

Exchange Rate Fluctuations and Inflation Rate in Nigeria: 1987 To 2019

¹James Ese Ighoroje

Faculty of Business Management

¹*Department of Banking and Finance, ,*

Delta state University of Science and Technology, Ozoro, Delta State.

²Catherine, Ogheneovo Orife

Faculty of Business Management

Department of Accounting and Finance

Delta state University of Science and Technology, Ozoro, Delta State.

ABSTRACT

The study examined the effect of exchange rate fluctuation on inflation rate in Nigeria. The study covered the period of deregulated economy from 1987 till 2019. Exchange rate fluctuation was represented by nominal exchange rate and supported with control variables including interest rate, money supply, imports and growth of GDP. The OLS and GLS were used for data analyses. The results that exchange rate and other macroeconomic variables including interest rate, money supply, imports and GDP are not impact on inflation in Nigeria. This suggest that macroeconomic variables are not the major causes of inflation rate in Nigeria. Social and political issues such as unrests, consumer confidence, and political landscape and so on can trigger inflation. The study therefore recommended that despite the use of monetary and fiscal policies on controlling inflation and unemployment, governments should pursue diplomatic missions aimed at creating good image for the country and public confidence in the citizenry.

KEYWORDS: *Inflation rate, exchange rate fluctuations, Nigeria, economic growth*

Date of Submission: 13-05-2022

Date of Acceptance: 27-05-2022

I. INTRODUCTION

In order to ensure long run growth and development, countries all over the world has always pursued price stability as one of its core of monetary policy. Inflation; a persistent rise in prices in of goods and services; has positive as well as negative implications on both developed and developing economies. High and fluctuation in inflation has some social and economic cost which include distorted prices, low voluntary savings and investment, capital flight and unfavourable for growth (Audu&Amaegberi, 2013).

In the recent time, Nigerian economy is experiencing concurrent and unstable volatility in inflation rate as well as exchange rates. Ojo and Alege (2014)hasargied that the current high variability of exchange rate fluctuations in Nigeria may generate adverse effects in the form of higher price inflation and larger output contraction. The theoretical assertion came through in Nigeria in the recent times with Nigeria witnessing incessant fall in the value of Naira to US dollar which is followed by high and persistent rise in general prices of commodities. Arguments in social media has associated the rise in prices to the nosediving exchange rate depreciation. The present study is fashioned to explain the role of exchange rate fluctuation on inflationary trend in Nigeria.

An ample of empirical studies have being carried out in recent times to explain exchange rate fluctuation and inflation rate nexus. These studies have produced a conflicting results which further throws analysts and academia into confusion. The proponents of positive effectin Nigeria (Oduola&Akihlo, 2001; Adetiloye, 2010; Obiekwe&Osabuohien, 2016) suggest that exchange rate depreciation should bring about rising inflation rate. However, those that support the negative effect hypothesis (Audu&Amaegberi, 2013;Bobai,Ubangida&Umar, 2013) posited that rising exchange rate leads to decreasing inflation rate. Still existing works of Mandizha (2014) and Okolil, Mbah, and Agu (2016) are mixed. The researchers employed highly sophisticated econometric tools such as GARCH, VECM and cointegration techniques, yet these conflicts still exist, the present study re-investigates the exchange rate – inflation rate nexus using the OLS which is a Best Linear and Unbiased Estimate of linear models.

The main objective of the study is to examine the effects of exchange rate fluctuations (EXCF) on inflation rate in Nigeria. The specific objectives include:

1. To determine the effect of exchange rate on inflation in Nigeria.
2. To examine the effect of interest rate on inflation in Nigeria.
3. To find out the effect of money supply on inflation in Nigeria.
4. To examine the effect of imports on inflation in Nigeria.
5. To determine the effect of economic growth on inflation in Nigeria.

II. CONCEPTUALISATION

Exchange Rate Fluctuation

Currencies are exchanged for one another in international trade. It is the price of one country's currency (Naira) is being exchanged for another (Dollar) (Saheed and Ayodeji, 2012). In the view of Ojo and Alege (2014), it is defined as the domestic price of foreign money. For instance, it is the value of Nigerian Naira in relation to USA dollar or United Kingdom (U.K) pounds.

Exchange rate can be denoted in normal or real terms. The nominal exchange rate is a monetary concept, which measures the relative price of the two moneys or currencies e.g. Naira in relation to U.S dollar; while Real exchange rate is being regarded as real concept that measure the relative price of two tradeable goods (overall exports and overall imports) in relation to non-tradeable goods (overall goods and overall services produced). Because it is so visible, the nominal exchange rate is a sensitive policy indicator; yet, for purposes of growth analysis, economic managers need to focus on trends in the real exchange rate (McPherson & Rakovski, 2000). Meanwhile, the deviation of exchange is termed fluctuation of exchange rates.

Jongbo (2014) described the erratic fluctuations in exchange rates as periods of domestic currency appreciation or depreciation. Osinubi and Amaghionyeodiwe (2009) conceptualized exchange rate fluctuation as the changes in exchange rate of one currency in relation to another. This changes results from the forces of demand and supply that acts on currency valuation. Thus, exchange rate fluctuation emerged as a result of the adoption of flexible exchange rate regime.

On the other hand, inflation is a term to explain changes in the price of goods and services. Jhingan (2005) refers to inflation as a persistent and appreciable rise in the general level of prices. Thus, economies in recent times have planned to control the rate of inflation using inflation targeting. Accordingly, inflation targeting is the use of monetary management interests like lending (interest rate) to make sure that inflation is kept at desired policy level (Audu & Amaegberi, 2013). Savensson (1999) reported that, inflation targeting involves setting a tenable framework aimed at curtailing the magnitudes of high inflation uncertainty which generally results in inefficient resource allocation and low productivity growth. Oluba (2008) added that, the characteristics of the framework tend to strengthen transparency and coherency of monetary policy thereby eliminating uncertainties concerning future inflation rates.

THEORETICAL FRAMEWORK

This study is built on the Flow Oriented Model. The flow oriented model considers capital flows to have an impact on international competitiveness of enterprises and profits of firms (Mlambo, 2013). According to Saleh (2009:12), the flow oriented model implies that currency movements affect international competitiveness and balance of trade positions and consequently the real output of the country. Joseph (2002) noted that exchange rate fluctuation affect the competitiveness of firms through their impact on input and output prices. Thus, when the exchange rate appreciates, exporters will be negatively affected. An appreciation of the currency will cause their goods and services to be dearer on the international market. This will cause their exports to decline, as they will be seen as expensive by buyers on the international market. This will result in them losing competitiveness internationally.

This model has a place currently because exchange rate can determine the price of imported products. When exchange rate appreciate, prices of domestic product will tend to fall because the local currency is exchanged at lower rate while depreciated currency will cause local currency to be exchanged at higher rate. Thus, when currency is exchanged at high rate, as in the case of Nigeria (exchanging USD for about 450 in black market and 320 at official market), prices of products has generally risen. The core issue of this study is to determine the extent of influence on general price of product. These findings may have policy implication to the economy.

EMPIRICAL STUDIES

A good number of empirical studies has been done in Nigeria have focused on exchange rate fluctuation and inflation rate in Nigeria. Among these studies are the work of Odusola and Akihlo (2001) studied the linkage between official exchange rate and the rate of inflation using the VAR technique from 1970 to 1995. The results showed a cointegration of test that there was long run relationship among the variables

while the VAR results using impulse responses suggested that the innovations in the parallel exchange rate caused positive though minor changes in the CPI. The innovations in the rate of inflation resulted in a slight but positive change in the official exchange rate and finally the innovations in the exchange rate led to significant movement in the CPI.

Also, Aliyu, Yakubu, Sanni and Duke (2008) employed a vector error correction methodology to examine the degree of exchange rate pass-through to import and consumer prices in Nigeria from 1986 to 2007. The study claimed that exchange rate though insignificant but was more pronounced than consumer prices.

In Iran, Kazeroon and Feshari (2009) used the co-integration approach studied the linkage between exchange rate parameters and inflation rate from 1971 to 2002 used weighted average of exchange rate under the multiple exchange rate regimes is used as a proxy for the unified exchange rate. The variables employed were the unified exchange rate, consumer price index, real GDP, nominal money supply and oil price. The model was analysed by multivariate Johansen's co-integration technique. The study reported that the exchange rate has substantial direct effects on inflation rate on the long run.

Using the granger causality test approach, Adetiloye (2010) reported that exchange rate granger causes inflation rate (CPI) such that the more significant one is causality is that import ratio granger causes CPI.

Audu and Amaegberi (2013) investigated the impact of exchange rate fluctuation on inflation targeting on the Nigerian economy. The study adopted annual times series data spanning a period of 43 years (1970 to 2012). The econometric techniques employed included Phillip-Perron unit root test, Johansen Max-Eigen statistics and Parsimonious error correction model. The result from the estimated long-run model shows that all the variables (interest rate and exchange rate) were statistically significant. The interest rate positively influences the growth of inflation in the Nigerian economy while exchange rate negatively impact on the economy. The study concludes that both interest and exchange rate in Nigeria are good explanatory variables in explaining the changes in inflation on Nigerian economy.

Ogundipe and Egbetokun (2013) adopted a Structural Vector autoregressive approach and discovered that exchange rate more driver of high inflation rate recorded over time than the money supply.

Using an Auto Regressive Integrated Moving Average (ARIMA) model, Mulwa (2013) reported that the relationship can be seen to be strong, negative but not significant from 2003 - 2013. The study thus concludes that exchange rates cannot be used to reliably predict movement in inflation rates.

Bobai, Ubangida and Umar (2013) evidenced the presence of volatility and the volatility is persistent according to the ARCH and GARCH results from 1986 to 2010.

Mandizha (2014) tested the short run exchange rate dynamism against inflation rate from January 2001 to June 2005. Adopting the Granger causality test, the study revealed a bidirectional causality from inflation to exchange rate. The result of the five lag Co-integration Model showed that exchange rate pass-through dynamics also show differences between the short run and long run.

Using the robust least estimates, Lohi (2014) supported the inflation-growth trade-off associated with fixed exchange rate regime in the case of CFA franc currency union countries of SSAs.

Okolil, Mbah and Agu (2016) employed a quarterly data of 181 series covering 1970 to 2014, to investigate the impact of inflation on real exchange rate volatility in Nigeria. The Vector Auto-Regressive estimates evidenced that inflation rate has a substantial direct effects on exchange rate volatility.

Obiekwe and Osabuohien (2016) employed the GARCH model to study the degree of pass-through of the official and parallel exchange rates to inflation as well as the relationship between exchange rate volatility and inflation in Nigeria based on monthly time series data (January 2006 to December 2015). The study found that exchange rate volatility has a direct yet substantial effect on inflation over time.

Table 1- Summary of Related Literature

SN	Author and Date	Scope	Variable employed	Tools used	Findings
1	Odusola & Akiho (2001)	Nigeria, Quarterly data: 1970:1 to 1995:4	CPI, Official and parallel Exchange rate	VAR technique: impulse response	Positive effect
2	Aliyu, Yakubu, Sanni & Duke (2008)	Nigeria: Quarterly data: 1986:1 to 2007:4	CPI, imports, exchange rate	vector error correction methods	Exchange rate has pass-through effect to import and consumer prices
3	Kazeroon & Feshari (2009)	Iran: Annual data: 1971 - 2002.	Unified exchange rate, CPI, real GDP, nominal money supply and oil price	co-integration approach	Positive effect
4	Adetiloye (2010)	Nigeria	parallel and the official exchange rate, CPI, imports	correlation and Granger causality	Positive effect
5	Audu and Amaegberi (2013)	Nigeria: Annual data 1970 - 2012	Exchange rate, inflation rate, interest rate	Parsimonious VCM	Negative effect
6	Ogundipe and Egbetokun	Nigeria	nominal effective exchange rates, money supply and CPI	Structural VAR	exchange rate pass-through to inflation

	(2013)				
7	Mulwa (2013)	Kenya: 2003 – 2013	exchange rate volatility and Inflation rate	OLS Regression model	Exchange rates not reliable to predict movement in inflation rates
8	Bobai, Ubangida and Umar (2013)	Nigeria: 1986 to 2010	exchange rate and inflation	VECM, impulse response, variance decomposition and ARCH and GARCH	negative shock
9	Mandizha (2014)	Zimbabwe: monthly data: 2001:1 - 2005:6	exchange rate depreciation, inflation	Granger causality	bidirectional causality from inflation to exchange rate
10	Lohi (2014)	Sub-Sahara African divided into CFA and Non- CFA countries	Inflation, exchange rate. compares fixed exchange rate regime and non-fixed exchange rate regime groups	Ordinary Least Square and Robust regression techniques	There is inflation-growth trade-off associated with fixed exchange rate regime in CFA of SSAs
11	Okolil, Mbah and Agu (2016)	Nigeria: quarterly data of 181 series covering 1970 to 2014	inflation, import, broad money supply and the lagged nominal exchange rate	GARCH (1, 1) and granger causality	un-directional causality running from inflation to real exchange rate volatility
12	Obiekwe and Osabuohien (2016)	Nigeria: January 2006 to December 2015	parallel exchange rate, official exchange rate, inflation rate, Oil price, broad money supply	GARCH model	Positive effect in the long run.

A number of empirical studies have been reviewed. The summary of these reviews are presented on Table 1. Most of these reviews were taken from Nigerian economy so that we can understand the position of previous researchers in Nigerian context. Some of the reviews found that exchange rate has positive effect on inflation rate in Nigeria (Odusola&Akihlo, 2001; Adetiloye, 2010; Obiekwe&Osabuohien, 2016). This suggests that exchange rate depreciation should bring about rising inflation rate. However, Audu and Amaegberi (2013) and Bobai, Ubangida and Umar (2013) posited negative effect or shock which implies that rising exchange rate leads to decreasing inflation rate. Explaining the causal direction of these effects, Mandizha (2014) posited that exchange rate and inflation rate causes each other while Okolil, Mbah and Agu (2016) argued that the causal effect of one directional running from inflation rate to exchange rate. The researchers employed highly sophisticated econometric tools such as GARCH, VECM and cointegration techniques, yet these conflicts still exist, the present study re-investigates the exchange rate – inflation rate nexus using the OLS which is a Best Linear and Unbiased Estimate of linear models.

III. METHODOLOGY

The study adopted an ex-post facto research design. The data used in the study have been document in official records of highly respected financial institutions, thus, the researcher has no powers to manipulate the record.

Data Collection and Sources

The data are obtained from CBN Statistical bulletin, 2015. The timeframe covered an annual time series for period of 33 years from 1987 – 2019. Data collected include inflation rate, broad money supply, interest rate, imports, annual growth rate of GDP and exchange rate of naira to USD.

Model Specification

The model for this study was coined from a selection of variables used in the works of Kazeroon and Feshari (2009), Adetiloye (2010), Audu and Amaegberi (2013) and Ogundipe and Egbetokun (2013). These studies used different versions of inflation (level or rate) to proxy for inflation rate. For Kazeroon and Feshari (2009), Adetiloye (2010) and Ogundipe and Egbetokun (2013) used level form of inflation (consumer price index) while Audu and Amaegberi (2013) used inflation at rate. However, the present employed the rate form of inflation.

However, they employed exchange rate, money supply, GDP, imports, and interest rate as explanatory variables for inflation rate in an economy. For instance, Adetiloye (2010) employed imports and exchange rate. In the work of Kazeroon and Feshari (2009), unified exchange rate, real GDP, nominal money supply and oil price were the explanatory variables. Audu and Amaegberi (2013) introduced only interest rate as control variable alongside exchange rate while Ogundipe and Egbetokun (2013) employed nominal effective exchange rate, real official foreign exchange rate and money supply as explanatory variables.

In the present study, all these variables were incorporated in one model as explanatory variables of inflation rate in Nigeria. Thus the explanatory variables are exchange rate fluctuation (ERF), interest rate (INTR), money supply (MS), imports (IMP) and growth rate of GDP, The functional form of the model is thus:

$$INFLR = f(ERF, INTR, MS, IMP, GDP)$$

This model can be expressed in its linear form as:

$$INFLR = \beta_0 + \beta_1ERF + \beta_2INTR + \beta_3MS + \beta_4IMP + \beta_5GDP + \mu$$

Where

INFLR = inflation rate and the dependent variable of the study

ERF = Exchange rate fluctuation proxied by Monthly Average Official Exchange Rate of the Naira (N/US\$1.00)

INTR = Interest rate that measures the reaction of investors to changes currency risk.

MS = Growth rate of broad money supply as a proxy for the amount of money available to spur economic activities.

IMP = Total value of imports included to capture the import dependent nature of Nigerian economy.

GDP = Growth rate of Gross Domestic Product to capture the growth of economic productivity of the country.

μ is a white noise error term and the L in the above model stands for natural logs.

Method of Data Analyses

The study employed the Ordinary Least Square (OLS) technique for the analysis. The OLS regression was used because it has the property of being the Best Linear Unbiased Estimator (BLUE). The coefficient of determination (R^2), F-test, t-test, beta and Durbin-Watson were used in the interpretation of the results. The decision rule for test of hypotheses is to reject the null hypotheses for calculated significance value below 5% level of significance. Adjusted coefficient of determination (Adj. R^2) test measures the explanatory power of the independent variables on the variables in the dependent variable. The r^2 normally makes an overestimation of the true value of the population especially when small sample is used. The Adj r^2 correct this problem (Pallant, 2004). Therefore, we use Adj r^2 . Student T-Test measures the individual significance of the estimated independent variables. F-Test measures the overall significance. The coefficient) is used to measure the individual contribution of the variables to variation in the dependent variable. Durbin Watson (DW) Statistics tests for auto correlation in the regression.

The summary statistics provided information about the means, medians, standard deviations (SD), minimum and maximum as well as the Jarque-Berastatistics of all the employed variables. However, the Jarque-Berastatistics was basically used for the test of normality of the variables. The null hypothesis in this test is data follow normal distribution. Decision rule: Reject the null hypothesis, when p-value is less than 0.05 level of significance, otherwise, do not reject.

To ensure the robustness of the results, the analyses were equally subjected to multicollinearity and autocorrelation tests. Durbin-Watson (DW) test for autocorrelation was used. This is used to check for the appropriateness of the models for analysis. Any equation with Durbin-Watson less than or greater than values not approximately 2, is not acceptable. Unacceptable Durbin-Watson suggests that the analysis cannot be relied on.

Since one major goal of the study is to understand how the X variables impact on Y, the test of multicollinearity must be done to ensure that one independent variable does not excessively influence the behaviour of others in the model. I istherefore necessary to estimate for multicollinearity to determine how robust the result from OLS would be. The Variance Inflation Factor (VIF) that shows how multicollinearity has increased the instability of the coefficient estimates (Freund &Littell 2000: 98), was was employed. The **Decision Rule:** “if any of the VIFs exceeds 10 (or 5), it is an indication that the associated regression coefficients are poorly estimated because of multicollinearity” (Ranjit, 2006).

IV. RESULTS AND INTERPRETATION

The results of the analyses of data are presented on tables 2, 3 and 4. The analyses were carried out with a computer based statistical tool. The results include summary statistics for test of normality of variables, the Variance Inflation Factors for test of reliability of model specification, and OLS and GLS for model estimation. Table 2 shows summary statistics of inflation rate, exchange rate fluctuation, interest rate, money supply, imports and economic growth variables.

Table 2: Test of Normality of the variables

	INFLR	ERF	INTR	M2	LNIMP	GDP
Mean	20.77	83.34	18.89	25.22	6.71	5.29
Median	12.07	107.03	18.14	22.62	7.05	5.51
Maximum	76.76	193.28	29.80	57.78	9.31	14.60
Minimum	0.22	2.02	10.50	1.32	1.79	-0.55
Std. Dev.	19.77	64.38	3.88	15.93	2.18	3.69
Skewness	1.54	-0.04	0.86	0.41	-0.64	0.43
Kurtosis	4.09	1.35	4.32	2.16	2.36	2.76
Jarque-Bera	13.33	3.41	5.87	1.71	2.58	1.02
Probability	0.00	0.18	0.05	0.42	0.28	0.60

Observations	33	33	33	33	33	33
--------------	----	----	----	----	----	----

The Jarque-Bera statistics, a test for departures from normality. The results of Jarque-Bera ($p > 0.05$) for ERF, INTR, M2, LnIMP and GDP show that inflation rate is normally distributed, but INFLR ($p < 0.05$) is not normally distributed. The reveal showed that the sample skewness and kurtosis are different from zero and three respectively. The kurtoses of INFLR and INTR are greater than three while ERF, M2, LnIMP and GDP are less than three. The kurtosis less than three implies that the series strongly departs from normality, since they are less than 3 which is the normal distribution value (Stock & Watson, 2006). Also, negative values of the skewness tests for ERF and LnIMP suggest that these variables have long left tails. The implication of left skewed of ERF and imports, are likely to have negative effect Nigerian economy. The positive value of the skewness tests for INFLR, INTR, M2 and GDP suggests that these variables have long right tails. On average, INFLR, ERF, INTR, M2, LnIMP and GDP grew at about 20.77%, 83.34%, 25.22, 6.71 and 5.29% respectively on annual basis, during the whole period.

Table 3: Test of Reliability of Model

Variance Inflation Factors
 Sample: 1987 2019
 Included observations: 33

Variable	Coefficient Variance	Centered VIF
ERF	0.016884	6.546948
INTR	0.892618	1.257910
M2	0.046486	1.103351
LNIMP	12.20295	5.404574
GDP	1.186523	1.509958
C	542.2965	NA

The result on Table 3 above is the VIF statistics of ERF, INTR, M2, LnIMP and GDP. The results for all the variables in each of the countries are below 10. This indicate that inclusion of the independent variables as employed in the model does not bring about multicollinearity in the model. Thus, the researcher conclude that the model involving ERF, INTR, M2, LnIMP and GDP as independent variables are reliable for investigating the effect of exchange rate fluctuation on inflation rate on Nigeria.

Table 4: Results of Model Estimation

Variable	OLS		GLS	
	Coefficient	t-Statistic	Coefficient	z-Statistic
ERF	-0.0892	-0.6867 (0.4988)	-0.0892	-0.6867 (0.4922)
INTR	1.2295	1.3013 (0.2055)	1.2295	1.3014 (0.1931)
M2	0.1508	0.6996 (0.4909)	0.1508	0.6996 (0.4842)
LnIMP	-0.3782	-0.1082 (0.9147)	-0.3782	-0.1083 (0.9138)
GDP	-1.1769	-1.0805 (0.2907)	-1.1769	-1.0805 (0.2799)
C	9.9378	0.4267 (0.6734)	9.9378	0.4268 (0.6696)
Adjusted R-squared	0.2069			
F-statistic/LR statistic	2.5139 (0.0575)			12.56956 (0.0277)
Durbin-Watson stat	1.3105			

() = probability values of the coefficients, *significant at 1%, **significant at 5%,

Dependent Variable: INFLR

Sample: 1987 2019

Included observations: 33

The result of model estimation is presented on table 4. The test of autocorrelation of the model is conducted with the Durbin-Watson statistics. The result showed a Durbin-Watson statistics of 1.3105 which is

less than 3, indicating presence of autocorrelation in the model. It is thus suspected that the results from the model will be distorted. The researcher therefore employed the Generalised Linear Square regression technique which is a correction result for presence of autocorrelation in the model. However, both results OLS and GLS produced similar coefficients. This suggests that presence of autocorrelation did not affect the results of the model estimation from OLS regression.

The adjusted coefficient of determination (Adj R²) of 0.2069 indicated that about 21% of reasons for inflation rate changes in Nigerian can be explained by presence of exchanger rate, interest rate, money supply, imports and GDP. However, the overall significance of the model using the OLS F-statistics 2.5139 (p.0.0575) showed that exchange rate model has no significant effect on inflation while the result of the GLS regression model with LR statistic 12.56956 (p. 0.0277) showed that exchange rate model can be significant on inflation rate in Nigeria.

The results of the coefficients from GLS regression explain the research question while the corresponding z-statistics tested the hypotheses. The coefficients of ERF (-0.0892), LnIMP (-0.3782) and GDP (-1.1769) indicated that exchange rate fluctuation, imports and growth rate of GDP as proxy for economic growth have negative effect on inflation rate in Nigeria. The results show that 1% change in ERF, LnIMP and GDP can bring about 8.9%, 37.8% and 117.7% decrees in inflation rate in Nigeria. However, INTR (1.2295) and M2 (0.1508) showed positive effects.

The probability of the z-statistics (p. > 0.05) indicated that all the variables are not statistically significant at 0.05 level of significance. This indicate that the variables in the model (exchange rate fluctuation, interest rate, money supply, imports and growth of GDP) do not have statistically significant effect on inflation rate in Nigeria.

V. DISCUSSION, CONCLUSION AND RECOMMENDATIONS

The study found that exchange rate fluctuation have insignificant negative effect on inflation rate in Nigeria. The result expects that exchange rate depreciation should have brought about 9% inflationary trend in Nigeria, but the probability value showed that exchange rate changes is not enough to trigger inflation.

The study showed that exchange rate and other macroeconomic variables including interest rate, money supply, imports and GDP are not impact on inflation in Nigeria. This suggest that macroeconomic variables are not the major causes of inflation rate in Nigeria. Social and political issues such as unrests, consumer confidence, and political landscape and so on can trigger inflation.

The result contradicts all the Nigerian empirical studies that supports positive effect on inflation rate (Odusola&Akiho, 2001; Adetiloye, 2010; Obiekwe&Osabuohien, 2016) and those that posits negative effect (Adu&Amaegberi, 2013; Bobai, Ubangida&Umar, 2013).

Despite the use of monetary and fiscal policies on controlling inflation and unemployment, governments should pursue diplomatic missions aimed at creating good image for the country and public confidence in the citizenry.

REFERENCES

- [1]. Adetiloye, K. A. (2010). Exchange rates and the consumer price index in Nigeria: A causality approach. *Journal of Emerging Trends in Economics and Management sciences*, 1(2), 114 -120.
- [2]. Alege, P.O. & Osabuohien, E.S (2015). Trade-exchange rate nexus in Sub-Saharan African countries: Evidence from panel co-integration analysis. *Foreign Trade Review*, 50(3), 151-167. Retrieved from <http://ftr.sagepub.com/content/50/3/151>.
- [3]. Aliyu, S.U.R Yakubu M.U, Sanni G.K & Duke O.O. (2008). Exchange rate pass- through in Nigeria Evidence from a vector Error correction model, *JEC classification: F3, F41*.
- [4]. Adu, N. P. & Amaegberi, M. (2013). Exchange rate fluctuation and inflation targeting in an open economy: Econometric approach. *European Journal of Accounting Auditing and Finance Research*, 1(3), 24-42. Retrieved from <http://www.eajournals.org/wp-content/uploads/exchange-rate-fluctuation-and-inflation-targeting.pdf>.
- [5]. Freund, R. J. & Littell, R. C. (2000). *SAS system for regression* (Third edition). Cary, NC: SAS Institute.
- [6]. Jhingan, M. L. (2005). *Macroeconomics theory*, 10th Edition, Vrinda Publication Ltd, New-Delhi.
- [7]. Jongbo, O. C. (2014). The impact of real exchange rate fluctuation on industrial output in Nigeria. *Journal of Policy and Development Studies*, 9(1), 268 – 278. Retrieved http://www.arabianjbm.com/pdfs/JPDS_VOL_9_1/19.pdf.
- [8]. Joseph, N. (2002). Modelling the impacts of interest rate and exchange rate changes on UK Stock Returns. *Derivatives Use, Trading and Regulation*, 7, 306-323.
- [9]. Kazeroon, A. R. & Feshari, M. (2009). The impacts of unified exchange rate system on domestic price in Iran. *Iranian Economic Review*, 14(24), 71 – 96. Retrieved from <ftp://ftp.repec.org/opt/ReDIF/RePEc/eut/journal/20092-5.pdf>.
- [10]. Lohi, J. (2014). Exchange rate regimes and inflations in Sub Saharan Africa. *Journal of Economics and International Finance*, 6(8), 173 – 189. Retrieved from <http://www.academicjournals.org/journal/JEIF/article-full-text-pdf/639902E47308>.
- [11]. Mandizha, B. (2014). Inflation and exchange rate depreciation: A granger causality test at the naissance of Zimbabwe's infamous hyperinflation (2001-2005). *Economics and Finance Review* 3(9), 22 – 42. Retrieved from [http://www.businessjournalz.org/articlepdf/EFR-21049-July-2014-3\(09\)-c.pdf](http://www.businessjournalz.org/articlepdf/EFR-21049-July-2014-3(09)-c.pdf).
- [12]. McPherson, M. F. & Rakovski, T. (2000). Exchange rates and economic growth in Kenya: An econometric analysis. *African Economic Policy, Discussion Paper Number 56*. Retrieved from http://pdf.usaid.gov/pdf_docs/Pnack375.pdf.
- [13]. Mlambo, C. (2013). Effects of exchange rate volatility on the stock market: A case study of South Africa. A dissertation for the Degree of Master of Commerce in Economics, Department of Economics, Faculty of Management and Commerce, University of Fort Hare. Retrieved from <http://contentpro.seals.ac.za/iii/cpro/app?id=3797199649336328&itemId=1007125&lang=eng&service=blob&suite=def>.

- [14]. Odusola, A.F &Akihlo, A.E. (2001). Output, inflation, and exchange rate in developing countries: An application to Nigeria. The Developing Economies Paper No. 199 -222.
- [15]. Ogundipe, A. A. &Egbetokun, S. (2013). Exchange rate pass-through to consumer prices in Nigeria. *European Scientific Journal*, 9(25), 110 – 123. Retrieved from <http://covenantuniversity.edu.ng/content/download/19577/126237/file/exchange+rate+pass-through.pdf>.
- [16]. Ojo, A. T. &Alege, O. P. (2014). Exchange rate fluctuations and macroeconomic performance in sub-Saharan Africa: A dynamic panel cointegration analysis. *Asian Economic and Financial Review*, 4(11), 1573-1591. Retrieved from [http://www.aessweb.com/pdf-files/aefr-2014-4\(11\)-1573-1591.pdf](http://www.aessweb.com/pdf-files/aefr-2014-4(11)-1573-1591.pdf)
- [17]. Oluba, Martin (2008). Proposed inflation targeting: Mis-targeting in Nigeria? SwissManagement Centre Working Paper No. 5
- [18]. Osinubi, T. S. &Amaghionyeodiwe, L. A. (2009).Foreign direct investment and exchange rate volatility in Nigeria.*International Journal of Applied Econometrics and Quantitative Studies*, 6(2), 83 – 116. <http://www.usc.es/economet/reviews/ijaeqs926.pdf>.
- [19]. Pallant, J. (2004). *SPSS survival manual*. United Kingdom: Open University Press.
- [20]. Ranjit (2006).Multicollinearity: causes, effects and remedies. Retrieved from <http://www.iasri.res.in/seminar/AS-299/ebooks%5C2005-2006%5CMsc%5Ctrim%5C3.%20Multicollinearity-%20Causes,Effects%20and%20Remedies-Ranjit.pdf>
- [21]. Saheed, Z. S. &Ayodeji, S. (2012). Impact of capital flight on exchange rate and economic growth in Nigeria.*International Journal of Humanities and Social Science*.Retrieved fromwww.ijhssnet.com/journals/vol-2-No-13-July-2012/28.pdf
- [22]. Saleh, G. (2009). The dynamic relation between stock prices and exchange rates in Egypt, Saudi Arabia and UAE. United States, UMI
- [23]. Svensson, L. (1999). Inflation targeting as a monetary policy rule.*Journal of Monetary Economics* 43, 607- 654

James Ese Ighoroje, et. al. "Exchange Rate Fluctuations and Inflation Rate in Nigeria: 1987 To 2019." *International Journal of Business and Management Invention (IJBMI)*, vol. 11(05), 2022, pp. 01-08. Journal DOI- 10.35629/8028