployment (UNEMP) will on the average lead to 0.75 percent decrease in economic growth in the short run. In addition, holding other variables constant, a percent change in Gross Fixed Capital Formation (GFCF) will on the average lead to 4.25 percent increase in economic growth (EGR). Lastly, a percent change in Real Gross Domestic Product (RGDP) will on the average lead to 1.09 percent decrease in economic growth in the short run.

**4.6 Post Estimation Evaluation**

To determine the suitability of the estimated model and to be sure of its overall significance and appropriate for policy control, a post estimation evaluation was conducted. The Wald Test which shows whether all the explanatory variables are able to jointly explain the changes in economic growth rate was conducted. That is, the significance of the model.

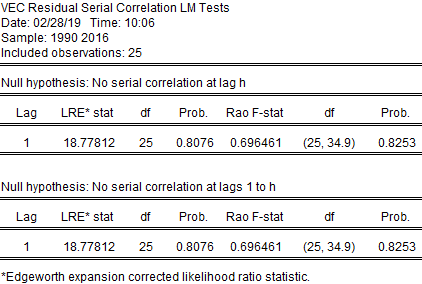


Table 6: WALD Test

Table 6 above was aimed at estimating the presence of auto correction in the model. The probability value which examines the presence of auto correction was found to be higher than 0.05. This suggests that the null hypothesis of no auto correction is accepted and hence it is concluded that the model does not suffer from the problem of autocorrelation.

**4.7 Test of Hypotheses**

**4.7.1 Hypothesis One**

H0:Inflation rate has no significant effect on the economic growth in Nigeria

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Dependent Variable: EGR Method: Least Squares  Date: 02/28/19 Time: 10:17 Sample: 1990 2016  Included observations: 27 | | | | |
| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
| C | 7.272422 | 1.831072 | 3.971675 | 0.0005 |
| INF | -0.100806 | 0.071503 | -1.409814 | 0.1709 |
| R-squared | 0.073648 | Mean dependent var | | 5.380370 |
| Adjusted R-squared | 0.036594 | S.D. dependent var | | 6.594497 |
| S.E. of regression | 6.472714 | Akaike info criterion | | 6.644255 |
| Sum squared resid | 1047.401 | Schwarz criterion | | 6.740243 |
| Log likelihood | -87.69744 | Hannan-Quinn criter. | | 6.672797 |
| F-statistic | 1.987575 | Durbin-Watson stat | | 1.716060 |
| Prob(F-statistic) | 0.170915 |  |  |  |

Table 7: Effect of Inflation on Economic Growth Source: Authors Computation (2019, Eviews10.0 Output)

From Table 7 above the individual OLS estimates of -0.100806coefficients and probability value of 0.1709 indicates that inflation rate (INF) has no significant effect on economic growth in Nigeria. Since the probability value is greater than 0.05, the null hypothesis is not rejected and it is concluded that inflation does not have significant effect on economic growth between 1990 and 2016.The result also shows that inflation is not significant in explaining the changes in economic growth between 1990 and 2016.

**4.7.2 Hypothesis Two**

H0: Causal relationship between inflation and economic growth in Nigeria is non existence

To examine the causality between inflation and economic, granger causality was used to test the direction or no existence of causality between inflation and economic growth.

|  |  |  |  |
| --- | --- | --- | --- |
| Pairwise Granger Causality Tests Date: 02/28/19 Time: 10:21 Sample: 1990 2016  Lags: 1 | | | |
| Null Hypothesis: | Obs | F-Statistic | Prob. |
| INF does not Granger Cause EGR | 26 | 0.31542 | 0.5798 |
| EGR does not Granger Cause INF | | 0.15481 | 0.6976 |

Table 8: Causal Relationship between Inflation and Economic Growth Source: Authors Computation (2023) using Eviews 10.0 Output

From the pair-wise causality test in Table 8, there is neither unidirectional or bidirectional causality between inflation rate (INF) and economic growth (EGR) in Nigeria between 1990 and 2016. Since their probability values are higher than 0.05, the hypothesis is not rejected and it is concluded that causal relationship between inflation and economic growth in Nigeria is nonexistence within the period under study.

**4.7.3 Hypothesis Three**

H0: There exist no short run and long run relationship between inflation and economic growth in Nigeria.

From the VECM estimates in Table 9, the adjustment coefficients of -0.677711 suggest that the previous year’s deviation from long run equilibrium is corrected at an adjustment sped of 6.7 %. On the other hand, the short run coefficient of inflation is 0.070590. This suggest that holding other variables constant, in the short run, a percent change in inflation will on the average lead to 0.07 percent increase in economic growth(EGR) in Nigeria. Meanwhile, change in the dependent variable (EGR) was explained by 35% changes in the independent variable (INF).

The study shows that there exists a short run and long run relationship between inflation and economic growth.

Therefore, we reject the null hypothesis.

|  |  |  |
| --- | --- | --- |
| Date: 02/28/19 Time: 10:25 Sample (adjusted): 1992 2016  Included Observations: 25 after Adjustments  S.E in ( ) & t-stat. in [ ] | | |
| CointegratingEq: | CointEq1 |  |
| EGR(-1) | 1.000000 |  |
| INF(-1) | 0.212082 |  |
|  | (0.09355) |  |
|  | [ 2.26713] |  |
| C | -9.468238 |  |
| Error Correction: | D(EGR) | D(INF) |
| CointEq1 | -0.677711 | -0.694780 |
|  | (0.29109) | (0.54665) |
|  | [-2.32819] | [-1.27097] |
| D(EGR(-1)) | -0.066458 | 0.319376 |
|  | (0.22428) | (0.42119) |
|  | [-0.29632] | [ 0.75827] |
| D(INF(-1)) | 0.070590 | 0.216281 |
|  | (0.11439) | (0.21482) |
|  | [ 0.61708] | [ 1.00678] |
| C | -0.071589 | 0.222522 |
|  | (1.42712) | (2.68006) |
|  | [-0.05016] | [ 0.08303] |
| R-squared | 0.353238 | 0.094926 |
| Adj. R-squared | 0.260844 | -0.034370 |
| Sum sq. resids | 1065.064 | 3756.168 |

|  |  |  |
| --- | --- | --- |
| Date: 02/28/19 Time: 10:25 Sample (adjusted): 1992 2016  Included observations: 25 after adjustments  S.E in ( ) & t-stat. in [ ] | | |
| S.E. equation | 7.121611 | 13.37405 |
| F-statistic | 3.823152 | 0.734178 |
| Log likelihood | -82.37240 | -98.12695 |
| Akaike AIC | 6.909792 | 8.170156 |
| Schwarz SC | 7.104812 | 8.365176 |
| Mean dependent | -0.040000 | 0.107600 |
| S.D. dependent | 8.283429 | 13.14998 |
| Determinant resid covariance (dof adj.) | | 8223.911 |
| Determinant resid covariance | | 5802.792 |
| Log likelihood | | -179.2731 |
| Akaike information criterion | | 15.14185 |
| Schwarz criterion | | 15.62940 |
| Number of coefficients | | 10 |

Table 9: Vector Error Correction Estimates Source: Authors Computation, using E-view

**4.8. Discussion of Findings**

The tests were aimed at examining the effect of inflation on economic growth in Nigeria. There were the application re-estimation checks in order to ensure rge stability of the result. More importantly, the parameters estimate and the estimated regression were done to meet the assumptions of OLS, granger causality and VECM. A long run analysis was also conducted to determine the long run relationship between UNEMP, GFCF, INF RGDP and EGR. The explanatory variables explained about 27% and 35% of the variation in the dependent variables. The whole model was found to be statistically significant, that is, the independent variables were statistically significant in explaining the changes in economic growth (EGR). Therefore, the model logically suggests that the economic growth model is significant.

From the VECM result inTable 9, inflation has a long run relationship with economic growth while the previous year’s deviation is corrected at a speed of 7.3 percent. Furthermore, holding other variable constant, a percentage change in inflation (INF) will on the average lead to 0.01 percent increase in economic growth in the short run. Meanwhile, holding other variables constant, a percentage change in unemployment (UNEMP) will on the average lead to 0.75 percent decrease in economic growth in the short run. In addition, holding other variables constant, a percent change in Gross Fixed Capital Formation (GFCF) will on the average lead to 4.25 percent increase in economic growth (EGR). Lastly, a percent change in Real Gross Domestic Product (RGDP) will on the average lead to 1.09 percent decrease in economic growth in the short run.

Hypothesis 1 sought to examine effect of inflation (INF) on economic growth (EGR) shows that inflation rate (INF) has no significant effect on economic growth in Nigeria. In conclusion, since probability value is greater than 0.05. This suggests that changes in inflation rates do not necessarily affect economic growth in Nigeria. The result of the analysis confirms the non-rejection of the null hypothesis one and that inflation rate (INF) has no significant (t0.025=-0.100806; P= 0.17090) effects on the economic growth process in Nigeria. In effect, the finding implies that change in inflation rate does not determine the extent of increase or decrease in the economic growth process between 1990 and 2016.

The result of this study is in tandem with the findings of Gbosi (2001) that the various sectors of the economy do not overlap with one another. Sectors which are expanding and experiencing a boom will lead to rise in price. Since prices are generally sticky, they will not decline in the contracting sector. The end result is an increase in the general price level leading to inflation. The result of this study also corroborates Chimobi (2010) findings which indicated no co-integrating relationship between the two variables.

Using Granger causality test, however, the study established unidirectional causality running from inflation to economic growth. Meanwhile, studies on the nonlinear relationship between inflation and economic growth argue that at low inflation levels, the relationship between inflation and economic growth is non-existent or positive while at higher levels of inflation, the relationship becomes significant and negative(Sani, 1999).

Hypothesis two, which sought to know if there is causal relationship between inflation and economic growth in Nigeria is nonexistence was not rejected because the p values were higher than 0.05.This implies that inflation does not cause economic growth between 1990 and 2016.The findings is consistent with Mohantyet al. (2011) who explored possible nonlinear relationship between inflation and growth in India using quarterly series and infer that the inflation rate of 4 to 5.5 per cent may be considered as an inflation threshold. Their empirical investigations do not find conclusive evidence of the existence of an inflation threshold. Meanwhile, Bassey and Onwioduokit (2011) used the framework of Li (2005) to investigate the relationship between inflation and economic growth as well as detect an appropriate threshold. Having established the presence of a negative relationship, they identify a statistically insignificant threshold level of 18 percent and establish that inflation rates below the threshold are growth propelling

Hypothesis Three: was meant to examine if there exist no short run and long run relationship between inflation and economic growth in Nigeria. The findings suggest that there is both short and long run relationship between inflation and economic growth in Nigeria. The findings are consistent with Mallik and Chowdhury (2001) findings in four South Asian Countries.

**CHAPTER FIVE**

**SUMMARY, CONCLUSION AND RECOMMENDATION**

**5.1 INTRODUCTION**

This chapter summarizes the findings into “inflation and economic activities in Nigeria”. The chapter consists of summary of the study, conclusions, recommendations and suggestions for further studies.

**5.2 SUMMARY**

The study examined the effect of inflation on economic, invariably examining the inflation-growth nexus has remained recurrent and has attracted substantial theoretical and empirical efforts. For instance, while the structuralists argue that inflation is crucial for economic growth, the monetarists posit that inflation is harmful to economic growth. Friedman (1973) noted that some countries have witnessed inflation period with and without development and vice versa (Sanni, 1999). The findings as well as the economic implications have been very instructive.

Specifically, the study found that inflation does not have significant effect on economic growth between 1990 and 2016 based on the significant level which was greater than 0.05. The result also shows that inflation is not significant in explain the changes in economic growth between 1990 and 2016. While the examination of their causal relationship also proved non- existence as their probability values are higher than the benchmark of 0.05. Meanwhile, a long run and short analysis was also conducted. The findings shows that the previous year’s deviation from long run equilibrium is corrected at an adjustment sped of 6.7 %. On the other hand, the short run coefficient of inflation is 0.070590. This suggest that holding other variables constant, in the short run, a percent change in inflation will on the average lead to 0.07 percent increase in economic growth (EGR) in Nigeria. Meanwhile, changes in the dependent variable (EGR) were explain by 35% changes in the independent variable (INF).

**5.3 CONCLUSION**

Based on the finding of this study, the following conclusions were made:

The examination of the effect of inflation on economic was to determine the level of effects on economic growth and the kind of relationship that exist between inflation and economic growth. Several findings from empirical point of view suggest that inflation has negative effect on medium to long term economic growth and showed that the relationship is influenced by countries with extreme values (either very high or very low inflation). They argued that inflation rates in excess of a critical value of 40 per cent are inimical to growth and went ahead to investigating only cases of discrete high- inflation (40 per cent and above) crises. Thisyielded very robust empirical result that growth falls sharply during high inflation episodes and recovers rapidly as inflation falls to moderate levels. Bullard (1995) also provided firm evidence that the negative relationship between inflation and growth only manifests when inflation rates are in excess of some threshold levels. However, from the study, inflation do not seem to have significant effects on economic growth within the year under study though has long run relationship. This helps to understanding inflation play in determining the levels of economic growth.

**5.4 RECOMMENDATION**

Based on the responses obtained, the researcher proffers the following recommendations:

1. There is an urgent need for effective monitoring of inflation rate to allow for acceleration of economic growth. This is necessary for its positive effects on the economic growth.
2. This study also recommends that the monetary policies aimed at exchange rate be strengthened through effective supervision and regulatory framework of financial system by the monetary authorities. Hence, continuous monetary policies that will active the desire macro-economic stability increase private sector credits and investments to boost economic growth in Nigeria.
3. That political leaders should minimize unjustified public spending and promote fiscal prudence.
4. Government is advised to pursue vigorously those economic policies that are capable of promoting economic growth, as it will help to reduce inflation rate in the country.
5. Similarly, government is also advised to expand its capital budget expenditures on public investment projects, and as well create a favourable business environment for private investment in Nigeria.
6. More so, government may reconsider its over reliance on its expenditures on government investment and private investment in solving inflation problems, as there are other variables responsible for high inflation in the economy.
7. Finally, there is need for further management of interest rate in Nigeria, because the more interest rate management, the more the level of economic growth in Nigeria.

**REFERENCES**

Ahmed, S. & Mortaza, G. (2005). Inflation and economic growth in Bangladesh: 1981-2005. Policy Analysis Unit (PAU) Working Paper 0604, 40-48.

Ahmed, S., and Mortaza, G. (2005). Inflation and Economic Growth in Bangladesh:1981- 2005. Policy Analysis Unit (PAU) Working Paper 0604.

Aigbokhan, B. E.(2001). Resuscitating agricultural production for exports. cited in CBN Proceedings of the 10th Annual Conference of the Zonal Research Units, Development..

Akinbobola, T.O. (2012). The dynamics of money supply, exchange rate and inflation in Nigeria. Journal of Finance and banking, 2 (4), 117-141.

America. European Economic Review, 36 (4): 417–425.

Aminu, U. & Anono, A. Z. (2012). An empirical analysis of the relationship between unemployment and inflation in Nigeria: 1977-2009. Business Journal, Economics and Review, 1(12), 42-61.

Aminu, U., Manu, D. & Salihu, M. (2013). An empirical investigation into the effect of unemployment and inflation on economic growth in Nigeria. Interdisciplinary Journal of Research in Business, 2 (12), 1- 14.

Asogu, J. O. (1991). “An Econometric Analysis of the Nature and Causes of Inflation in Nigeria”, CBN Economic and Financial Review, 29(3): 69-80.

Awogbemi, C. A. & Ajao, S. I. (2011). Modeling volatility in financial time series: evidence from Nigerian inflation rates. Ozean Journal of Applied sciences, 4(3), 337-350.

Awogbemi, C. A. & Taiwo, J. K. (2012). Empirical analysis of the causes and effects of inflation in Nigeria. Journal of Economics and Sustainable Development, 3(11), 35-40.

Barro R. J. (1996). Determinants of Economic Growth – A Cross-Country Empirical Study, the MIT Press, Massachusetts Institute of Technology.

Barro, R. J. (1995). Inflation and Economic Growth. National Bureau of Economic Research (NBER) Working Paper No. 5326.

Bhatia, R. J. (1960). “Inflation, Deflation, and Economic Development,” Staff papers,

Billi, R. M. & Khan, G. A. (2008). What is the optimal inflation rate. Federal Reserve Bank of Kansas City Economic Review, 2(4), 91-99.

Bruno, M. and Easterly, W. (1995). Inflation Crises and Long-Run Growth, World Bank Policy Research Working Paper No.1517

Central Bank of Nigeria (1984). Origin and development of inflationary trends in African countries: impact on their growth. Association of Central Banks seminar, held in Addis Ababa, Ethiopia, 5th – 16th August, 1984.

Central Bank of Nigeria (1991). Statistical bulletin. Lagos: Central Bank of Nigeria.

Central Bank of Nigeria (2015). Annual statistical report: Central Bank of Nigeria.

Chibber, A. & Safik, N. (1991). Exchange reform, parallel markets and inflation in Africa: A case study of Ghana. World Bank Working Papers, WPS 427, 401-412.

De-Gregorio, J. (1993). Effects of Inflation on Economic Growth: Lessons from Latin

Dewan, E and Hussein, S. (2001). “Determinants of Economic Growth”, Working Paper, Reserve Bank of Fiji.

Dornbusch, R., Fischer, S. & Kearney, C. (1996). Macroeconomics. The Mc-Graw-Hill Companies, Inc., Sydney, pp. 354-361.

Dotsey, S. & Sarte, J. (2000). Inflation and Economic Growth in Nigeria: Examining the Threshold Level. CBN Journal of Applied Statistics, 3(2), 99.

Elbadawi, I. A. (1990). Inflationary process, stabilization and the role of public expenditure in Uganda. Mimeo, World Bank, Washington DC, 221-228.

Erbaykal, E. & Okuyan, H.A. (2008). Does inflation depress economic growth? Evidence from Turkey. International Research Journal of Finance and Economics, 17, 1450-2887.

Erbaykal, E. and Okuyan, H.A. (2008). Does Inflation Depress Economic Growth? Evidence from Turkey. International Research Journal of Finance and Economics, Issue 17(5): 1450-2887

Ezeanyeji, C. I. & Ugochukwu, F. E. (2015). Inflation and economic growth in Nigeria: An impact analysis. Continental Journal of Social Sciences, 8(1), 22-33.

Fakhri, H. (2011). Relationship between inflation and economic growth in Azerbaijani economy: is there any threshold effect? Asian Journal of Business and Management Sciences, 1(1), 1-11.

Fakiyesi, O.M. (1996). “Further Empirical Analysis of Inflation in Nigeria”, CBN Economic and Financial Review, 34(1): 35-49.

Farai, K. & Kenani, M. (2013). Impact of inflation on economic growth: a case study of Tanzania. Asian Journal of Empirical Research, 3(4), 363-380.

Faria, J. R. and Carneiro, F.G. (2001). Does High Inflation Affect Growth in the Long and Short-run? Journal of Applied Economics, 4(1): 89-105.

Fischer, S. (1993). The role of macroeconomic factors in economic growth. Journal of Monetary Economics, 32, 485-512.

Fischer, S. (1993). The role of macroeconomic factors in economic growth, Journal of

Friedman, M. (1956), Money and economic development, Toronto: Lexington Books.

Frimpong, J. M. & Oteng-Abayie, E. F. (2010). When is inflation harmful? Estimating the threshold effect for Ghana. American Journal of Economics and Business Administration, 2 (3), 225-232.

Gomme, P. (1993). “Money and Growth Revisited: Measuring the Costs of Inflation in an Endogenous Growth Model”, Journal of Monetary Economics, 32(5): 51-77.

Haslag, J. H. (1997). “Output, Growth, Welfare and Inflation: A Survey”, Economic Review Second Quarter, Federal Reserve Bank of Dallas. Retrieved on December 17, 2011.

International Monetary Fund, 8(3): 1011-1014.

Inyiama, O.I.(2013). Does inflation weaken economic growth? Evidence from Nigeria. European Journal of Accounting Auditing and Finance Research, 1(4), 139-150.

John, C. (2011). Inflation and economic growth: Evidence from Nigeria. International Journal of Economics and Finance, 3(5), 13-24.

Kevin, X.D. & Liu, H. Z. (2004). Inflation to target: what inflation to target? Journal of Economics, 3(10), 7-29.

Khan, M. S. & Senhadji, A.S. (2001). Threshold effects in the relationship between inflation and growth. IMF Staff Papers, 48(1), 1-21.

KIlindo, K. (1993). High inflation and economic growth in the long run and short-run. Journal of Applied Economics, 4(1), 89-105.

Marbuah, G. (2010). The inflation-growth nexus: testing for optimal inflation for Ghana. Journal of Monetary and Economic Integration, 11(2), 71-72.

Mohanty, D., Chakraborty, A.B., Das, A. & John, J. (2011). Inflation threshold in India: An empirical investigation. Reserve bank of India Working Paper Series, 18, 2-9.

Monetary Economics, 32(3): 485-512.

Mubarik, Y. A. (2005). Inflation and growth: an estimate of the threshold level of inflation in Pakistan. State Bank of Pakistan-Research Bulletin, 1 (1-2), 35-44.

Muhammad, A., Imran, S. C. & Fatima, F. (2011). Does inflation affect economic Growth? The case of Pakistan. Pakistan Journal of Social Sciences, 31(1), 51-64.

Muhammad, I., Hazoor, M. S., Anam, S. & Naeem, S. (2014). Inter-relationship among Economic growth, savings and inflation in Pakistan. Journal of Finance and Economics, 2(4), 125-130.

Naeem, K. (2014). Is low inflation a precondition for faster growth: The case of South Africa? Department of Economics, University of Kent, United Kingdom, Unpublished paper, 78-86.

Najid, A. & Uma-Tul, S. J. (2012). The relationship between inflation and economic growth in pakistan: an econometric approach. Asian Journal of Research Business Economisc and Management, 2 (9), 38-48.

Olafin, S. (2001). An introduction to macroeconomics. Malthouse Social Science Series, Lagos; Malthouse Press, 78-123.

Omoke, C. (2010). Inflation and economic growth in Nigeria. Journal of Sustainable Development, 3(2), 159- 166.

Osuala, A. E., Osuala, K. I. & Onyeike, S.C. (2013). Impact of inflation on economic growth in Nigeria: A causality test. Retrieved from www.transcampus. org/journals; www.ajol.info/ journals/jorind, 11(1), 206-216.

Ozurumba, B. A. (2012). Fiscal deficits and inflation in Nigeria: the causality approach. International Journal of Scientific and Technology Research, 1 (8), 6-12.

Phillips, A.W. (1958). The relationship between unemployment and rate of change in money wage rates in the United Kingdom. Econometrica, 25, 56-76.

Prasanna, M. & Gopakumar, D. (2012). Inflation and unemployment trade-off relationship in Malaysia. Asian Journal of Business Management. Science. 1(1), 103-111.

Quartey, P. (2010). Price stability and the growth maximizing rate of inflation for Ghana. Business and Economic Journal, 1 (1), 180-194.

Saaed, A. (2007). Inflation and economic growth in Kuwait: 1985-2005 evidence from co-integration and error correction model. Applied Econometrics and International Development, 7(1), 54-61.

Sani, B. & Abdullahi, I.S. (2011). Threshold effect of inflation on economic growth in Nigeria. CBN Journal of Applied Statistics, 3(1), 43-63.

Sowa, N. K. & Kwakwe, J.K. (1991). Inflationary trends and control in Ghana. African Economic Research Consortium, 71-78.

Sweidan, O. D. (2004). Does inflation harm economic growth in Jordan? An econometric analysis for the period 1970-2000. International Journal of Applied Econometrics and Quantitative Studies, 1(2), 41-66.