

EFFECT OF EXCHANGE RATE FLUCTUATIONS ON THE NIGERIA ECONOMY: ECM ANALYSIS

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Abstract:

Research Purpose: The study investigated the effect of exchange rate fluctuations on the Nigerian economy for the period 1986-2021 employing Error correction model. Annual time series data was used and the study specifically sought to, determine the effect of Monetary Policy Rate instability on the Nigerian Economy, ascertain the impact of Interest Rate instability on the Nigerian Economy, determine the causal relationship between Inflation Rate instability and the Nigerian Economy. Gross Domestic Product is the dependent variable of this study, while inflation rate, interest rate monetary policy rate are the independent variables.

Design/Methodology/ Approach: *We applied in our analysis, Phillips- Perron unit root Test, Johansen test for co-integration among variables, Error Correction Model (ECM) was adopted to investigate the linkage of these variables to the Nigerian economy.*

Findings: *The co-integration test confirms that there is a long run relationship between Exchange Rate instability and the Nigerian Economy. The estimated result shows that the exchange rate instability has no significant and negative influence on Gross Domestic Product in Nigeria during the period.*

Implication: *The result therefore suggested that devaluation of the domestic currency does not lead to improvement in the Exchange Rate stability and hence GDP position of the country*

Originality/Value added: *It was therefore recommended that measures to stabilize exchange rate and check its continuous free fall should be carefully considered as a policy option under fiscal policy measures. Both fiscal and monetary authorities should collectively develop the political will to implement policies that will boost Nigeria*

production base to maximize the gains from foreign exchange flow.

Keywords: Exchange Rate, Interest Rate, ECM, Inflation Rate and Monetary Policy Rate, Instability.

Introduction

The fluctuation of exchange rate has been a serious issue in sub-Saharan nations in 1980's and the exchange rate policy was mate with stiff opposition to devaluation to avoid its inflationary implications, among other reasons (Usman and Adegbite, 2013). Nigeria faces such a situation and there has been interest, therefore, in economic performance as a result of exchange rate volatility in the process. This fluctuation is a topical issue and it is a key determinant that is affecting price signals in a market driven economy (Nwonye et al, 2020). It is generally accepted that exchange rate is a variable, which affect the rate of economic activity and developmental impact on investments, savings, production and consumption and inflation.

Nigerian economy has consistently faced important policy issue with respect to devaluation of exchange rates and their subsequent impact on the economy. Trade deficits imply choosing between exchange rate devaluation and the internal or external financing of the deficit, which are challenging policy decisions to undertake, manage or sustain, especially in the long run for a developing country like Nigeria (Usman and Adegbite 2013). There is also a general agreement that there are differences between the short-run and long-run effects of a depreciating exchange rate on trade balance in that there is no specific pattern that the trade balance follows in the short-run after devaluation.

Statement of the Problem

Nigeria's exchange rate fluctuation has affected the valuation of the Naira. It has encouraged imports and discouraged exports

and also encourages over dependence of Nigerians on imported goods and services. (Owolabi and Adegbite, 2013)

Naira exchange rate has continued to show some element of depreciation and instability. This singular action has resulted in the declines in the standard of living of the populace, increased cost of production which also leads to cost push inflation. Exchange rate fluctuation undermines the international competitiveness of non-oil export and make planning and projections difficult on both micro and macro level of Nigerian economy (Nwobia, Ogbonnaya and Okoye, 2020)

The huge inflow of foreign exchange income that followed the era of oil boom in Nigeria in the 1970s diverted the attention of the government from its traditional agriculture commodities to crude oil exploitation (Onodugo, Ikpe and Anowor, 2013). A considerable number of the producers of these commodities such as groundnut, cotton, oil palm moved into activities aimed at exploiting the economic opportunities created by increased oil revenues (Onodugo et al, 2014). This development brought about the decline of agricultural production and the resultant drop in both volume and value of traditional export commodities. The resultant effect of this is a mono-product economy with the national revenue in excess of eighty percent from crude oil earnings alone.

Nigeria has a large population coupled with large number of insurgency and imports virtually everything including toilet tissues and tooth picks has gone up. In fact, in some quarters, the consumption of imported goods has become a status symbol.

Objectives of the Study

The broad objective of the study is to investigate the impact of Exchange Rate fluctuation on the Nigerian Economy for the period 1986- 2021. The Specific Objectives were to;

- Determine the effect of Monetary Policy Rate fluctuation on the GDP in Nigeria.
- Ascertain the impact of Interest Rate fluctuation on the GDP in Nigeria.
- Examine the causal relationship between Inflation Rate fluctuation and the GDP in Nigeria

Statement of Hypotheses

In line with the objectives above, the following hypotheses guided this study.

H0₁: Monetary Policy Rate fluctuation has no significant effect on the GDP in Nigeria

H0₂: Interest Rate fluctuation has no significant Effect on the GDP in Nigeria

H0₃: There is no causal relationship between Inflation Rate fluctuation and the GDP in Nigeria

Economy

Review of Related Literature

Conceptual Review

Exchange Rate: According to Ezu (2012) Exchange rate is the price of a nation's currency versus another currency. It is the required amount of units of a currency that can buy another amount of units of another currency. Powell (1993) defined exchange rate simply as the external price of a currency expressed in terms of an artificial unit such as weighted average of "sample" or "basket of leading trade currencies". Olukole (1992) observed that exchange rate is numerical expression of the value of the currency of one country at any given time.

Okonkwo (1991) defined exchange rate as "the price of one currency in terms of the other". To him, exchange rate is the rate at which one currency exchanges for another. This view is corroborated by Usman (1991) when he said that "the exchange rate is the value of a country's domestic currency in terms of a foreign, currency". Elumelu

(2002), Anowor, Ukwueni and Ikeme (2013) saw exchange rate as any other price that is determined by the forces of demand and supply in a perfectly competitive market and in a world where free international exchange is the rule. Daniels et al (1976) defined exchange rates as the number of units of currency, at which another currency can be bought. It is also defined as the price of the currency in terms of another (CBN 1997)

Interest Rate

Interest rate is a macroeconomic concept that is defined as the amount that a bank charges on the amount it lends. It is the rate at which commercial banks make funds available to customers (Ochinanwata et al, 2020). Interest rate is an important economic price; which can either be seen as a cost of capital or as an opportunity cost of funds. Also, interest rate can be viewed as the price paid for the use of money. It is the opportunity cost of borrowing money from a lender. It can also be seen as the return being paid to the provider of financial resources (Bosco and Emerence, 2016)

Inflation Rate

Inflation refers to an overall increase in the Consumer Price Index (CPI), which is a weighted average of prices for different goods. The set of goods that make up the index depends on which are considered representative of a common consumption basket. Therefore, depending on the country and the consumption habits of the majority of the population, the index will comprise different goods. Some goods might record a drop in prices, whereas others may increase, thus the overall value of the CPI will depend on the weight of each of the goods with respect to the whole basket. Annual inflation, refers to the percent change of the CPI compared to the same month of the previous year (Faraji, 2014)

Monetary policy rate

MPR is the formal and authorized interest rate of the CBN, which helps all other financial institutions in the country to

determine the rate of interest at which facilities should be given to the firms and individuals. This is the interest rate at which CBN lends to commercial banks. The MPR is the benchmark against which other lending rates in the economy are pegged and is usually used as an instrument to moderate inflation in the economy (CBN, 2006).

Theoretical Framework

The Study was anchored on the Monetary Model of exchange rates, to this, Anowor and Okorie (2016) posits that it assumes that changes in the supply of money affect the exchange rate either directly or indirectly. The model tries to explain the changes in exchange rates in terms of changes in the demand for and supply of money between two currencies (Olisadebe, 1991). Conceptually, an increase in real income given a fixed nominal money supply, leads to a fall in prices, thus making exchange rates to appreciate (Anowor et al, 2022). Conversely, an increase in money demand, leads to increase in prices, which eventually leads to exchange rates depreciation.

Empirical Review

Babtunde, Abuh, Ekpenyong and Ehinomen (2016) focused their study on the nexus between exchange rates and economic growth in Nigeria over the period of 1978 to 2014. Data from Nigeria were analyzed using Ordinary Least Square (OLS) method and it was discovered that Exchange Rates positively and significantly influences Economic Growth. The study revealed the non-spuriousness of our regression via the stationarity of the residuals. Cointegration technique employed also showed the long-run equilibrium among the series used.

Danladi, Akomolafe, Bablola and Akpan (2016) evaluated the impact of exchange rate volatility on international trade in Nigeria on the basis of annual data from 1980 to 2013, which was obtained from World Bank Development Indicators (WDI). Exchange rate volatility was used to capture the long-

run and short-run relationship between exchange rate volatility and international trade. The co-integration test indicated that the variables are co-integrated which implies that a long-run relationship exist between the variables while the granger causality test showed that a causal relationship exist between international trade and exchange rate volatility. It was observed form the ECM analysis that exchange rate volatility negatively affects international trade. The study therefore recommend that the government should put in place exchange rate and trade policies that will promote greater exchange rate stability and trade conditions that will promote domestic production in the economy. In other to achieve this, the government should provide efficient infrastructural services like energy resources.

Nwobia, Ogbonnaya and Okoye (2020) examined the effect of exchange rate fluctuation on Nigeria external trade from 2000 to 2019. The study made use of secondary data sourced from central bank of Nigeria statistical bulletin of various issues from 2000 being the year of monetary authority regime of flexible exchange rate to 2019. The correlation and regression analysis of the Ordinary Least Square (OLS) were used to analyze the data. The result shows that the three variables; have significant effect on the Gross Domestic Product (GDP). Exchange rate has a negative effect on the GDP because as it increases, the external trade is negatively affected.

Methodology

Research Design

The type of research design used in this study is *ex-post facto* research design which is the type of research involving events that have already taken place and for which data already exists, and the researchers are merely involved in data gathering.

Data used in this study were sourced from the Central Bank of Nigeria Statistical Bulletin of various issues. The models of study are

estimated using annual data on some macro-economic indicators, which includes: Gross Domestic Products (GDP); Interest Rate (INTR), Inflation Rate (INFR) and Monetary Policy Rate (MPR) for the period 1986 - 2021. Error Correction Model (ECM) was the technique employed in this study to determine the degree of adjustment of the dependent variable to changes in the independent variables. This is to preserve the long-run relationship of the model

Model Specification

This study attempts to ascertain the impact of exchange rate fluctuation on Nigerian Economy covering the period between 1986 and 2021, using Nigerian data. For this purpose, the model adopted by Onwe (2014) that carried out similar study in Nigeria for the period from 1970 to 2013 was employed as our models with little modifications which include INFR, INTR, MPR and EXCR. Therefore the mathematical specification of the model for this study is as shown thus;

$$Y_t = f(X_{t1}, X_{t2}, X_{t3}, X_{t4}, X_{t5}) + \mu_t \text{-----}$$

-----Equ.3.2.1

Rewriting the above econometric models to regression models, we have;

$$GDP_t = \beta_0 + \beta_1 INTR_t + \beta_2 MPR_t + \beta_3 INFR_t + \mu_t \text{----- (equ 3.2.2)}$$

Where

- GDP_t = Gross Domestic Product
- INTR_t = Interest Rate -- Control Variable
- MPR_t = Monetary Policy Rate
- INFR_t = Inflation Rate
- t = Time Series
- μ_t = Error or Disturbance Term

The variables in the model were log-transformed so as to keep them at the same level of measurement and make provision for easy interpretation. Hence, log-transforming the variables in equation 3.2.2 to log form their real terms is given:

$$\text{GDP}_t = \beta_0 \text{Log} + \beta_1 \text{Log(INTR)}_t + \beta_2 \text{Log(MPR)} + \beta_3 \text{Log(INFR)} + \mu - (\text{equ.3.2.3})$$

Equation 3.2.2 implies that (GDP) in Nigeria depends on Monetary Policy Rate, Interest Rate, and Inflation Rate. Since the study among other things is interested in investigating relationship between Exchange Rate and the GDP.

Data Presentation and Analysis

Table 4.1. Data for the Study consists of inflation rate, GDP, Monetary Policy Rate, Exchange Rate and Interest Rate from 1986 - 2020

Year	LNG DP	LNMPR	LNINFR	LNINTR
1986	144.83	10	5.72	2.02
1987	154.98	12.75	7.46	4.02
1988	163.00	12.75	6.83	4.54
1989	170.38	18.50	8.15	7.39
1990	192.27	18.50	7.36	8.04
1991	202.44	14.50	13.01	99.91
1992	249.44	17.50	44.59	17.30
1993	320.33	26.00	57.17	22.05
1994	419.20	13.50	57.03	21.89
1995	499.68	13.50	72.84	21.89
1996	596.04	13.50	29.27	21.89
1997	909.80	13.50	8.53	21.89
1998	1,259.07	14.31	10	21.89
1999	1,762.81	18.00	6.62	92.69
2000	2,895.20	13.50	6.93	102.11

2001	3,779.13	14.31	18.87	111.94
2002	4,111.64	19.00	12.88	120.97
2003	4,588.99	15.75	14.03	129.36
2004	5,307.36	15.00	15	133.50
2005	6,897.48	13.00	17.86	132.15
2006	8,134.14	12.25	8.24	128.65
2007	11,332.25	10.00	5.38	125.83
2008	13,301.56	10.00	11.58	118.57
2009	17,321.30	13.00	11.54	148.88
2010	22,269.98	13.00	13.72	150.30
2011	28,662.47	13.00	10.84	153.86
2012	32,995.38	13.00	12.22	157.50
2013	39,157.88	13.00	8.48	157.31
2014	44,285.56	13.00	8.06	158.55
2015	54,612.26	11.00	9.01	195.52
2016	62,980.40	14.00	15.7	305.00
2017	71,713.94	14.00	15.3	305.79
2018	36,477	14.00	16.90	306.08
2019	57,980	15.00	17.00	306.10
2020	45,876	16.00	17.05	306.10
2021	23315.08	16.5	18.5	17.5

Source: CBN Statistical Bulletin various issues, 2022

Descriptive Statistics

Table 4.2

	LN GDP	LN NINFR	LN NINTR	LN MPR
	P	R	R	R
Mean	8.1737 07	2.6071 69	4.0944 97	2.6452 68
Median	8.4314 15	2.5556 76	4.7955 43	2.6026 90
Maximum	11.180 44	4.2882 65	5.7239 12	3.2580 97
Minimum	4.9755 61	1.6826 88	0.7030 98	2.3025 85
Std. Dev.	2.1858 11	0.6707 06	1.4539 17	0.1983 63
Skewness	- 0.16166 7	0.9969 85	- 0.77738 8	0.7409 53
Kurtosis	1.5453 56	3.4136 92	2.3602 99	4.4193 31
Jarque- Bera	3.0532 34	5.7022 04	3.8865 02	5.7894 96
Probabilit y	0.2172 69	0.0577 81	0.1432 38	0.0553 13
Sum	269.73 23	86.036 59	135.11 84	87.293 84
Sum Sq. Dev.	152.88 86	14.395 09	67.643 98	1.2591 33
Observati ons	33	33	33	33

Source: E-view 9 output 2022

Table 4.2 The descriptive characteristics of the variables are presented in table 4.2 above. The mean values are LNINTR 4.094497, LNMPR 2.645268, and LNINFR 2.607169 and LNGDP 8.173707. The median variables which measure the centrality of variables are distributed in the following pattern; LNINFR (2.555676), LNINTR (4.795543), LNMPR (2.602690) and LNGDP (8.431415) respectively. The probability corresponding to Jarque-Berra (JB) shows that all the variables were normally distributed. The p-values of the variables are significantly greater than 0.05. LNINTR and LNGDP are positively signed while LNINFR and LNMPR. The kurtosis that measured the peakness of the distribution of each variable

is, 1.545356, 3.413692, 2.360299 and 4.419331 respectively.

Data Analysis

Analysis of Unit Root Test

The unit root test was performed to ascertain the stationarity of the time series data under study so as to avoid running a spurious regression. Phillips-Perron method was used in the process. In considering the levels the data could be integrated of, Phillips-Perron test statistics was compared with the critical values at 5% and 10% level of significance. A situation whereby the (PP) test statistics is greater than the critical values with consideration on the absolute values, the data at the tested order will be said to be stationary

Summary of Unit Root Test

Table 4.3: Unit Root Test using Phillips-Perron Test

Vari able s	PPT	5% C.V	10 %C .V	p- Va lue	Orde r of integ ratio n
LNG DP	- 5.82 759 6	- 2.96 776 7	- 2.62 298 9	0.0 00 0	1(1)
LNI NFR	- 4.60 039 8	- 2.96 776 7	- 2.62 298 9	0.0 01 0	1(1)
LNI NTR	- 4.76 858 2	- 2.98 103 8	- 2.62 990 6	0.0 00 8	1(1)
LN MPR	- 8.08 265 8	- 2.98 103 8	- 2.62 990 6	0.0 00 0	1(1)

Source: Author's Compilation, 2022

Table 4.3 report the test for stationarity properties of the series following the PPT statistics. It indicates that all the variables

attained stationarity at the same order as reported; the PPT statistics for the respective variables were more negative than the critical values at 5% and 10% level of significance. The reported p-value is all less than 0.05 for which cause the null hypotheses with the presence of unit root in all the variables rejected. Based on the fact that the variables attained stationarity at first level first intercept I(1) it is advisable to test for cointegration using Johansen cointegration test.

Table 4.4: Johansen Co-integration test.

Date: 08/12/21 Time: 17:30				
Sample (adjusted): 1986 2020				
Included observations: 27 after adjustments				
Trend assumption: Linear deterministic trend				
Series: GDP EXCR INFR INTR MPR				
Lags interval (in first differences): 1 to 1				
Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.*
None *	0.815286	99.19159	69.81889	0.0000
At most 1 *	0.583464	53.59006	47.85613	0.0131
At most 2 *	0.508805	29.94394	29.79707	0.0481
At most 3	0.322320	10.74927	15.49471	0.2274
At most 4	0.009000	0.244106	3.841466	0.6213
Trace test indicates 3 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Table 4.4 above test identifies the number of long-run relationship that exists among the sets of integrated variables. The above trace result on Johansen cointegration test indicates 3 cointegrating eqn(s) at the 0.05 level, having three (3) equations that have a p-value less than 0.05. The implication of the analysis is that there is a long-run equilibrium

relationship between Inflation Rate fluctuation and GDP and therefore we are not accepting the null hypothesis of no cointegrating relationships among the variables. Thus, we are advised to use VECM regression analysis to test our hypotheses

Table 4. 5 VECM regression analyses

Dependent Variable: D(GDP)				
Method: Least Squares				
Date: 08/12/21 Time: 17:14				
Sample (adjusted): 1986 2020				
Included observations: 29 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	755.4428	1511.238	0.499884	0.6221
D(GDP(-1))	-0.775701	0.153544	-5.051987	0.0000
D(INTR(-1))	178.6100	59.93799	2.979914	0.0069
D(INFR(-1))	-40.87953	105.9217	-0.385941	0.7032
D(MPR(-1))	-210.3695	344.3029	-0.611001	0.5475
ECM(-1)	5410.804	1751.607	3.089051	0.0054
R-squared	0.583810	Mean dependent var		987.2590
Adjusted R-squared	0.470303	S.D. dependent var		8715.500
S.E. of regression	6343.164	Akaike info criterion		20.55465
Sum squared resid	8.85E+08	Schwarz criterion		20.88469
Log likelihood	-291.0424	Hannan-Quinn criter.		20.65801
F-statistic	5.143407	Durbin-Watson stat		1.866545
Prob(F-statistic)	0.001941			

Source: Author's Compilation, 2022

Table 4.5 shows the dynamic model of the impact of Exchange Rate fluctuation on Nigerian Economy using ECM. Every variable was set at lag 1 in accordance with the lag selection. According to the result, the ECM (-1) has the correct sign of negative meaning that about 54.10% of the errors are corrected yearly. Precisely, this speed of adjustment shows that about 54.10% of errors generated in each period is automatically corrected by the system in the subsequent period and is statistically significant at 0.005

The adjusted coefficient of determination (R^2) value of 0.470303 shows that all the

variables are jointly fitted as explained by 47% of GDP output. The Durbin-Watson value of 1.86 implies that the model does not suffer from autocorrelation problem. The overall models are seen to be statistically significant at 5% level giving the f-stat of 5.14

Equation Model

$$D(\text{GDP}) = 755.442826483 - 0.77570078543 * D(\text{GDP}(-1)) + 178.610028467 * D(\text{INTR}(-1)) - 40.8795266874 * D(\text{INFR}(-1)) - 8.76812872757 * D(\text{EXCR}(-1)) - 210.369546233 * D(\text{MPR}(-1)) + 5410.80364689 * \text{ECM}(-1)$$

Test of Hypothesis

This section tested the hypotheses stated in chapter one and modeled in chapter three. Three steps were utilized in interpreting the (ECM) results. The steps involved are:

Test of hypothesis was carried out as follows;

Step 1: - Re- statement of the hypothesis in null and alternative form

Step 2:- Statement of decision criteria

Step 3:- Decision

Test of Hypothesis One

Step One: Restating Hypothesis One in Null and Alternate Forms

H₀₁: MPR fluctuations has no significant effect on the GDP in Nigeria

H_{a1}: MPR fluctuations has significant effect on the GDP in Nigeria

Step 2:- Statement of decision criteria

Reject the null hypothesis if the t- statistics is greater than 2.0 and p-value is less than 5% otherwise accept the null hypothesis

Step 3:- Presentation of Test Result

Table 4.5 was used to test Hypothesis One

Step 4:- Decision

A decision criterion is to reject H₀ if the t- statistics is > 2.0 and if the probability of the t- statistics is < 0.05. The coefficient MPR is negatively signed with p-value 0.5475>0.05. Thus, we reject the null hypothesis that MPR has negative and no significant effect on Gross domestic product (GDP) in Nigeria

Test of Hypothesis Two

Step One: Restating Hypothesis Two in Null and Alternate Forms

H₀₁: Inflation Rate fluctuations has no significant effect on the GDP in Nigeria

H_{a2}: Inflation Rate fluctuations has significant effect on the GDP in Nigeria

Step 2: Statement of decision criteria

Reject the null hypothesis if the t- statistics is greater than 2.0 and p-value is less than 5% otherwise accept the null hypothesis

Step 3:- Presentation of test result

Table 4.5 was used to test hypothesis Two

Step 4:- Decision

A decision criterion is to reject H₀ if the t- statistics is > 2.0 and if the probability of the t- statistics is < 0.05. The coefficient INFR is negatively signed with p-value 0.7032>0.05. Thus, we accept the null hypothesis that Inflation Rate has negative and no significant effect on Gross domestic product (GDP) in Nigeria

4.2.3 Test of Hypothesis Three

Step One: Restating Hypothesis Two in Null and Alternate Forms

H₀₁: There is no causal relationship between Interest Rate fluctuations and the GDP in Nigeria

Ha₂: There is causal relationship between Interest Rate fluctuations and the GDP in Nigeria

Step 2: Statement of decision criteria

Reject the null hypothesis if the t- statistics is greater than 2.0 and p-value is less than 5% otherwise accept the null hypothesis

Step 3:- Presentation of test result

Table 4.4 Johansen Co-integration test was used to test hypothesis three

Step 4:- Decision

From the above table, the Johansen co integration tests revealed that the maximal Eigen value statistics and rank test show no existence of co integration equations for GDP, INFR, MPR, and EXCR all at the p values greater than 5% level of significance while INTR has p value less than 5% significance level

The conclusion drawn from this result is that there is no long-run relationship among the explanatory variables in our various models. So we reject the null hypothesis which states that Interest Rate has no causal long-run relationship with the Gross Domestic Product in Nigeria

4.2 Discussion of Result

The following results were generated from the analysis of the study.

- **Objective One:** To determine the effect of Monetary Policy Rate fluctuations on the GDP in Nigeria.

The results of our estimation revealed that Monetary Policy has no significant effect on Gross domestic product in Nigeria. This was explained by the negative coefficient value (0-210.3695) of MPR and its corresponding probability value (0.5475), which is greater than 0.05 significant levels

- **Objective Two:** To ascertain the impact of Interest Rate fluctuations on the GDP in Nigeria

The results of our estimation revealed that Interest Rate fluctuation has significant impact on Gross domestic product in Nigeria. This was explained by the positive coefficient value (178.6100) of INTR and its corresponding probability value (0.0069), which is less than 0.05 significant levels

- **Objective Three:** To examine the causal relationship between Inflation Rate fluctuations and the GDP in Nigeria

The result from the Johansen Co-integration Test showed that there is no long-run relationship among the explanatory variables in our various models. So we accept the null hypothesis which states that Inflation Rate fluctuation has no causal long-run relationship with GDP.

Summary of the Findings, Conclusion and Recommendations

5.1 Summary of the Findings

- Monetary Policy Rate has negative and no significant effect on GDP in Nigeria within the year under review.
- Interest Rate has positive and significant impact on GDP in Nigeria
- There is no long-run relationship between inflation rate fluctuation and gross domestic product in Nigeria.

Conclusion

This paper examines the impact of exchange rate fluctuation on gross domestic product in Nigeria within the year 1986-2021, while the

study applied the Error Correction Model (ECM) and was discovered that GDP was negatively affected by positive shocks to Money Policy Rate in the long-run. Meanwhile, interest rate has positive and significant impacts on GDP. Inflation rate was found to have long-run relationship with GDP. We have concluded that exchange rate instability has no significant effect on the gross domestic product of the Nigerian economy even though the influence is not potent in the short-run and the resultant effect of depreciation in Naira exchange rate to Dollar (\$) on Nigeria economic growth is positive. The policy implication of this is that, no policy intervention of these macroeconomic variables can be implemented to achieve long-term economic results in Nigeria. As a result, both fiscal and monetary authorities should collectively develop the political will to implement policies that will boost Nigeria production base to maximize the gains from foreign exchange flow.

Recommendations

1. Monetary Policy Authorities should develop the political will to ensure Monetary Policy Rate stability and stabilize Nigeria's economy.
2. Fiscal and Monetary authorities should collectively develop the political will to implement policies that will boost the Nigerian production base to maximize the gains from foreign exchange flow.
3. Government should stimulate the productive capacity of Nigeria, especially the agricultural sector to increase aggregate supply of basic food products to meet the needs of the industrial sectors to bring down prices of goods and services and consequently boost economic growth in the country.

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