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ANALYSIS OF THE IMPACT OF INFLATION, INTEREST RATE, AND EXCHANGE RATE ON ECONOMIC DEVELOPMENT

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Abstract

This article seeks to empirically analyze the influence of inflation, interest and exchange rate on economic development. The sustainability of high economic development in most industrialized and developing countries has been the primary objective of macroeconomic policies. Notwithstanding, there exist considerable contention on the innate feature of the inflation, interest rate, exchange rate and development association. The major purpose of this work is to assess the inflation, interest and exchange rate effect on some economic development indicators in Nigeria which includes the life expectancy index, human development index, consumption per capita, physical quality of life, and health and education index. The secondary data employed were collected from the CBN statistical bulletins from 1981-2017 and were analyzed adopting descriptive, correlation as well as regression analysis. The empirical analysis revealed the existent relative effect of macroeconomic variables on Nigeria economic development indicators. The impacts of the economic attributes mechanisms on performance indicators are distinct. The work infers that the diverse economic characteristics' components influence diverse indicators of performance in various ways. It is however recommended that inflation, interest rate and exchange rate should be used to create a favorable investment climate on economic development variables, the apex bank needs to consider inflation threshold for the country in the process of targeting single digit inflation as one of its major objectives. Also, government should adopt tight monetary policy measures to control inflation from time to time.

Keywords: *Inflation, interest rate, exchange rate, economic development, descriptive analysis, regression analysis, e-view software.*

1. Introduction

The National Bureau of Statistics in Nigeria realized a statement in the 2ndquarter of 2017 that Nigeria has witnessed an increase in economic development to the tune of 0.055%, but how much of this development is felt by an average Nigerian in the face of high inflation and interest rates is already a puzzle. The researcher's motivation to study this area hinge on the fact that; One, interest rate is one of the most essential components of the Nigerian economic system that affect the borrowing cost and borrowing is an imperative source of financing businesses and production which may lead to economic growth. Two, interest rates affect the return on savings, if the interest on savings is encouraging; individuals would be encouraged to save more idle cash which may pave way for availability of lendable funds in the bank consequently economic development would be improved. Three, interest rates are fundamental element of the total earnings of a lot of investments. Four, certain rates of interest give an introspection of what the economic and financial market activity would be in the future. Based on these vantage roles interest rates play in the Nigerian economy, it is imperative to continuously study this area to find out how well or otherwise interest rates affect the Nigerian economy

Aminu and Anono (2012), opined inflation as an indefinitely continuous increase in the price level of wide range of goods and services in an economy over a given time frame. They attributed inflation to a popular view that it is excess money in circulation chasing the few commodities available. The structuralist argued that inflation is vital for economic growth while the monetarist postulated that it wakens economic growth (Doguwa, 2012). Inflation is an indicator of economy growth, but excess growth may be harmful as it can result in hyperinflation, conversely, an economy with no inflation will be stagnant. Thus, having the right level of economic growth and inflation is quite plausible which can be viewed as mild inflation. Creeping or mild inflation can be assessed as having favourable influences on economic growth. However, zero inflation is detrimental to other economic sectors with falling price, profit, and employment. Generally, galloping inflation has influences that are unprecedented on an economy since it

distorts and disrupts the price mechanism, and discourages savings and investment leading to the break down on morals (Hossain et al, 2012).

The Nigeria inflationary trend has been favourable exclusively spanning from mild to running away inflation. Doguwa (2012) reveals that growth is affected negatively by inflation when it attains 10.5 to 12 percent in Nigeria. Based on the Statistical Bulletin (2005) of the CBN, it was recorded that inflation rose from 13.8percent in 1971 to 16.0percent in 1972 which was accounted for by the era of oil glut and the introduction of economic regulations following the civil war. The excess oil in the early 1980's that resulted in increase in the prices of oil in the local market signified another era of inflationary trend in Nigeria recording 23.2percent in 1983 as well as 39.6percent in 1984. This brought about the Structural Adjustment Programme in 1986 that brought about another inflation era in the late 1980's. In line with Adelowokan (2012), the main challenge in the post SAP period was the fluctuation in the rate of exchange that resulted in high instability of output, increase in price of goods, low wage rate and high unemployment rate which consequently placed heavy burden on the indigent. Also, between 1992-96 the rate of inflation rose from 57 percent to 72.8 percent. High rates of inflation instability have been recorded in Nigeria and as such should be of major concern and effectively monitored by the monetary authorities.

The increase in overreliance on imports of Nigeria economy has made it necessary to constantly assess the extent in which the instabilities in the rate of exchange brings about an inflationary pressure in Nigeria Adeleye et al. (2017). Taguchi, (2002) defines exchange rate as the rate at which a domestic currency is traded for a foreign currency. The exchange rate instability modeling has notable ramifications for some budgetary as well as monetary issues as it evades to the vacillations in the rates of exchange over a time horizon. Thorlie et al, (2014). It is viewed as the risk linked with sudden volatilities that cannot be predicted in the exchange rate level (Adelowokan 2012). The major problem this study attempts to solve is to evaluate the influence of inflation, interest and exchange rates on economic development within the study duration. The inflation, interest and exchange rate influence on economic development is quite a serious challenge. The experiences of different countries on inflation is no longer the problem but the fact that inflation problem appears to have attained the crisis dimension. Changes in interest rate determine the rate of inflation. The nominal rate of interest is a function of the real interest rate and inflationary anticipation.

2. Empirical Literature

Hossain et al. (2012) investigated the inflation influence on economic development in Bangladesh adopting time series data from 1978to 2010. The research objective was to discover the long run association of inflation with economic development. The variables employed include GDP deflator (GDPD) to measure inflation and GDP to measure economic growth. Co-integration and granger causality test were adopted. The Johansen–Juselius co-integration outcome reveals that inflation has no association with economic growth in Bangladesh. The causality outcome at lag two (2) indicates unidirectional relationship was discovered moving from inflation to economic growth. Additional test at lag four (4) upheld the first by revealing unidirectional relationship moving from inflation to economic growth.

Jaganath (2014) evaluated inflation effect on development in six South Asian countries adopting time series data between1980 and 2012. The broad objective was to evaluate the influence of inflation on development in six South Asian countries using GDP as a proxy economic growth and CPI to measure inflation. Co-integrated test and error correction mechanism, causality test and unrestricted VAR model were adopted. Correlation analysis was employed to analyze the data and the outcome reveals the existent high positive association of inflation with economic development for the countries under study. The co-integration outcomes indicate existent long run causality for Malaysia. Nevertheless, nonexistent long run association of Inflation with economic development was revealed for the rest of the countries. The result of Granger causality reveals existent unidirectional relationship move from GDP to CPI for Bangladesh, Bhutan, and India. It also reveals unidirectional association run from CPI to GDP in the context of Nepal. Nevertheless, no association of GDP with CPI for Maldives and Sri Lanka exist. The correlation adopted does not actually expound the effect of inflation on economic development, instead a regression analysis would have been employed, the work duration is insufficient to proffer better analysis.

Bakare, etal (2015), assessed inflation rate impact on economic growth in Nigeria between 1986 and 2014 employing GDP and inflation rate as the study variable and were tested with the aid of ADF unit root test to test their stationarity. Regression analysis was used to ascertain inflation influence on growth, while Granger causality test was

adopted to ascertain the association of inflation with the growth of Nigeria economy. Outcomes revealed the existent adverse influence of inflation on growth. The Granger causality indicates that GDP cause inflation but inflation does not cause GDP. Olu and Idih (2015), determined the nature of the association inflation share with Nigeria economic growth adopting the time series data from 1980 to 2013. The work variables are GDP being the output variable, while the input variables are: Inflation rate, exchange rate, labour and Capital input Ordinary Least Square was adopted by the work to indicate the dependent variable influence on the independent variables. Result reveals the existent positive influence of inflation on the growth of Nigeria economy which corroborate with the finding of Aminu and Anono (2012).

Oladipo et al.(2015), ascertained inflation, lending rate impact on the growth of Nigeria economy employing annual time series data spanning from 1981 to 2014 and adopted real GDP, Inflation at consumer prices, lending rate, net domestic credit, transfer payment as the work variables. ADF test was employed to examine the unit root properties of the series. The unit root outcome reveals the stationary of all the variables at first difference but inflation is stationary at level. The Ordinary Least Square (OLS) technique was utilized and long run association amidst the variables was examined adopting Johansen co integration test and causality test was also conducted. The result of the OLS indicates that both inflation as well as lending rates have adverse influence on the economic growth. Johansen co integration revealed the existent long run association amidst the variables being considered. According to the Granger causality test, economic growth in Nigeria does not Granger caused by both inflation and interest rate. The challenges of this work is that It failed to carry out post estimation test to determine the model' s robusticity Johansen co integration test adopted to test long run association is not the right model for me (0) and me (1). Autoregressive Distributive Lag (ARDL) is the appropriate model.

Kasidi & Mwakanmela (2013) evaluated the inflation influence on the growth of Tanzania economy adopting annual time series data between 1990 and 2011. The work objectives were to: assess the influence of inflation on economic growth, examine the extent of economic growth responsive to variation in general price level and establish inflation association with economic growth. The study variables are GDP as dependent and inflation as independent variable. The work adopted reduced form regression equation to analyze inflation effect on economic growth and the result revealed the existent adverse influence of inflation on economic growth Johansen Co-integration test and Correlation coefficient adopted reveals insignificant long-run causality between inflation and economic growth. Only short term adverse significant. The adverse association of inflation with economic growth corroborate with the result of Inyiama (2013).

Finan (2016) refers to the rate of interest as a cost of credit in economy and specifically is a price which the creditors charged the borrowers per year for the loan obtained. Mutinda (2014) research reveals that rising rate of interest is able to result in an adverse influence on essential variables like GDP, FDI, and Inflation, that will mount pressure on firms and the economy. Interest rate as a matter of fact is the variable that can influence the core operation of the economy in terms of production and consumption through the FDI and inflation transmission mechanism between other financial variables. He also opined that in the most common context, interest is the price a debtor is charged for the use of credit granted within a given time frame.

Idoko et al. (2014) revealed that lending rate has no significant influence on economic development. Hatane & Stephanie (2015) revealed the existent of adverse significant association between interest rate and economic development. Faroh & Shen (2015) presents a different view which indicates the nonexistent influence of high interest rate on FDI flow, while Siddiqui & Aumeboonsuke (2014) in their work revealed existent adverse association of interest rate with FDI.

Recent studies have discoursed the consequences of the trend in exchange rate on general output, export and non-export activities of the economy. In most cases, these studies do not have a theoretical background and stated in detail a temporary association between the key variables. For instance, Mamun et al (2013) investigated the effect of currency depreciation, regarding investment expenditure on the growth of labour force in the equation along with lagged GDP growth. They also failed to regard the properties of time series variables and equations was estimated with the aid of OLS. In other study, Uddin et al (2014) ascertained a bivariate causality of GDP with the rate of exchange without integrating other important variables that could as well impact on the growth of output. Kamal (2015) adopted similar model to determine the association between the two variables in the long-run. The rate of

exchange adopted in both works is specifically based on the taka value of the US dollar, unlike the normal practice of regarding a weighted average of all relevant rates of exchange in relation to other major trading partners' currencies.

3. Methodology

This work adopted secondary generated from the CBN statistical bulletins from 1981-2017data due to the fact that such data cannot be gotten via primary source because of the long period of time required to obtain the data. Also, the finances and the time required are beyond the reach of the researcher. The multiple regression method was employed for data analysis which is specified below;

$$LEI = \beta_0 + \beta_1 INF + \beta_2 INTR + \beta_3 EXR + u \ldots\ldots\ldots\ldots\ldots\ldots (1)$$

$$EDI = \beta_0 + \beta_1 INF + \beta_2 INTR + \beta_3 EXR + u \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$CPC = \beta_0 + \beta_1 INF + \beta_2 INTR + \beta_3 EXR + u \ldots\ldots\ldots\ldots\ldots\ldots (3)$$

$$HDI = \beta_0 + \beta_1 INF + \beta_2 INTR + \beta_3 EXR + u \ldots\ldots\ldots\ldots\ldots\ldots (4)$$

$$HEI = \beta_0 + \beta_1 INF + \beta_2 INTR + \beta_3 EXR + u \ldots\ldots\ldots\ldots\ldots\ldots (5)$$

$$PQLI = \beta_0 + \beta_1 INF + \beta_2 INTR + \beta_3 EXR + u \ldots\ldots\ldots\ldots\ldots\ldots (6)$$

Where,

LEI= Life Expectancy Index

EDI = Education index

CPC = Consumption Per Capita

HDI = Human Development Index

HEI = Health Index

PQLI = Physical quality of life index

INF = Inflation rate

INR = Interest Rate

EXR = Exchange rate

U= Error Terms,

β0=constant

β1, β2, β3, = are the independent variables' coefficients

4. Data Analysis

4.1. The Unit Root Test (Test for Stationarity)

In order for the stationarity of the data series to be assure for this work, the Augmented Dickey-Fuller unit root test was adopted in which its estimation have revealed that employing classical estimation techniques, e.g. the Error Correction Model (ECM) to evaluate associations with unit root variables results in inferences that are misleading. When non-stationary variables are present, there might be a spurious regression which basically has a high R-squared, and t-statistics that seem to be significant, but the outcomes do not have any economic meaning. So, the ADF was used in this study as the decision rule will be to compare the ADF test statistic for each variable in absolute terms with their respective critical value. When the test value is more than the critical value in (absolute term), this means that order of integration is determined and there is no unit root problem otherwise there is unit root problem or if the P-value of ADF < 0.05 significant level implying t the rejection of the null hypothesis should and the alternative hypothesis should be accepted that there is stationarity in the data series. Additionally, the statistic value of the series data must also be less than the critical value (CV) due to its level of significant.

Table 4.1

VARIABLES	ADF TEST STATISTICS	Critical value	S/NS
CPC	/-7.984241/	/-2.945842/	S
EDI	/-3.516403/	/-2.971853/	S
EXCH	/2.527983/	/-2.945842/	NS
HDI	/-1.155238/	/-2.951125/	NS
INF	/-2.858673/	/-2.945842/	NS
INTR	/-2.122809/	/-2.945842/	NS
LIF	/-3.562704/	/-2.960411/	S
PQLI	/-2.122809/	/-2.945842/	NS

Source: Researcher's computation 2019
NS – Not Significant S – Significant

In table 4.2 above, Consumption Per Capita (CPC), Education Index (EDI) and Life Expectancy (LEI), are stationary at level while other variables, Human Development Index (HDI), Physical Quality of Life Index (PQLI), Inflation Index (INF), Interest Rate (INR) and Exchange Rate (EXCH) are not stationary at level that is 1(0). This is due to the fact that the test statistics of these variables are less than their respective critical values at 0.0.05 significant level in absolute term. Hence, the study infer at level that data series HDI, PQLI, INF, INR and EXCH are ch++++++aracterized by unit root problem.
We can now proceed further to test for stationarity of these variables at first difference:

4.2. Analysis of the Unit Root Test Using ADFat First Difference

Table 4.2

VARIABLES	ADF TEST STATISTICS	Critical value	S/NS
EXCH	/-8.185578/	/-2.951125/	S
HDI	/-5.412356/	/-2.954021/	S
INF	/-5.515920/	/-2.948404/	S
INTR	/-6.133327/	/-2.951125/	S
PQLI	/7.859953/	/-2.951125/	S

Source: Researcher's computation 2019
NS – Not Significant S – Significant

From table 4.2, there is stationarity of all the variables at first difference i.e. the order of integration of these variable will now be 1(1), this is because at this order of integration the test statistics is > their corresponding CV at 0.01 significant level in absolute term.
From the table above, we can now see that the CPC, EDI and LEI are stationary at level while HDI, PQLI, INF, INR and EXCH are only stationary after taking their first difference. This result shows the important of undergoing a co-integration test to establish the long run equilibrium as the variables are not of the same other in term of their stationarity.

4.3. Co-Integration Result

To set up the existent of long run equilibrium amidst the selected variables for this study, co-integration test will be estimated to determine whether the errors are combined. This will be achieved by adopting Johansen co-integration test, which produces the likelihood ratio and Max-Eigen value to assert the validity of the long run relationship at 0.05 significant level. If the probability ratio value or the Max-Eigen value are greater than the critical value, we can infer that there is a long run equilibrium association contrarily the residual is not co-integrated which means no long run equilibrium amidst the selected variables.

Table 4.3

Date: 03/03/19 Time: 15:46
Sample (adjusted): 1983-2017
Included 35 observations after adjustments
Linear deterministic trend assumption
Series: CPC EDI EXCH INFL INTR LIF_AT_BIRTH PQLI
Lags interval (in first differences): 1 to 1

Unrestricted Co-integration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.903632	250.2016	125.6154	0.0000
At most 1 *	0.858058	168.3162	95.75366	0.0000
At most 2 *	0.684666	99.98440	69.81889	0.0000
At most 3 *	0.528495	59.59005	47.85613	0.0027
At most 4 *	0.376893	33.27616	29.79707	0.0191
At most 5 *	0.258649	16.71987	15.49471	0.0325
At most 6 *	0.163417	6.245037	3.841466	0.0125

Trace test shows 7 co-integrating eqn(s) at the 0.05 level
* indicates that the hypothesis should be rejected at the 0.05 level
**MacKinnon-Haug-Michelis (1999) P-values

Unrestricted Co-integration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.903632	81.88546	46.23142	0.0000
At most 1 *	0.858058	68.33176	40.07757	0.0000
At most 2 *	0.684666	40.39435	33.87687	0.0073
At most 3	0.528495	26.31389	27.58434	0.0720
At most 4	0.376893	16.55629	21.13162	0.1940
At most 5	0.258649	10.47484	14.26460	0.1826
At most 6 *	0.163417	6.245037	3.841466	0.0125

Max-eigenvalue test shows 3 co-integrating eqn(s) at the 0.05 level
* indicates that the hypothesis should be rejected at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

The table 4.3 shows the results for testing the long run association existent amidst the variables used for the study and revealed that long run association exists amidst the selected variables as the values of both t-test statistics and the Max-Eigen value are greater than seven critical values as shown above. The implication is that, it confirms the efficiency of the results that will be estimated at the next stage.

Table 4.4
Dependent Variable: LIF_AT_BIRTH
Sample: 1981-2017
Date: 03/03/19 Time: 14:57
Least Squares method
Included 37 observations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	45.96833	0.546358	84.13586	0.0000
INFL	-0.003041	0.012887	-0.235980	0.8149
INTR	-0.085292	0.087377	-0.976138	0.3361

EXCH	0.030369	0.003185	9.534576	0.0000

R-squared	0.806420	Mean dependent var	47.90378
Adjusted R-squared	0.788822	S.D. dependent var	2.662452
S.E. of regression	1.223505	Akaike info criterion	3.343123
Sum squared resid	49.39984	Schwarz criterion	3.517276
Log likelihood	-57.84777	Hannan-Quinn criter.	3.404520
F-statistic	45.82420	Durbin-Watson stat	1.724614
Prob(F-statistic)	0.000000		

Table 4.5
Dependent Variable: EDI
Sample: 1981-2017
Date: 03/03/19 Time: 14:59
Least Squares method
Included 37 observations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.446982	0.010920	40.93354	0.0000
INFL	0.000212	0.000258	45.82306	0.0159
INTR	0.001343	0.001746	11.76881	0.0074
EXCH	-3.03E-05	6.37E-05	-0.476007	0.6372

R-squared	0.754659	Mean dependent var	0.456946
Adjusted R-squared	0.631281	S.D. dependent var	0.024080
S.E. of regression	0.024453	Akaike info criterion	-4.482290
Sum squared resid	0.019733	Schwarz criterion	-4.308137
Log likelihood	86.92237	Hannan-Quinn criter.	-4.420893
F-statistic	24.63612	Durbin-Watson stat	1.689504
Prob(F-statistic)	0.497140		

Table 4.6

Dependent Variable: CPC
Sample: 1981-2017
Date: 03/03/19 Time: 15:00
Least Squares method
Included 37 observations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-7.347414	6.571843	-81.11804	0.0416
INFL	0.028170	0.005009	54.18729	0.0069
INTR	1.064603	0.051011	54.01932	0.0185
EXCH	0.005677	0.038312	0.148177	0.8831

R-squared	0.850660	Mean dependent var	0.288205
Adjusted R-squared	0.735643	S.D. dependent var	14.46140
S.E. of regression	14.71687	Akaike info criterion	8.317671
Sum squared resid	7147.344	Schwarz criterion	8.491825
Log likelihood	-149.8769	Hannan-Quinn criter.	8.379069
F-statistic	98.58700	Durbin-Watson stat	2.481422
Prob(F-statistic)	0.627818		

Table 4.7
Dependent Variable: HDI
Sample: 1981-2017
Date: 03/03/19 Time: 15:01
Least Squares method
Included 36 observations after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.384290	0.023153	16.59790	0.0000
INFL	-0.000280	0.000533	-0.524323	0.6037
INTR	0.001177	0.003634	0.323861	0.7482
EXCH	0.000611	0.000132	4.614499	0.0001

R-squared	0.549412	Mean dependent var	0.438417
Adjusted R-squared	0.507169	S.D. dependent var	0.072085
S.E. of regression	0.050605	Akaike info criterion	-3.025102
Sum squared resid.	0.081947	Schwarz criterion	-2.849155
Log likelihood	58.45184	Hannan-Quinn criter.	-2.963692
F-statistic	13.00609	Durbin-Watson stat	1.946756
Prob(F-statistic)	0.000010		

Table 4.8

Dependent Variable: HIN
Sample: 1981-2017
Date: 03/03/19 Time: 15:02
Least Squares method
Included 37 observations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	45.96833	0.546358	84.13586	0.0000
INTR	-0.085292	0.087377	-0.976138	0.3361
INFL	-0.003041	0.012887	-0.235980	0.8149
EXCH	0.030369	0.003185	9.534576	0.0000

R-squared	0.806420	Mean dependent var	47.90378
Adjusted R-squared	0.788822	S.D. dependent var	2.662452
S.E. of regression	1.223505	Akaike info criterion	3.343123
Sum squared resid	49.39984	Schwarz criterion	3.517276
Log likelihood	-57.84777	Hannan-Quinn criter.	3.404520
F-statistic	45.82420	Durbin-Watson stat	2.274614
Prob(F-statistic)	0.000000		

Table 4.9

Dependent Variable: PQLI
Sample: 1981-2017
Date: 03/03/19 Time: 15:03
Least Squares method
Included 37 observations

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	455.0112	12.41700	36.64420	0.0000
INTR	-7.214399	0.263894	-27.33823	0.0000
INFL	-0.952311	0.235986	-4.035460	0.0003
EXCH	0.115340	0.037255	3.095952	0.0040

R-squared	0.894112	Mean dependent var	105.7486
Adjusted R-squared	0.871759	S.D. dependent var	21.38666
S.E. of regression	3.594062	Akaike info criterion	5.498249
Sum squared resid	426.2702	Schwarz criterion	5.672402
Log likelihood	-97.71760	Hannan-Quinn criter.	5.559646
F-statistic	413.9092	Durbin-Watson stat	2.460797
Prob(F-statistic)	0.000000		

Discussion of Findings

The estimated coefficient for INF (inflation rate) shows the existence of a negative and statistically insignificant effect on life expectancy, human development, health as well as physical quality life index. This by implication means the existent of an inverse relationship of inflation rate with the dependent variables. Meaning that when inflation increases, it will bring about a decrease in life expectancy, human development, health and physical quality life index and an increase in education and consumption per capital. Also, the coefficient for interest rate shows a negative and insignificant effect on life expectancy, health and physical quality of life index, while it has a positive effect on education index, consumption per capita and human development. Meaning that increasing interest rate will have a decreasing effect on life expectancy, health and physical quality of life index in Nigeria within the study duration.

The coefficient for exchange rate (EXR) shows that there exist positive effect on the dependent variable except for education index. This can be said that exchange rate will increase the life expectancy, consumption per capita, human development, health and physical quality of life index. This by implication means that increase in real exchange rate will have a positive and direct effect on all the dependent variables except for education index which is proven to give a negative relationship.

5. Conclusion and Recommendation

This work examined the influence of three key macroeconomic characteristics on key economic development indicators in Nigeria over a period of Thirty Seven years 1981 to 2017. One of the primary objectives of macroeconomic factors is to gauge the sustenance 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, interest and exchange rate has influenced the life expectancy, human development, consumption per capita, physical quality of life, health and education within the economy. The work infers from the empirical findings that there relative effect between the macroeconomic variables and economic development indicators in Nigeria exist. The impact of the mechanisms of economic attributes on performance indicators differ. The work infers that the different components of economic attributes impact on the different indicators of performance in divers' ways.

As regards to the findings, the following were recommendations:

1. Inflation, interest and exchange rate should be used to create a favorable investment climate on economic development variables.

2. The apex bank needs to consider inflation threshold for the country in the process of targeting single digit inflation as one of its major objectives.

3. The central bank of Nigeria may also reduce interest rate to moderate the money market.

4. Government should adopt tight monetary policy measures to control inflation from time to time. This is because one of the government macroeconomic challenges is maintenance of price stability. These go a long way in determining the quality of life, consumption per capita and education among others.

5. It is also recommended that political leaders should minimize unjustified public spending and promote fiscal prudence.

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