

## Analysis of Inflation and Its Effect on Economic Growth in Nigeria

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**Abstract:** This paper 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.

**Keywords:** Inflation rate, Nigeria, Real Gross Domestic Product, Regression, Sampled period.

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### I. Introduction

The performance of every economy whether developing or developed is affected by certain key macroeconomic factors such as output, investment, national reserve, per capita income, interest rate, exchange rate, price stability (inflation rate), among others. Thus, preservation of price stability remains one of the cardinal goals of monetary policy for various countries (including Nigeria). According to Umaru and Zubairu [(2012[1]) failure to pay adequate attention to price stability in managing monetary policy in order to maintain sustainable national growth and development cum strengthening purchasing power of the local currency is tantamount to steering the ship of state economy to a halt. Admittedly, the necessity to advance research on the dynamics of inflation and its effect on economic growth in Nigeria became crucial to researchers, policymakers, Central Bank of Nigeria and others.

*Based on inflationary perspective, our state of nation has been captured thus:*

*“Nigeria’s year-on-year headline inflation entered into the double-digit range in February, 2016 at 11.38 percent, from the 2015 year-end inflation of 9.55 percent, it went up to 18.55 percent by December, 2016. This was significantly above the recommended threshold of the West African Monetary Zone (WAMZ) convergence inflation rate of 5 percent. The rise in inflation was attributed mainly to foreign exchange shortages and hike in energy prices amidst poor power supply. The continued exchange rate pressures coupled with the depreciation of the Naira against major convertible currencies are expected to pose potential inflation risk.”* (Nwankwo, 2017:xxx[2])

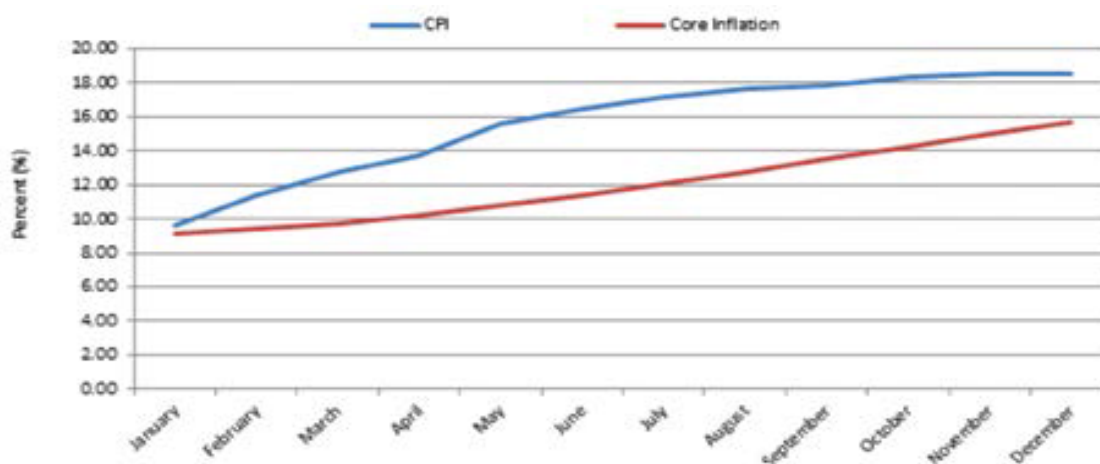
In view of the foregoing, our country has been grappling with double digit average inflation rate since 2016. She has been using her monetary and fiscal policies to maintain stronger growth rates in terms of improved Gross Domestic Product (GDP) in relation to a single digit stable inflation rate (price stability). The Monetary Police Committee (MPC) of Central Bank of Nigeria has for some time sustained its policy rate at 14 per cent as a means of maintaining economic stability. This approach was anticipated to keep the lending rate of commercial banks steady in view of the persistent ailing nature of Nigerian economy. In a related study, Agalega and Antwi (2013[3]) observe that between low and average rates of inflation, enlargement in the rate of inflation results in a significantly less amounts of bank credits to the private sector, fewer amounts of bank

liabilities outstanding and greatly diminished levels of stock market capitalization and volume of trading. In a similar study, Frimpong and Oteng (2010[4]), an increased rate of inflation beyond 14 per cent would continually impair the GDP; hence the principle that explains the resolution of the Monetary Policy Committee (MPC) of the Central Bank of Nigeria on every occasion plans to achieve a single digit inflation rate.

Considerable previous research efforts seem to either support or invalidate the assumption that inflation exerts significant positive influence of economic growth. Therefore, the question of whether any or all macroeconomic variables is inimical to economic growth has in recent times been an issue of great interest to policymakers and macro economists (Kasidi and Nwakanemela, 2013[5]). Nevertheless, Chughtai, Malik and Aftab (2015[6]) identify some primary causes of unsustainable growth to include: (i) high inflation, (ii) rising foreign debt, (iii) currency exchange rate volatility (iv) propensity to consume more and save less (v) poor governance and policy implications, (vi) trade imbalance, (vii) spend more earn less, (viii) energy and water shortages, and (ix) political instability, among others. The scholars contend that the connection between basic macroeconomic indicators such as gross domestic product (GDP), consumer price index (CPI), producer price index (PPI), current employment statistics (CES), inflation rate (INFR), currency exchange rate (CEXR), and interest rate (INTR). In the same vein, Samuel & Nurina (2015[7]) posit that a high or low economic growth can be determined by calculating the GDP of the country in question.

Perhaps the uninterrupted democratic rule, progressive social policies, and notable capital investments that Nigerians have enjoyed since 1999 to date when she jettisoned military rule have positively contributed to its growth. This is because the country's growth rate appeared to have become one of the fastest in Africa during the period 1999 - 2016 when she began to witness a decline in economic activity with attendant shrink in GDP, high interest and inflation rates and all time high depreciation in the value of the naira. It is instructive to note that the economy of Nigeria is regrettably dependent solely on crude oil production, which often is prone to external shocks. Revenue from oil propels much of the country's growth prospects, but more still needs to be done to sustain future growth. The country's growth rate in 2014 budget was estimated at 4.5 percent, and in 2015 budget it was projected to grow at 5.5 percent, a figure which is far higher than the developed economy like United States that recorded a growth rate of 2.2 percent in 2004 (Ademola and Badiru, 2016[8]).

Successive governments in Nigeria over time had initiated various fiscal and monetary policies with a view to reducing inflation and interest rates and consequently bring about improved economic growth evaluated by GDP. Though these policies might be right for a purpose, the impacts of these macroeconomic indicators on our economy have not been well established on account of fewness of literature in this area. In order to realize the significance of inflation on the growth of Nigeria's economy, it is imperative to ascertain how far inflationary pressures have affected economic growth. Limited number of studies on the responsiveness of economic growth to inflation has created a gap in knowledge. It is against this backdrop that this empirical assessment sought to find out both direction and magnitude between the relevant dependent and independent variables that constitute the model over 1986 – 2015 sampled periods. Encapsulated below are the trends of the Consumer Price Index (CPI) and Core Inflation in 2016.



**Source:** National Bureau of Statistics (NBS)

**Fig. 1:** Consumer Price Index and Core Inflation in 2016. The graph in Fig. 1 shows the trend of CPI and Core Inflation between January and December, 2016.

## **II. Review of Related Literature**

### **2.1 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 Mwanemela (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.

## **2.2 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.

## **2.3 Empirical Review**

A considerable number of empirical works had been reviewed in the course of this study as encapsulated. Hussain, Shabir and Kashif (2016[18]) explored the impact of macroeconomic indicators such as inflation rate, exchange rate and interest rate on GDP of Pakistan covering a sample period of 32 years from 1980 to 2011. The research made use of secondary data sourced from website of the State Bank of Pakistan and the World Bank. Descriptive statistics and multiple regressions were used for analysis. The variables contained in the model consisted of GDP as dependent variable, while the explanatory variables were interest rate, exchange rate and inflation rate. The study revealed that inflation rate and interest rate had a significant negative impact on GDP, while exchange rate related significantly and positively with GDP. Based on the results and analysis, it was recommended that the government should adopt tight monetary policy measures to control inflation.

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[20]) 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 co-integration 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[21]) 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 [22]) 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 (no date [23]) 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.

### III. Data and Methodology

This paper utilized data gathered entirely from secondary sources. Sourcing published data that is acceptable is a sine qua non for obtaining extremely reliable results. We obtained data from the National Bureau of Statistics and Central Bank of Nigeria Statistical Bulletins covering the period 1986 – 2015. Our regressand is the real GDP, while the inflation rate is our regressor. Moreover, interest rate and exchange rate are our control variables. Our model was estimated using the Ordinary Least Square (OLS) method. Since we are making use of annualized time-series data and the study cover a long sample period, we made sure our data set were not impaired by unit root; hence we tested for stationarity of the series by employing the Augmented Dickey-Fuller (ADF).

#### 3.1 Model Specification

This research paper adopted the economic model previously used by Chughtai, et al (2015) that assessed the macroeconomic variable-growth nexus of Pakistan. The study, which had earlier been reviewed in the preceding section are specified below:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon_i \dots\dots\dots (1)$$

The model is rewritten as

$$GDP = \alpha + \beta_1 INTR + \beta_2 INFR + \beta_3 EXCHR + \varepsilon_i \dots\dots\dots (2)$$

Where GDP is gross domestic product,  $\alpha$  = constant,  $\beta_1$ ,  $\beta_2$  and  $\beta_3$  are coefficients. INFR is inflation rate, INTR is interest rate, EXCHR is official exchange rate and  $\varepsilon$  is error term.

However, this study attempted to modify the scholars' work by using GDP at current price (Real GDP, which has been adjusted for inflation) as dependent variable rather than just GDP at constant price to measure economic growth. In that regard, our regression model is specified thus:

$$\text{LogRGDP} = \alpha_0 + \beta_1 \text{INFR} + \beta_2 \text{INTR} + \beta_3 \text{EXCHR} + \varepsilon_i \dots\dots\dots (3)$$

Where RGDP is real GDP and other acronyms in the model (INFR, INTR, EXCHR and  $\varepsilon$ ) remain as explained above.

### IV. Results and Analyses

#### 4.1 Unit Root Test

**Table 1:** Augmented Dickey-Fuller (ADF) Unit Root Test Results

Variable	ADF Test Stat.	5% Critical Value	Order of Int.	Inference
RGDP	-5.04	-2.98	I(1)	Stationary
INFR	-6.73	-2.99	1(1)	Stationary
INTR	-5.83	-2.97	1(1)	Stationary
EXCHR	-5.45	-2.97	1(1)	Stationary

**Source:** Authors' computation aided by Eviews, 2017

**Table 1** displays the unit root test results, and reveals that all our series are stationary; hence has no unit root. Model estimation relating to time series data that are not stationary is sure to produce unreliable regression results. As can be seen, the calculated values are more negative than the critical values for each of the variables tested. Therefore, all the variables attained stationarity at 5% critical values or integrated of order one after first differencing.

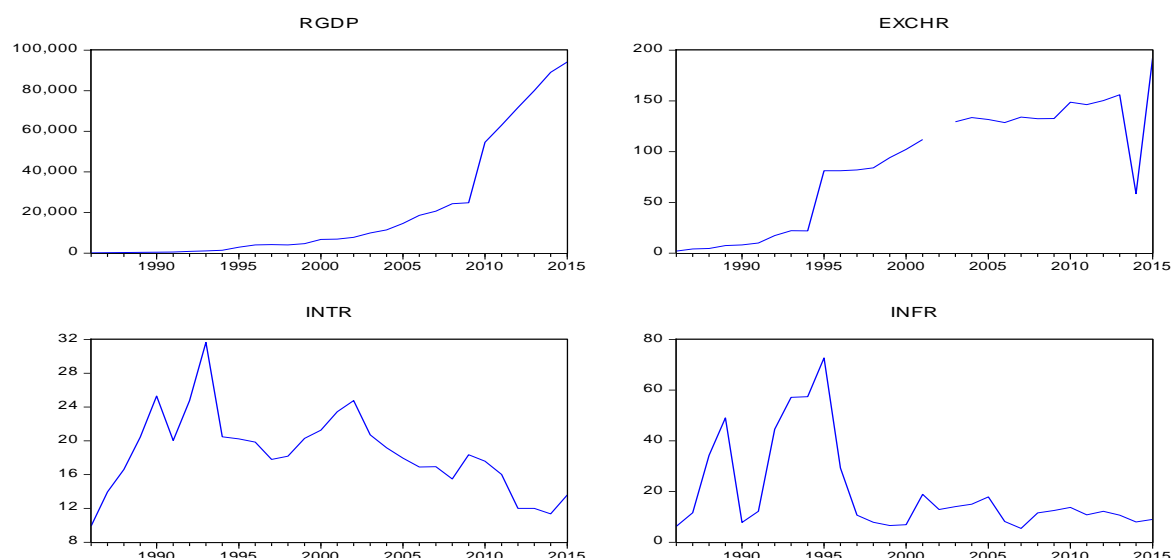
#### 4.2 Descriptive Statistics

**Table 2:** Descriptive Statistics Results

	RGDP	EXCHR	INTR	INFR
Mean	20779.80	86.47379	18.56967	19.83933
Median	6804.387	93.95000	18.27000	12.19750
Maximum	94144.96	192.4400	31.65000	72.73000
Minimum	134.6033	2.020000	9.930000	5.420000
Std. Dev.	29361.80	58.47856	4.668589	18.07895
Observations	30	30	30	30

**Source:** Author's computation aided by Eviews, 2017

**Table 2** shows individual characteristics of the proxied variables, viz. RGDP averaged N20779.80 between 1986 and 2015. The maximum RGDP was in 2004 at N94144.96, while it recorded lowest in 1987 at N134.60. INFR, INTR and EXCHR averaged N86 19.84%, 18.57% and N86.47 respectively, over the 30-year study period. Also, the mean and median of the variables can be observed to be approximately equal – an indication that the series seem normally distributed.



**Fig. 2** Graphical Representation of Variables  
Source: Authors' computation, 2017

The graph in Figure 2 presents pictorially the trend of economic growth in Nigeria for the sampled period, as well as the other macroeconomic factors that affect its performance such as inflation rate (INFR), interest rate (INTR) and exchange rate (EXCHR).

**Table 3:** Regression Results

Dependent Variable: LOG(RGDP)  
Method: Least Squares  
Date: 09/21/17 Time: 22:54  
Sample: 1986 2015  
Included observations: 29

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	6.629319	0.823364	8.051501	0.0000
INFR	0.004099	0.010903	0.375939	0.7101
INTR	-0.040750	0.041611	-0.979321	0.3368
EXCHR	0.030552	0.003116	9.805647	0.0000
R-squared	0.831411	Mean dependent var		8.605589
Adjusted R-squared	0.811180	S.D. dependent var		1.997299
S.E. of regression	0.867894	Akaike info criterion		2.681947
Sum squared resid	18.83099	Schwarz criterion		2.870540
Log likelihood	-34.88823	Hannan-Quinn criter.		2.741012
F-statistic	41.09655	Durbin-Watson stat		1.539100
Prob(F-statistic)	0.000000			

Source:: Authors' computation aided by Eviews, 2017

$$RGDP_t = 6.629 + 0.0041INFR_t - 0.041INTR_t + 0.031EXCHR_t$$

Bearing the focus of this study in mind, which relates to the effect of inflation on economic growth, Table 3 indicates that INFR has a positive and non-significant effect on RGDP in Nigeria for the period under review. This is described by the positive coefficient value (0.0041) of our independent variable (INFR) and the corresponding probability value of the t-statistic (0.71) that is greater than 0.05 critical value (i.e.  $0.71 > 0.05$ ). Considering the value of  $R^2$ , inflation is responsible for 83% of total variation in RGDP growth, while the remaining 17% variation in RGDP is traced to some other factors besides inflation. The adjusted  $R^2$  records account of more number of independent variables if included, and it still explains 81% variations in the dependent variable. The standard errors as presented in Table 3 indicate that all the causal variables were significant. The low values of the standard errors in the results prove that some level of confidence can be placed on the estimates. The F-statistic is used to check the overall significance of the model. Thus the F-

statistic of our estimated model is 41.09655 and the probability of the F-statistic is 0.000000 (see Table 3). Since the probability of F-statistic is less than 0.05, it is concluded that the independent variables had significant effects on economic growth in Nigeria within the period under consideration. The Durbin Watson statistic (DW Stat.) by “rule of thumb” has approximated value of 2.0; it therefore presents no suspicion of autocorrelation.

#### 4.3 Discussion of Results

The results presented in Table 3 means that INFR related positively and non-significantly with economic growth measured by RGDP in Nigeria within the period studied. This finding implies that a unit change in INFR brought about more than a proportionate change in RGDP. Furthermore, for the control variables, while INTR had a negative (-0.041) and non-significant ( $0.34 > 0.05$ ) effect on RGDP, EXCHR related positively (0.031) and significantly ( $0.0000 < 0.05$ ) with RGDP. In that regard, our findings agreed with the works of Osuala, et al (2013) carried out in Nigeria, but contradicted the study of Chughtai, et al (2015), Kasidi and Nwakanemela (2013) conducted in Pakistan and Tanzania respectively.

### V. Conclusion and Recommendations

Broadly speaking, inflation has been examined empirically. Generally, inflation is known to diminish the purchasing power of currency as a result of a rise in prices across an economy. Most of the existing studies in this area mainly assessed how macroeconomic factors affect economic growth. One of the primary objectives of macroeconomic factors is to gauge the health condition of a domestic economy as a whole with regard to how a specific factor affects overall performance of such economy. For this reason, we considered it sufficiently beneficial to disaggregate the factors with the ultimate goal of exploring how inflation has influenced the RGDP. Similar studies in our local context are superficial; hence the necessity to fill the knowledge gap really inspired this study. Assorted analytical approaches were used to accomplish our objective. Inflation rate (causal variable) together with interest rate and exchange rate (control variables) were all regressed on real GDP (effect variable) in Nigeria. This study found that INFR had a positive but non-significant influence on RGDP. This paper concludes that high inflation rate is inimical rather than beneficial to the economy. We, therefore, recommend that government should adopt tight monetary policy measures to control inflation from time to time. It is also recommended that political leaders should minimize unjustified public spending and promote fiscal prudence.

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