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# Impact of Capital Flight on Exchange rate in Nigeria

## Johnny NELSON<sup>1</sup>, Okoyan KROKEME<sup>2</sup>, Dumani MARKJARKSON<sup>3</sup>, Ekokeme Tamaroukro TIMIPERE<sup>4</sup>

<sup>1,2,3</sup>Department of Finance and Accountancy, Niger Delta University, P.M.B. 71, Bayelsa State, Nigeria, E-mail: nelsonjohny@yahoo.com (Corresponding author) <sup>4</sup>University of Africa, Toru Orua, Sagbama, Bayelsa State, Nigeria

#### Abstract

The study examined capital flight and real exchange rate in Nigeria from 1990 to 2014. The study used five independent variables (capital flight, foreign direct investment, current account balance, foreign borrowing and external reserves) and one dependent variable (real exchange rate). Test carried out include unit root test, co-integration test, causality test and ordinary least square. The study revealed that: There is positive significant relationship between foreign borrowing and real exchange rate in Nigeria, there is negative and insignificant relationship between capital flight and real exchange rate in Nigeria, there is positive and insignificant relationship between foreign direct investment and real exchange rate in Nigeria, there is negative insignificant relationship between current account balance and real exchange rate in Nigeria, and there is positive insignificant relationship between foreign reserves and real exchange rate in Nigeria. Based on the findings, the study recommends that, real exchange rate depreciation and appreciation can cause an increase in capital flight, there is a serious need by the fiscal authorities to pursue policy that creates less exchange rate uncertainties and should also ensure that real exchange rate movements are stable and this can also be complemented by closely observing the general rise in the price level.

#### Key words

Real Exchange Rate, Capital Flight, Foreign Direct Investment, Current Account Balance, Foreign Borrowing and External Reserves

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#### 1. Introduction

Lack of financial resources for appropriate economic development can push any nation into external borrowing, which may also result to unfavorable exchange rate situation. One of the unresolved problems facing the Nigerian economy is the issue of capital flight. The recent economic recession in Nigeria is attributed to several factors by scholars. One of such factors includes capital flight from Nigeria. Ayadi (2008) sees capital flight as the outflows of resident capital which is influenced by political and economic uncertainties in the home country. Isu (2002) explain that at one extreme, all private capital outflows from developing countries, whether short or long term are classified as capital flight. Ajilore (2010) opined that, capital flight is generally associated with short-term outflows resulting from political and economic uncertainties in the home nation. Capital flight in all ramifications refers to capital moving out of a domestic economy to another country's economy.

Capital flight could have severe effect on economic growth and development. Money that is transferred out of a country cannot contribute to the growth and development of that country's economy.

This is because; it will not contribute to the domestic productive activities. Ndikumana (2000) opined that, Nigeria over the years have recorded significant low investment level as a result of capital flight from the country to other nations. Whenever an investment is hampered in an economy, due to the multiplier effect, the damage becomes severe, as it could result to unemployment, low output, low savings and unfavorable exchange rate situation. When there is a signal of excessive capital flight in a country, it will discourage foreign investors from investing in such country. It means, the negative effects of capital flight could make any rational foreign investor hesitate in creating credits to the debtor's country. This effect could make a country to go into external borrowing since the capital that should stay to complement the economic activities and budgetary deficits is taking out; the only available option to fill the budgetary gap becomes external borrowing.

#### 2. Literature review

It could be the reason; Nigeria over the years has experienced excessive external borrowing and unfavorable exchange rates. Exchange rate is the price at which the domestic currency is exchanged for foreign currencies. Saheed and Ayodeji (2012) explain exchange rate at which one currency will be exchanged for another, such that the value of a country's currency in terms of another. A major challenge facing policy makers in Nigeria is the issue of exchange rate. In determining an appropriate exchange rate, a country's economic structure and institutional characteristics should be considered. Jhingan (2005), changes in export, imports and structural influences are the factors responsible for exchange rate fluctuation. Therefore, a proper exchange rate management tries to strike a balance between the level of imports and that of exports of goods that the country has comparative advantage. The over reliance on crude oil revenue and political uncertainties could be the reasons for volatility of the country's foreign exchange rate regimes.

Kaldor's economic growth theory (1956) also agree with the Keynesian growth theory that whenever an economy has not attain full employment level, the amount of money in the system will not be proportional to the price level, rather as the money increases in the system, it will lead to increase in economic activities. In this case, as the income increases, investment will increase and that leads to increase in output.

Kaldor postulates "the technical progress function" which is a joint product of two tendencies: growth of capital and growth of productivity. When a country accumulates savings, such savings or capital can be directed to investment, such creates employment and as well leads to increase in output.

Several studies have been carried out in capital flight, but almost all are directed to the determinants of capital flight in Nigeria, thus concentrating portfolio diversification theory, intermediation theory and speculative theory in the determination and not to find out the relative effect of capital flight on economic growth. Few studies that examined the impact of capital flight and economic growth end with conflicting results and conclusions. The capital taking out in the country could yield interest and send back to the home country for productive activities, thus the impact is not really clear and need to be examined. Also, the impact of capital flight and exchange rate is lacking in the existing literature. This study is therefore undertaken to fill this gap in literature, using recent data and econometrics techniques.

Based on the foregoing, this study attempts to examine the relationship between capital flight and exchange rate in Nigeria.

Adedayo and Ayodele (2016) empirically analyzed the impact of capital flight on the Nigerian economy from 1980 to 2014. The study used gross domestic product, capital flight and exchange rate as variables and employed ordinary least square and co-integration as methods. The variables have significant effect on the positive direction. Kingsley and Eberechi (2016) using government expenditure, capital flight, external debt, government revenue, economic openness and real exchange rate as variables examined the influence of capital flight on budget implementation in Nigeria between 1986 and 2014. With the use of co-integration and vector error correction revealed that, long run relationship exists between the variables. Also, capital flight has a positive and significant influence on government spending.

Olatunji and Oloye (2015) examined the impact of capital flight on economic growth in Nigeria from 1980 to 2012. The study employed Johansen co-integration, ordinary least square and error correction mechanism in measuring capital flight, foreign reserves, external debt, foreign direct investment, current

account balance and gross domestic product. The results revealed among others that capital flight had negative impact on economic growth. Onoja (2015) analyzed the dynamic impact of capital flight on real exchange rate in Nigeria from 1981 to 2009. The study employed co-integration and error correction mechanism to measure capital flight, foreign direct investment, external debt, current account deficit and total external reserves. The study shows that long run relationship does not exist between capital flight and exchange rate. Also, capital flight has no dynamic influence on real exchange rate.

Adaramola and Obalade (2013) investigated whether capital flight have force to bear on Nigerian economic growth between 1981 and 2010, using co-integration and ordinary least square in measuring capital flight and gross domestic product. The study shows that capital flight had a negative impact on economic growth on the short run but positive and significant impact on economic on the long run in Nigeria.

Vukenkeng and Mukete (2016) examined capital flight and economic growth in Cameroun from 1970 to 2013. The study employed full modified least square method in estimating the relationship between capital flight, gross domestic product, foreign direct investment, external debt, inflation and exchange rate. The results revealed among others, a negative and significant relationship between capital flight and gross domestic product.

Uguru (2016) on the tax implications of capital flight in Nigeria, using ordinary least square revealed that, a unit increase in capital leads to a 2% decrease in tax revenue.

Mariana (2006) examined the impact of capital flight on long-term economic growth using several methods in seventy five countries for the period 1994 to 2003. He used pooled cross-section analysis based on the fixed effects model estimated by feasible generalized least squares method. The results indicated that countries with high capital flight to gross domestic product ratio have experienced slower growth of gross domestic product per capita, with poorer countries being punished more by the phenomena.

Njimanted (2008) examined the determinants, measurement and impact of capital flight on real economic growth in Cameroun using two-stage least square technique after the application of cointegration, ECM, using time series data from 1970 to 2005. The result shows that large capital outflows from Cameroun is accounted for by political unstableness, fiscal deficit, interest rate, inflation differential and external debt servicing gross domestic product ratio.

Onwioduokit (2007) investigated the determinants of capital flight from Nigeria for the period of 1970-2000. The data were analyzed using OLS. The results revealed that domestic inflation, availability of capital, parallel market premium and competitive growth rate of the economy are the major determinants of capital flight in Nigeria. Saheed and Ayodeji (2012) examined the impact of capital flight on exchange rate and economic growth in Nigeria, using Ordinary Least Squares (OLS) method on the variables. It was found that capital flight has a positive and significant impact on the exchange rate in Nigeria, and unlike most of the existing studies, capital flight has a positive effect on economic growth in Nigeria. Similarly, Adesoye, Maku and Atanda (2012) also found a positive relationship between capital flight and economic growth. Uguru, Benjamin and Chibuike (2014) examined capital and exchange rate volatility in Nigeria, employing capital flight and exchange rate as variables from 1970 to 2007. The ordinary least square result revealed that, exchange rate is positively significant with capital flight. Meaning, exchange rate is influenced by the volume of capital flight in Nigeria.

Ajadi (2008) investigated capital flight in developing countries. The study investigated the linear determinants of capital flight in Nigeria employing OLS and ECM for the period of 1972-1989. The study revealed that, the validity of the portfolio theory which postulates how risk-adverse investors can build portfolio in order to maximize expected returns given a level of market risk. This was confirmed in the international realm as private sector engaged in international arbitrage. Capital flight is caused by the interest rate differential both in the short and the long run. In addition, exchange rate depreciation significantly increases capital flight in Nigeria. Output growth which measures the domestic opportunity cost of flight in Nigeria is negative and indicating that nonperformance of domestic resources can trigger capital flight.

#### 3. Methodology of Research

This research work basically covers the analysis of the impact of capital flight on exchange rate volatility in Nigeria. The variables that constitute the capital flight (i.e. the independent variables) include capital flight, foreign borrowing, net foreign direct investment, current account balance, and stock of official foreign reserves. All the data were collected for the period of 1990 to 2014. The source of data was purely secondary sources from Central Bank of Nigeria Statistical Bulletin, National Bureau of Statistics Annual Abstract of Statistics and Journal articles from the internet. The data used was mainly time series data which are quantitative in nature.

#### 3.1. Research Design

The study adopted an ex-post facto research design which is a form of descriptive research in which investigator starts with the observation of the dependent variable then studies the independent variable in retrospect for possible relationship and effects on the dependent variable.

#### 3.2. Models specification

The study shall use five explanatory variables (Capital Flight (CAPF), Foreign Borrowing FB), Foreign Direct Investment (FDI), Current Account Balance (CAB) and Foreign Reserves (FR)). They shall be regressed against Real Exchange Rate (RER) which is the dependent variable in the study. In order to bring the units closer, the study used the growth rate of the variables. Where; Gr stands for growth rate in all the variables. The functional relationship of the model is:

$$RERGrt = f(CAPFGrt, FBGrt, CABGrt, FRGrt)$$
 (1)

The econometric specification of the model is:

$$RERGr_t = \overline{T}_0 + \overline{T}_1CAPFGr_t + \overline{T}_2FBGr_t + \overline{T}_3FDIGr_t + \overline{T}_4CABGr_t + \overline{T}_5FRGr_t + \mathcal{E}_t$$
 (2)

Where: To is the intercept or constant term;

 $\overline{T}_1$ - $\overline{T}_5$  are the coefficients of the explanatory variables. They represent the rate of change in dependent variables for each unit change in the independent variables respectively.

t is the time period under study

Æ is the stochastic variable or error term

#### 3.3. Data analysis method

Different econometric analysis tools have been employed in this study to analyze the impact capital flight and exchange rate fluctuation in Nigeria.

#### 3.3.1. Descriptive statistics and normality test

The study also employed descriptive statistics for the calculation of means, frequencies, variances, and standard deviations. The Jarque-Bera was used to test the normality of the residuals for skewness and kurtosis. These served as a means of describing the overall distribution and character of the data.

#### 3.3.2. Simple regression analysis

The Linear Regression is an econometric technique which correlates the changes in the variable (the series data that reappear again at permanent intervals) to other variable or variables. The demonstration of the association is described as linear regression model. It is identified linear because the association is linearly preservative. The simple regression was used to analyze the impact on the dependent variable (Real Exchange Rate) of the various independent variables (Capital Flight, Foreign Borrowing, Net Foreign Direct Investment, Current Account Balance and Foreign Reserves). The Ordinary Least Squares (OLS) approach was used in the estimation of the parameters. The choice of OLS techniques of regression is not only as a result of its simplicity, but as a result of its optimal properties of linearity, unbiasedness, minimum variance, zero mean (Koutsoyiannis, 1977).

#### 3.3.3. Unit root test

Unit root test is used to check the stationarity of the data. It has been established that macroeconomic data usually exhibit stochastic trend that can be removed through only differencing (Jawad, 2013). To examine the existence of stochastic non-stationarity in the series, the study establishes the order of integration of individual time series through the augmented Dickey-Fuller (ADF) test. The ADF contains three types of situation for every time series. First, random selection process includes intercept (c) and trend (t). Second, random selection process includes intercept (c) but no trend (0). Third, random selection process includes lag length. The essence is to correct spurious regression results and to ensure that the variables fit into the estimation techniques (Khuram *et al.*, 2015).

### 3.3.4. Co-integration

The co-integration analysis helps to test for the existence of long run stable relationship that exists between the dependent variable and its regression. A vector of variables integrated of order one is co-integrated if there exist linear combination of variables that are stationary. Johansen and Juselius (1990) two likelihood ratio test statistic was used to determine the number of co-integrating vectors.

#### 3.3.5. Causality test

The causality test is to investigate the causal relationship between capital flight and real exchange rate in Nigeria using the Granger-causality test. The purpose of this test is to determine the direction of causation between the dependent and the independent variable

#### The F- Test and T-Test

The T-test is used to test whether the individual variables included on the model are significant or not in determining the impact of capital flight on exchange rate in Nigeria. The F-tests used to test the overall adequacy of the regression line. All will be tested at 5 percent level of significance.

#### 4. Data Presentation

Table 1. Growth rate of real exchange rate and capital flight indicators for the period 1990 to 2014

Year	RERGr	CAPFGr	FBGr	FDIGr	CABGr	FRGr
1990	8.77	36.01	24.22	397.6	357.84	49.02
1991	23.29	-84.37	9.99	-68.8	-75.89	-8.63
1992	74.56	418.84	65.7	21.18	88.58	-62.53
1993	27.47	-18.02	16.33	25.87	-234.41	-8.04
1994	-0.75	16.67	2.47	50.05	172.68	530.19
1995	0	1,061.61	10.49	45.63	21.17	-82.12
1996	0	-50.85	-13.89	-44.91	-236.01	111.28
1997	0	-49.14	-3.46	47.64	-84.27	112.17
1998	0	525.42	6.22	-3.39	-869.38	-1.59
1999	323.53	156.4	307.16	-31.71	-111.92	-23.68
2000	10.15	-58.44	20.18	-4.41	1,368.48	73.03
2001	9.64	-22.61	2.55	13.46	-66.64	9.39
2002	8.06	2.23	23.82	4.43	-56.29	-25.19
2003	6.93	213.04	13.87	57.4	213.05	-2.78
2004	3.2	46.38	9.2	7.01	396.67	127.04
2005	-1.01	5.27	-44.89	-6.55	116.91	66.79
2006	-2.65	17.69	-83.25	165.09	-0.03	49.57
2007	-2.19	13.36	-2.78	-8.72	-24.3	21.36
2008	-5.77	21.18	19.22	13.95	5.31	3.25
2009	25.57	23.1	12.84	38.27	-52.52	-20.03
2010	0.95	37.43	16.84	-1.61	-3.7	-23.7
2011	2.37	43.19	30.01	-26.97	-34.71	0.93

2012	2.36	41.96	14.5	56.33	-42.82	34.29
2013	-0.12	-4.57	33.76	-58	-75.67	-2.24
2014	0.79	-47.19	18.78	-3.66	70.77	-20.08

The variables showed erratic movement during the period under review. Between 1990 and 1999, the Nigerian naira depreciated by more than 10 percent against the USA dollar. In the period 2000 to 2007, the foreign exchange rate depreciated by more than 23 percent. In the period 2008 to 2014, the Nigerian naira depreciated by more than 26 percent against the USA dollar.

Table 2. Descriptive Analysis

	CABGr	CAPFGr	FBGr	FDIGr	FRGr	RERGr
Mean	33.71600	93.78360	20.39520	27.40720	36.30800	20.60600
Median	-24.30000	17.69000	13.87000	7.010000	0.930000	2.360000
Maximum	1368.480	1061.610	307.1600	397.6000	530.1900	323.5300
Minimum	-869.3800	-84.37000	-83.25000	-68.80000	-82.12000	-5.770000
Std. Dev.	361.9114	246.4201	65.57761	90.12172	115.2903	65.19907
Skewness	1.509705	2.833592	3.347856	2.959152	3.276049	4.266577
Kurtosis	9.818152	10.91219	16.19959	12.72260	14.74056	20.25273
Jarque-Bera	57.92086	98.66630	228.1894	134.9534	188.3029	385.9076
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	842.9000	2344.590	509.8800	685.1800	907.7000	515.1500
Sum Sq. Dev.	3143516.	1457349.	103210.1	194926.2	319004.7	102022.0
Observations	25	25	25	25	25	25

Where: CAPGr is capital flight growth rate; FBGr is foreign borrowing growth rate; FDIGr is foreign direct investment growth rate; CABGr is current account balance growth rate; FRGr is external reserves growth rate and RERGr is real exchange rate growth rate.

We observed that over the period, the RERGr averaged at 21% with maximum value at 324 % with the minimum value at -6%. The standard deviation is 65% and indicates the presence of significant fluctuations from the mean. All the other variables (CABGr, CAPFGr, FBGr, FDIGr and FRGr) averaged at 34%, 94%, 20%, 27% and 36% respectively with maximum values at 1369%, 1062%, 307%, 398% and 530% respectively and minimum values at -869%, -84%, -83% -69%, and -82% respectively. Their standard deviations respectively are also high and indicate the presence of significant fluctuations from their mean. The Jarque-Bera statistics and probability values of the variables indicate the normality status of the variables meaning that the data of the variables are normality distributed.

Table 3. Unit Root Test summary

Source: Extracted from Unit Root Test Result

Variable	ADF value	Critical Values			Conclusion
variable	ADF value	1%	5%	10%	Conclusion
RERGr	-4.964294	-4.394309	-3.612199	-3.243079	Stationary @ level
CAPFGr	-10.14243	-4.440739	-3.632896	-3.254671	Stationary @ Ist dif.
FBGr	-4.347610	-4.394309	-3.612199	-3.243079	Stationary @ level
FDIGr	-11.69324	-4.394309	-3.612199	-3.243079	Stationary @ level
CABGr	-4.442903	-4.416345	-3.622033	-3.248592	Stationary @ level
FRGr	-3.934100	-4.498307	-3.658446	-3.268973	Stationary @ level

The Augmented Dickey-Fuller Unit Root test result as summarized above shows that all the variables are stationary at level except capital flight growth rate (CAPFGr) which is stationary at first difference and integrated of order one i.e. 1(1).

Table 4. Summary of Co-integration result

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.964621	199.8714	95.75366	0.0000
At most 1 *	0.938365	123.0138	69.81889	0.0000
At most 2 *	0.801009	58.92383	47.85613	0.0033
At most 3	0.417042	21.79049	29.79707	0.3103
At most 4	0.233740	9.378772	15.49471	0.3315
At most 5	0.131979	3.255401	3.841466	0.0712

**Source:** Extract from Co-integration Test

The unrespricted co-integration rank test i.e. Eigenvalue and Trace indicate three cointegrating equation at critical p-value of 0.05 respectively. We therefore conclude that there is a long run equilibrium relationship among the variables.

Table 5. Result of Pairwise Granger Causality test

Null Hypothesis:	Obs	F-Statistic	Prob.
CAPFGR does not Granger Cause RERGR	23	1.20130	0.3238
RERGR does not Granger Cause CAPFGR		0.09216	0.9124
FBGR does not Granger Cause RERGR	23	0.05274	0.9488
RERGR does not Granger Cause FBGR		0.39753	0.6777
FDIGR does not Granger Cause RERGR	23	0.40257	0.6745
RERGR does not Granger Cause FDIGR		0.27912	0.7597
CABGR does not Granger Cause RERGR	23	9.92552	0.0012
RERGR does not Granger Cause CABGR		10.4105	0.0010
FRGR does not Granger Cause RERGR	23	0.18894	0.8295
RERGR does not Granger Cause FRGR		0.16703	0.8475

Source: Computer printout

The above results show that, there is a bidirectional causal relationship between current account balance growth rate (CABGr) and real exchange rate growth rate (RERGr).

Table 6. OLS Result

Dependent Variable: RERGR Method: Least Squares Date: 01/03/18 Time: 13:25

Sample: 1990 2014 Included observations: 25

Variable	Coefficient	Std. Error	t-Statistic	Prob.
С	1.503986	6.467186	0.232556	0.8186
CAPFGR	-0.009869	0.022867	-0.431581	0.6709
FBGR	0.941657	0.083189	11.31946	0.0000
FDIGR	0.034201	0.060901	0.561581	0.5810

CABGR	-0.010018	0.015342	-0.652949	0.5216
FRGR	0.006133	0.048984	0.125208	0.9017
R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.876775 0.844348 25.72286 12571.64 -113.2275 27.03796 0.000000	S.D. deper Akaike inf Schwarz c	o criterion riterion Juinn criter.	20.60600 65.19907 9.538200 9.830730 9.619336 1.328750

Source: Computer Estimate

As the result revealed, foreign borrowing growth rate (FBGr), foreign direct investment growth rate (FDIGr) and foreign reserves growth rate (FRGr) have positive relationship with RERGr, but only FBGr is significant at 5%, FDIGr and FRGr are statistically negative.

Conversely, CAPFGr and CABGr have inverse relationship with RERGr and not significant respectively. Indicating that any increase in capital flight growth rate (CAPFGr) and current account balance growth rate will lead to decrease in real exchange growth rate (RERGr).

#### Coefficient of Determination (R<sup>2</sup>)

The coefficient of determination measures the explanatory power of the regression model. There is a high coefficient of R<sup>2</sup> of 0.876775 which is 88%. This is an indication that the model is good fitted. Also, the adjusted R<sup>2</sup> value shows 0.844348 which is 84%. Meaning 84% change in real exchange rate growth rate is explained by the independent variables while the remaining 16% is explained by other variables not captured in the model.

#### 5. Discussion of Results

The evaluation of the slop of the coefficients of the explanatory variables indicated the existence of positive relationship between foreign borrowing, foreign direct investment, foreign reserves and real exchange rate of Nigeria. The relationship between capital flight, current account balance and real exchange rate is found to be negative.

Generally, our model suggests a significant relationship between capital flight and exchange rate using the f-statistics. The coefficient of determination (R<sup>2</sup>) 84% Meaning 84% change in real exchange rate is influenced by the predictor variables while the remaining 16% is explained by other variables not captured in the model.

The findings of this study is not in line with that of Saheed and Ayodeji (2012) that capital flight has a positive and significant impact on the exchange rate in Nigeria, and unlike most of the existing studies, capital flight has a positive effect on economic growth in Nigeria. It is also not line with the findings of Adesoye, Maku and Atanda (2012) that found a positive relationship between capital flight and economic growth, but agree with the findings of Uguru (2016) that the relationship between capital flight and economic growth is negative.

#### 5.1. Summary of Findings

The research work investigated the impact of capital flight on exchange in Nigeria from 1990 to 2014. The following findings were inferred from the study:

That capital flight represented by capital flight, foreign borrowing, net foreign direct investment, current account balance and foreign reserves shows different results. Foreign borrowing, net foreign direct investment and foreign reserves are found to be positively related with real exchange rate. While capital flight and current account balance have negative relationship with real exchange rate. Among all the variables, only foreign borrowing is significant, others are not significant. Generally, our model suggests the existence of a significant relationship between capital flight and exchange rate in Nigeria using the f-statistics and R<sup>2</sup> with particular reference to the period under review.

### 6. Conclusions and Recommendations

The study examined the relationship between capital flight and exchange rate in Nigeria from 1990 to 2014. Based on the findings, the study concludes that:

- There is positive significant relationship between foreign borrowing and real exchange rate in Nigeria.
- There is negative and insignificant relationship between capital flight and real exchange rate in Nigeria
- There is positive and insignificant relationship between foreign direct investment and real exchange rate in Nigeria.
- There is negative insignificant relationship between current account balance and real exchange rate in Nigeria.
- There is positive insignificant relationship between foreign reserves and real exchange rate in Nigeria.

Based on the findings of the study, we therefore recommend the following;

- Acknowledging that real exchange rate depreciation and appreciation can cause an increase in capital flight, there is a serious need by the fiscal authorities to pursue policy that creates less exchange rate uncertainties.
- Fiscal authorities should ensure that real exchange rate movements are stable and this can also be complemented by closely observing the general rise in the price level.
- Federal government should put more effort on the real sectors to reduce the level of high importation into Nigeria.
- Government should create enabling environment for business to excel and also to boast on the security to reduce capital flight from Nigeria to other nations.

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