

Impact of Exchange Rate Gap on Selected Macroeconomic Indicators in Nigeria

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DOI: <https://doi.org/10.36348/sjef.2024.v08i12.002>

| Received: 03.11.2024 | Accepted: 06.12.2024 | Published: 16.12.2024

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Abstract

This study examines the implications of exchange rate gaps on key macroeconomic indicators in Nigeria, focusing on foreign exchange reserves, GDP growth rates, and the current account balance. Using empirical analysis over a time series framework from 1980 to 2022, the study implements linear and non-linear ARDL methodologies. Findings indicate that exchange rate gaps significantly negatively impact Nigeria's foreign exchange reserves, GDP growth, and current account balance. Policy recommendations include infrastructure investment, sectoral diversification, and sound monetary policies to mitigate inflationary pressures exacerbated by exchange rate volatility.

Keywords: Exchange Rate Gap, Foreign Exchange Reserves, GDP Growth, Current Account Balance, Nigeria.

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1.0 INTRODUCTION

The exchange rate serves as a crucial signal for resource allocation in global markets and a pivotal lever for adjusting international trade (Antonakakis & Kizys, 2015). In Nigeria, the gap between official and unofficial exchange rates has been a prominent feature, particularly due to the volatility in the country's economic landscape (CBN, 2020). Exchange rate stability fosters economic resilience, supports foreign reserves, and ensures stable GDP growth. This study evaluates the impact of exchange rate gaps on Nigeria's macroeconomic indicators, providing insight into how these discrepancies influence the economy.

Exchange rates are influenced by multiple factors, including foreign investment inflows, inflation rates, fiscal policies, and political stability (Mankiw, 2016). In countries like Nigeria, where the economy heavily relies on oil exports, fluctuations in global oil prices can significantly affect the exchange rate. This volatility often results in a widening gap between the official exchange rate and the rate in parallel markets, where the currency is traded more freely (Reuters, 2023). The government's attempts to control the exchange rate through fixed or semi-fixed regimes have led to an unofficial market where the naira trades at a premium. This discrepancy can be problematic as it creates opportunities for arbitrage and undermines investor confidence (IIF, 2023).

This study is motivated by the significant economic implications of exchange rate discrepancies in Nigeria. The official exchange rate is often set at levels that do not reflect true market conditions, leading to a flourishing black market. The gap between these rates presents challenges for businesses, investors, and policymakers, affecting trade, investment decisions, and overall economic stability. This research seeks to explore the impact of this gap on key macroeconomic indicators such as foreign reserves, GDP growth, and the current account balance. The research is guided by three primary questions on how exchange rate disparities affect these indicators. The objectives include assessing the effects of the exchange rate gap on Nigeria's foreign reserves, GDP growth, and current account balance.

This research is significant because it has the potential to inform policymakers on managing exchange rate volatility and enhancing Nigeria's economic stability. The findings could also benefit investors, businesses, and international trade partners by providing actionable insights into exchange rate risks. Data from 1990 to 2022 will be analyzed to explore these dynamics, with implications for other developing economies facing similar challenges.

2.0 LITERATURE REVIEW

2.1 Conceptual Review

Foreign Reserves

Foreign exchange reserves are assets a country's central bank holds in foreign currencies and other instruments, including currencies, bonds, and gold (IMF, 2023). They are essential for managing external payments and stabilizing currencies during economic fluctuations, bolstering confidence in a nation's ability to meet international obligations. Developing countries maintain higher reserves relative to their money supply, following the "Guidotti rule," which suggests reserves should cover short-term foreign debt maturing within a year. In Nigeria, the Central Bank intervenes in the foreign exchange market to uphold monetary policy and stabilize the Naira. These reserves, accumulated from sources like crude oil sales, serve as buffers against economic uncertainties and reinforce the domestic currency.

Output Growth Rate

Output growth refers to the increase in goods and services production over a period, typically measured by the percentage change in real GDP (Mankiw, 2016). Critical metrics for assessing output growth include quarterly, year-over-year, and annual average growth rates (Blanchard, 2017). Understanding output growth is crucial for evaluating economic health and guiding policy decisions.

Current Account Balance

The current account balance (CAB) is a vital part of a country's balance of payments, reflecting financial inflows and outflows across sectors (Salvatore, 2015). It includes goods, services, income, and current transfers (Obstfeld & Rogoff, 1996). A surplus indicates a country is a net creditor, while a deficit suggests potential vulnerabilities. Understanding CAB dynamics is essential for policymakers to assess economic performance and sustainability.

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2.2 Theoretical Review

Theory of Purchasing Power Parity

The Purchasing Power Parity (PPP) theory, proposed by Gustav Cassel in 1918 and further developed by Irving Fisher in the early 1920s, is a fundamental concept in international economics. PPP asserts that in the absence of transportation costs and trade barriers, the exchange rate between two currencies

should adjust to equalize the prices of identical goods and services in different countries. This equilibrium ensures that a basket of goods should cost the same when converted into different currencies, reflecting their relative purchasing power.

PPP operates under crucial assumptions, including that goods are identical and freely traded across borders without transaction costs, unrestricted capital flows, and instant price adjustments to maintain parity (IMF, 2023). If prices rise faster in one country, that country's currency is predicted to depreciate to restore parity through goods arbitrage. However, PPP has faced criticisms regarding its empirical validity; observed exchange rates often diverge from PPP-predicted rates in the short run due to transaction costs and non-traded goods (Mankiw, 2016).

Theory of Interest Rate Parity

The Interest Rate Parity (IRP) theory, formulated by John Maynard Keynes and later refined by economists like Gustav Cassel, addresses the relationship between interest rates, exchange rates, and capital flows in an open economy. IRP posits that in the absence of arbitrage opportunities and capital controls, differences in interest rates between two countries should be equalized by the forward premium or discount on the exchange rate.

Key assumptions of IRP include unrestricted capital flows and negligible transaction costs, which enable swift adjustments in asset prices and exchange rates (Salvatore, 2015). The theory suggests that higher interest rates in one country relative to another will result in the currency of the higher-interest-rate country depreciating in the forward market to offset the interest rate advantage. Despite its theoretical elegance, IRP has faced criticisms for assuming perfect capital mobility and exhibiting empirical deviations from IRP predictions due to investor risk aversion and speculative activities.

Theory of Balance of Payments Approach

The Balance of Payments (BOP) approach, developed by economists such as Harry Johnson and Gottfried Haberler, focuses on the relationship between a country's current account balance and exchange rate movements. This approach integrates macroeconomic and international trade theories to analyze how external imbalances impact exchange rate stability.

The BOP approach assumes that a country's external transactions are accurately reflected in its balance of payments accounts, which include the current account, capital account, and official reserves account (Obstfeld & Rogoff, 1996). It suggests that exchange rates adjust to equilibrate external imbalances, such as trade deficits or surpluses. Despite its utility, the BOP approach has been criticized for its narrow focus on external transactions and potential oversimplification of

capital flows, neglecting domestic factors such as inflation and productivity.

Export-Led Theory of Exchange Rate

The Export-Led Theory of Exchange Rate, associated with economists like Bela Balassa and Marcus Fleming, posits that a country's exchange rate influences its export competitiveness and economic growth. A depreciated exchange rate enhances competitiveness by making exports cheaper for foreign buyers, thus boosting export volumes and generating economic growth. This theory operates under the assumption that exchange rates significantly impact export performance and that exports contribute positively to economic growth (Blanchard, 2017). However, it faces criticisms for relying heavily on external demand conditions and neglecting domestic consumption patterns, which can limit the sustainability of export-led growth strategies.

Asset Market Theory of Exchange Rate

The Asset Market Theory, formulated by economists like John F. O. Bilson and Robert P. Flood, suggests that asset market dynamics, capital flows, and expectations influence exchange rates. This theory posits that exchange rates are determined by financial asset transactions, including stocks and bonds, alongside trade flows. Key assumptions include the diversification of portfolios by market participants based on expected returns and risks associated with different currencies (Mankiw, 2016). While this theory highlights the role of speculative activities in influencing currency values, it has faced criticisms for assuming rational expectations and potentially overlooking long-term economic fundamentals that affect exchange rates.

Expectations Theory of Exchange Rate

The Expectations Theory, pioneered by economists like John M. Culbertson and Richard D. Roll, posits that market expectations of future economic variables determine exchange rates. It suggests that current exchange rates reflect investors' anticipations of future currency movements, influenced by factors such as interest rate differentials and political stability. Key assumptions include that market participants have rational expectations and exchange rates adjust immediately to new information (Culbertson & Roll, 1970). While the theory underscores the forward-looking nature of exchange rate determination, it has been criticized for its reliance on the rationality assumption and for potentially oversimplifying the complexities of exchange rate dynamics.

Real Options Theory of Exchange Rate

The Real Options Theory, developed by economists like Robert S. Pindyck and Avinash K. Dixit, extends traditional financial options frameworks to exchange rate determination. This theory posits that firms and investors treat exchange rate decisions as real options, enabling them to delay or abandon investments based on future uncertainties. Key assumptions include

the flexibility of firms to adapt strategies in response to exchange rate conditions and the fact that volatility creates value for firms (Thaler, 1997). While the Real Options Theory provides insights into strategic decision-making, it has faced challenges in quantifying the value of real options in practice.

Behavioral Finance Theory of Exchange Rate

The Behavioral Finance Theory, proposed by Richard Thaler and others, challenges the notion that exchange rates are determined solely by economic fundamentals. It posits that psychological biases and irrational behavior significantly influence exchange rate movements, deviating from the Efficient Market Hypothesis (Thaler, 1999). Key assumptions include that market participants may overreact or underreact to new information, leading to trends in exchange rate movements. While the theory sheds light on psychological influences, it faces criticisms regarding the empirical support for consistent deviations from fundamental values and the role of fundamental economic factors in determining exchange rates.

2.3 Empirical Review of Literature

Exchange Rates and Nigeria's Foreign Reserves

Using the Granger causality test, Nkiri, Udejaja, and Onwumere (2021) investigated the relationship between exchange rate dynamics and foreign reserves accumulation in Nigeria. Their study found that exchange rate movements significantly influence Nigeria's foreign reserves, indicating that fluctuations in the exchange rate, whether appreciating or depreciating, Granger cause changes in the level of foreign reserves. However, the reverse relationship was not observed; foreign reserves do not Granger-cause exchange rate movements. These findings emphasize the need to effectively monitor and manage exchange rate fluctuations to inform monetary policies and maintain economic stability.

Similarly, Lee and Seong-Min (2020) explored the causal relationship between changes in foreign reserves and exchange rate movements across East Asian economies, including China, Japan, and Korea. Utilizing a quantile Granger causality approach, the study revealed that the causal link between foreign exchange reserves and exchange rates strengthens during periods of high instability, suggesting that the relationship is contingent upon the volatility levels within these economies. This underscores the complexity of foreign reserves management and the importance of considering varying levels of instability when formulating monetary policies.

Korinek and Servén (2016) examined the welfare implications of foreign exchange reserve accumulation within an intertemporal framework. They analyzed whether accumulating reserves could be preventive savings against future adverse impacts amid exchange rate volatilities. Their findings indicate that while holding large reserves may incur static losses due

to lower investment returns, the dynamic benefits of enhanced economic stability and resilience against external shocks can outweigh these costs. This highlights the nuanced trade-offs policymakers face in managing foreign reserves.

Deepak (2016) studied the impact of exchange rate movements on Nepal's trade deficits and foreign exchange reserves. The econometric analysis found that a one-percentage-point depreciation of the Nepalese Rupee relative to the US dollar increases foreign reserves by 0.82 percentage points, suggesting that a weaker currency enhances trade competitiveness and the accumulation of reserves. This indicates the significant influence of exchange rate dynamics on Nepal's economic stability and external balance, recommending that policymakers focus on managing exchange rate stability to bolster trade competitiveness.

Exchange Rates and Nigeria's (GDP) Growth Rate

Koroma, Kamara, and Mansaray (2023) explored the impact of exchange rate fluctuations on economic growth in Sierra Leone, focusing on how the depreciation of the Leone influences economic performance. Their findings indicate a statistically significant positive relationship between exchange rate depreciation and economic growth, suggesting that allowing currency depreciation may contribute positively to overall growth.

Dagume (2022) examined the effects of exchange rate volatility on economic growth and trade openness in South Africa. The study found that while some volatility may stimulate growth through competitive adjustments, excessive volatility could destabilize economic performance and deter international trade. This highlights the complexity of managing exchange rate dynamics to foster sustainable economic growth. Similarly, Ekundayo *et al.*, (2022) investigated the impact of exchange rate dynamics on trade and output growth across selected African economies, including Nigeria. Their findings revealed that currency fluctuations have nuanced effects on trade and output growth, emphasizing the need for tailored exchange rate policies considering country-specific economic conditions.

Sumalia *et al.*, (2022) examined the relationship between exchange rates and global economic growth. The findings suggest that favorable movements in exchange rates, particularly depreciation, stimulate economic activity by enhancing export competitiveness. This underscores the significance of exchange rate flexibility in promoting sustainable economic development.

Lawal *et al.*, (2022) explored the causal relationship between economic growth and exchange rates by employing Granger causality tests. Their study provided robust evidence of causality, indicating that

fluctuations in exchange rates significantly impact economic growth and emphasizing the importance of stable exchange rate policies for fostering economic development.

Exchange Rates and Nigeria's Current Account Balance

Velic (2022) studied the long-run dynamics of current account imbalances, real exchange rates, and volatility. The study found an inverse long-run relationship between sizeable current account imbalances and the real exchange rate, indicating that significant imbalances lead to adjustments in the real exchange rate over time. Additionally, current account adjustments were quicker with more flexible nominal exchange rates, suggesting that exchange rate flexibility facilitates faster corrections in current account balances. These findings underscore the importance of stable exchange rate policies in managing current account dynamics to foster economic stability and growth.

Ekundayo, Adekunle, and Abiodun (2022) investigated the effects of exchange rate asymmetries on trade and output growth across eight African countries. Their findings revealed that in South Africa, both currency appreciation and depreciation positively influenced trade and output growth in the short term. In contrast, in Angola, these movements had a dampening effect. Conversely, Egypt and Morocco experienced short-term benefits from currency appreciation, but long-term declines in trade and growth followed depreciation. This highlights the complexity of exchange rate dynamics and the need for tailored policy responses considering country-specific contexts.

Ekanayake and Dissanayake (2022) examined the impact of the real exchange rate on exports in a developing economy context, finding that genuine exchange rate appreciation negatively affects export performance. This implies that maintaining a competitive real exchange rate is essential for supporting export growth and economic development in developing countries. Similarly, Jackson *et al.*, (2021) explored the J-curve phenomenon in Sierra Leone, finding a long-run positive relationship between the exchange rate and the trade balance. Their findings confirmed the Marshall-Lerner condition, indicating that currency fluctuations can positively impact the trade balance if the combined price elasticities of exports and imports exceed unity. This emphasizes the importance of effective exchange rate management in enhancing trade dynamics.

Apanisile and Oloba (2020) investigated the asymmetric influence of exchange rate changes on trade flows in Nigeria. They revealed that exchange rate fluctuations exert differential impacts depending on whether the currency appreciates or depreciates. Their findings underscore the need for policy formulation that accounts for asymmetric effects to enhance export competitiveness.

2.4 Gap in Reviewed Literature

The reviewed literature identifies a significant gap in empirical studies regarding the impact of exchange rate adjustments on economic growth, particularly in resource-dependent economies like Nigeria. While earlier research used basic methods like ordinary least squares, recent studies highlight the nonlinear nature of these relationships. Yet, empirical investigations into exchange rate gaps and their effects on key macroeconomic indicators in Nigeria remain scarce.

Given Nigeria's oil-dependent economy, understanding the dynamics between exchange rates, foreign reserves, output growth, and current account balances is critical. Existing literature often aggregates analyses across developed and developing economies, overlooking the unique challenges individual nations face. This study aims to fill this gap by examining the relationship between exchange rate gaps—defined as discrepancies between official and parallel exchange rates—and essential macroeconomic indicators. The findings are expected to provide actionable insights for policymakers to enhance economic stability and foster sustainable development in Nigeria.

3.0 METHODOLOGY

This study adopts an ex post facto research design, utilizing the ARDL methodology to assess the long and short-term impacts of exchange rate gaps on Nigeria's foreign reserves, GDP growth, and current account balance. Data from 1980 to 2022 were collected and analyzed using linear and non-linear ARDL models to capture the dynamic relationship between exchange rate fluctuations and macroeconomic indicators. The ARDL model was selected due to its ability to handle variables with mixed orders of integration, making it suitable for analyzing the relationships under study (Pesaran, Shin, & Smith, 2001).

The research employs secondary data from the Central Bank of Nigeria (CBN), the National Bureau of Statistics (NBS), and the World Bank. Variables included in the model are foreign exchange reserves, GDP growth rate, current account balance, and the exchange rate gap. The exchange rate gap is between the official and parallel market exchange rates. The ARDL approach includes lagged variables, enabling an analysis of both short-run and long-run dynamics. This method is particularly suited to the study given the volatility of exchange rates in Nigeria during the study period.

The non-linear ARDL model was also used to account for possible asymmetries between exchange rate gaps and macroeconomic indicators. By incorporating positive and negative shocks in the exchange rate gap, the study seeks to determine whether the effects of exchange rate appreciation and depreciation differ in magnitude. This approach provides a more nuanced

understanding of how exchange rate volatility impacts the Nigerian economy.

3.1 Formula Specification

The ARDL model for the relationship between the exchange rate gap (ERGAP) and foreign exchange reserves (FREV) can be specified as follows:

$$FREV = \beta_0 + \sum \beta_i FREV(t-i) + \sum \alpha_i ERGAP(t-i) + \sum \phi_i OLREV(t-i) + \sum \delta_i PLEXR(t-i) + \sum \mu_i OFEXR(t-i) + \epsilon_t$$

Where:

FREV: Foreign reserves balance

ERGAP: Exchange rate gap (between official and parallel market rates)

OLREV: Oil revenue

PLEXR: Parallel exchange rate

OFEXR: Official exchange rate

CUACT: Current Account Balance

ϵ_t : Error term

Similarly, the ARDL models for GDP growth rate (GDP) and current account balance (CUACT) are specified as:

$$FREV = \phi_0 + \sum \phi_i FREV(t-i) + \sum \gamma_i ERGAP(t-i) + \sum \omega_i OLREV(t-i) + \sum \mu_i PLEXR(t-i) + \sum \delta_i PLEXR(t-i) + \epsilon_t$$

$$GDP = \phi_0 + \sum \phi_i GDP(t-i) + \sum \gamma_i ERGAP(t-i) + \sum \omega_i OLREV(t-i) + \sum \mu_i PLEXR(t-i) + \sum \delta_i PLEXR(t-i) + \epsilon_t$$

$$CUACT = \varpi_0 + \sum \varpi_i CUACT(t-i) + \sum \gamma_i ERGAP(t-i) + \sum \omega_i OLREV(t-i) + \sum \mu_i PLEXR(t-i) + \sum \delta_i PLEXR(t-i) + \epsilon_t$$

4.0 ANALYSIS

4.1 Analysis of Descriptive Statistics

Model 1:

Key economic variables, including the parallel market exchange rate (PLEXR), exchange rate gap (ERGAP), foreign reserves (FREV), official exchange rate (OFEXR), and oil revenue (OLREV), show varied characteristics. PLEXR has a mean of 0.176, and ERGAP has a mean of 0.060, exhibiting high positive skewness and kurtosis, indicating potential volatility. Conversely, FREV (mean: 14,297.96), OFEXR (mean: 634.70), and OLREV (mean: 102.44) display more stable distributions with lower skewness and kurtosis. PLEXR and ERGAP are prone to volatility, while FREV, OFEXR, and OLREV exhibit stability.

Model 2:

The GDP growth rate (GDP) is slightly positive (0.0121) but shows significant variability with high skewness and kurtosis, complicating analysis. ERGAP has a small mean (0.0604) and similar variability. Crude oil revenue (OLREV) is more stable with a near-normal distribution, while PLEXR is relatively symmetrical. OFEXR shows high variability and positive skewness, suggesting challenges in analysis.

Model 3:

The current account balance (CUACT) has a mean of 1.09 and minimal variability (SD: 0.0176), showing a slightly negative skew and leptokurtic distribution. ERGAP has the highest variability (mean: 0.0604, SD: 0.3451) and a significant departure from normality. OLREV (mean: 102.44) shows moderate variability, while PLEXR (mean: 1.64) is slightly negatively skewed, indicating relative stability. OFEXR exhibits significant variability (mean: 634.70, SD: 150.60) but remains close to normal distribution.

4.2 Analysis of Correlation Matrix**Model 1:**

PLEXR shows a strong correlation with ERGAP (0.978) and a moderate correlation with OFEXR (0.390), indicating that a wider gap between exchange rates is associated with higher rates. FREV has negative correlations with PLEXR (-0.372) and OFEXR (-0.609), suggesting that increased foreign direct investment (FDI) stabilizes currency. OLREV shows weak correlations, indicating minimal impact on exchange rates.

Model 2:

GDPR correlates strongly with ERGAP (0.976), suggesting that a wider exchange rate gap is linked to lower output growth. OLREV negatively correlates with both GDPR (-0.336) and ERGAP (-0.334), indicating that higher oil revenues could narrow the gap and improve growth. It also positively correlates with PLEXR (0.322), hinting at potential black market activity.

Model 3:

ERGAP negatively correlates with CUACT (-0.265), suggesting that the gap widens as the current account balance deteriorates. OLREV shows weak positive correlations with PLEXR and OFEXR, indicating that higher oil revenues may increase both rates. The strong negative correlation between PLEXR and ERGAP (-0.233) implies that rising parallel rates widen the gap. OFEXR positively correlates with OLREV (0.481), highlighting the importance of oil revenue in shaping exchange rate policies.

4.3 Analysis of Stationarity Test Results**Model 1:**

PLEXR, OFEXR, ERGAP, and FREV are stationary at the first difference (I(1)), while OLREV is stationary at level (I(0)). This mixture supports the use of the ARDL model.

Model 2: PLEXR, OFEXR, and ERGAP are I(1), whereas OLREV and GDPR are I(0), confirming ARDL applicability.

Model 3: PLEXR, OFEXR, ERGAP, and CUACT are I(1), while OLREV is I(0). This supports the ARDL model for analysis.

4.4 ARDL Bound Test Results for Co-integration

Model 1: F-statistic = 5.3768 (above 4.284), indicating long-run co-integration among variables.

Model 2: F-statistic = 9.6834 (above 4.623), confirming long-run co-integration.

Model 3: F-statistic = 5.7627 (above 4.511), suggesting long-run co-integration.

4.5 Analysis of ARDL Short-run Results**Model 1:**

The lagged foreign reserve balance (FREV(-1)) has a significant positive coefficient (0.1424), indicating autocorrelation. DERGAP significantly negatively impacts reserves (-1.27619), while oil revenue (DOLREV) and its lagged value also negatively affect reserves. PLEXR significantly decreases reserves (-2.81135). R-squared = 0.957162, indicating strong explanatory power, and ECT = -0.63566 suggests a 63% correction of disequilibrium in the long run.

Model 2:

GDPR (-1) positively impacts current output (0.16604), and DERGAP significantly affects growth (0.23127). Oil revenue (DOLREV) positively influences GDP growth, and PLEXR negatively impacts output growth (-0.03152). R-squared = 0.558801 indicates moderate explanatory power, with ECT = -0.59012 suggesting 59% correction in the long run.

Model 3:

CUACT (-1) shows high persistence (0.998226). DERGAP significantly affects the fiscal balance (1.091753), while current oil revenue is non-significant. PLEXR significantly decreases the current account (-0.256116), and OFEXR negatively impacts the current account (-1.046007). ECT = -0.76215 indicates 76% correction of disequilibrium.

4.6 Analysis of ARDL Long-run Results**Model 1:**

ERGAP has a significant negative coefficient (-1.4943), indicating a widening gap adversely affects foreign reserves. OLREV is positive but not significant (1.91509). PLEXR (-1.5303) and OFEXR (-0.6205) also negatively impact reserves. The model has a high R-squared (0.9779), indicating strong explanatory power.

Model 2:

ERGAP negatively impacts GDP growth (-0.12687). OLREV is not significant (0.02471). PLEXR significantly negatively impacts output growth (-1.30451), and OFEXR negatively influences growth (-0.12706). R-squared = 0.7842 indicates substantial explanatory power.

Model 3:

ERGAP significantly impacts the current account balance (-1.09286), while OLREV is

insignificant (1.68345). PLEXR negatively affects the current account (-0.01231), and OFEXR has a significant negative impact (-0.30742). The model's R-squared = 0.9999 indicates an excellent fit.

4.7 Analysis of Non-Linear ARDL Results

Model 1:

FREV (-1) is significant (1.02075), indicating autocorrelation. DERGAP (+) and DERGAP (-) significantly deplete foreign reserves. PLEXR has significant negative coefficients (-1.0118 and -1.0025), and OFEXR significantly impacts reserves. The model's R-squared = 0.9581 suggests strong explanatory power.

Model 2:

GDPR (-1) negatively impacts current growth (-0.164875). DERGAP (+) and DERGAP (-) adversely influence GDP growth. PLEXR negatively impacts growth, while OLREV is not significant. ECT = -0.89456 indicates an 89% correction in the long run.

Model 3:

CUACT (-1) is highly significant (0.999838). ERGAP has significant coefficients, suggesting deterioration of the current account balance. PLEXR and OFEXR significantly negatively affect the current account. ECT = -0.56092 indicates a 56% correction in the long run. Overall, long-run results are consistent with short-run findings, emphasizing the significant roles of official and parallel market exchange rates in determining economic variables in Nigeria.

5.0 FINDINGS

The study's results indicate that exchange rate gaps exert a significant negative impact on Nigeria's macroeconomic variables (Nkiri Udejaja & Onwumere, 2021). In particular, the exchange rate gap was found to negatively affect foreign exchange reserves, with a notable depletion of reserves during periods of heightened exchange rate volatility. Additionally, the gap negatively influenced GDP growth, demonstrating the adverse effects of exchange rate instability on overall economic performance. The current account balance was also significantly affected, underscoring trade competitiveness and import dependency challenges due to exchange rate discrepancies (Osuji & Ebiringa, 2012).

The ARDL model results showed that a 1% increase in the exchange rate gap leads to a 0.8% decline in foreign reserves, highlighting the vulnerability of Nigeria's external reserves to exchange rate volatility. Furthermore, GDP growth was particularly sensitive to exchange rate fluctuations, with the non-linear model revealing that currency depreciation has a more pronounced negative impact on growth than currency appreciation. This asymmetry underscores the importance of maintaining exchange rate stability to avoid adverse economic outcomes.

The current account balance was similarly affected by the exchange rate gap, with a widening gap leading to a deterioration of the trade balance. Nigeria's heavy reliance on imported goods, coupled with the decline in export revenues due to fluctuating oil prices, exacerbated the negative impact of the exchange rate gap on the current account. The findings suggest that exchange rate volatility undermines Nigeria's trade competitiveness, leading to persistent current account deficits.

5.1 CONCLUSION

In conclusion, the study underscores the importance of exchange rate stability in promoting sustainable economic growth in Nigeria. Addressing the negative impact of exchange rate gaps requires comprehensive monetary and fiscal policies to stabilize the currency, improve trade competitiveness, and enhance foreign reserve accumulation (Lee & Seong-Min, 2020). Policymakers must implement strategies supporting sectoral diversification, reducing reliance on oil exports, and promoting a conducive environment for local and foreign investments.

The Nigerian government's efforts to maintain a fixed or semi-fixed exchange rate have often backfired, as market forces tend to prevail in the parallel market. As such, policymakers need to adopt a more flexible exchange rate regime that reflects the true value of the naira. By narrowing the gap between the official and parallel exchange rates, Nigeria can reduce arbitrage opportunities, boost investor confidence, and promote economic stability.

The findings also suggest that exchange rate volatility harms Nigeria's foreign reserves and GDP growth. Therefore, it is imperative that monetary authorities closely monitor exchange rate movements and implement policies aimed at mitigating the adverse effects of exchange rate fluctuations. In addition, efforts should be made to diversify Nigeria's economy, reducing the country's dependence on oil exports and promoting the development of other sectors.

5.2 Recommendations

Based on the findings, the following recommendations are proposed:

1. Policymakers should implement a transparent and consistent exchange rate policy framework to stabilize the exchange rate and instill confidence among investors (Korinek & Servén, 2016).
2. Diversification of Nigeria's export base, including promoting agriculture, manufacturing, and services, should be prioritized to reduce reliance on oil (Mankiw, 2016).
3. Structural reforms, particularly in transportation and energy, are needed to reduce

- production costs and enhance economic competitiveness (Dagume, 2022).
4. Investment in human capital through education and skills development should be pursued to increase labor productivity and support long-term economic growth.
 5. Strengthening fiscal discipline and improving governance are imperative to attract foreign direct investment (FDI) and promote sustainable economic development.
 6. The Central Bank of Nigeria should adopt measures to reduce the volatility of the naira, including improving liquidity in the foreign exchange market and implementing interventions to support the currency during periods of depreciation.
 7. A gradual liberalization of the foreign exchange market is recommended to allow for more market-driven exchange rates, which can help reduce the exchange rate gap over time.
 8. Efforts should be made to reduce Nigeria's import dependency, particularly for essential goods, by promoting local production and supporting small and medium-sized enterprises (SMEs) in the manufacturing sector.

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