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Accepted: 29th Dec 2023 Received in Revised Form: 12th Jan 2024 Published: 26th Jan 2024

Abstract

Purpose: The purpose of this study is to investigate the effect of sectoral utilization of foreign exchange and the policy implications for economic growth in Nigeria.

Methodology: The methodology involved the use of annual time series data covering 1997 to 2022 for pre-diagnostic tests for unit roots which showed that the variables used in the study: economic growth (proxied by real gross domestic product), visible transactions, invisible transactions, treasury bill rate, and exchange rate, were stationary in the first difference. Hence, after first differencing the data, the Ordinary Least Squares (OLS) estimation method was used to estimate the model.

Findings: The findings of the study showed that visible and invisible foreign exchange utilization valid for foreign exchange transactions, in addition to exchange rate and Treasury bill rate impacted positively and significantly on economic growth in Nigeria during the study period. The results of the study strengthened the theoretical basis for the use of relevant policies to grow economies generally, and that of Nigeria in particular.

Unique contributor to theory, policy and practice: By implication, the governments at all tiers should endeavor to provide the enabling environment for greater availability and utilization of foreign exchange to further improve economic growth and sustainable development in Nigeria.

Keywords: Foreign exchange utilization, Foreign exchange inflows, Foreign exchange controls, Visible and invisible sectors, and Economic growth.
1. Introduction

Foreign exchange plays a significant role in promoting economic growth and sustainable development. According to Mishra (2023), foreign exchange is an important facilitator of international trade and a stimulator of economic growth but can also have a negative impact on the economy when a sharp foreign exchange surge destabilizes macroeconomic stability. Foreign exchange comprises foreign currencies other than that of the domestic economy, drafts, bills, letters of credit, and travellers’ cheques which are denominated and ultimately payable in foreign currencies.

In the Nigerian case, foreign exchange is sourced from the Central Bank of Nigeria (CBN), autonomous receipts, gifts and loans, export of goods and services (gas, oil, and non–oil), capital importation, external borrowings/grants, home remittances and domiciliary accounts (Nwaoba, 1999). The foreign exchange inflows, as reported in the CBN Statistical Bulletin (2023), are utilized in various sectors of the Nigerian economy for transactions valid for foreign exchange, broadly classified as visible and invisible transactions. The visible (imports) are categorized under industrial sector raw materials and machinery, spare parts and CKD; agricultural sector; food products; manufactured products; transport sector; minerals; and oil sector. The invisibles which are mainly services consist of business services, communication services, construction and related engineering services, distribution services, educational services, environmental services, financial services, health-related and social services, recreational, cultural and sporting services, and transport services.

Central to the demand and supply of foreign exchange in the economy is the rate at which it is exchanged as well as the management and the regulatory stance of the Central Bank. Market-driven interest rate policy, macroeconomic stability, political stability, rule of law, protection of lives and property, and conducive business environment all contribute to enhanced foreign exchange inflow and its utilization. In addition, the removal of structural, infrastructural, and technological constraints would further enhance the foreign exchange absorptive capacity of the Nigerian economy.

The utilization of foreign exchange in the various sectors of the economy has been constrained by an inadequate supply of foreign exchange to the economy despite the availability of huge potential sources of foreign exchange in the economy. A major factor militating against higher foreign exchange inflows into the economy over the years is the inability of the country to break the jinx of massive commodity exports without value addition, despite various industrialization policies pursued over the years. Instead, the country uses its meager foreign exchange earnings to import products produced from those same commodities it exported. Abina (2023) attributed other causes of the low foreign exchange inflow to overdependence on oil proceeds and imports, external debt/debt service burden, and unorthodox financial and economic policies, including foreign exchange and interest rate policies.
These challenges, notwithstanding, foreign exchange utilization in the various sectors of the Nigerian economy may have contributed to the growth and development of the economy. Thus, while past studies focused on investigating the impact of the use of the capital importation segment of foreign exchange (foreign investment, loans, equity) on the economy, this paper examines the effect of the sectoral utilization of total foreign exchange including capital importation in the various sectors of the Nigerian economy during the period, 1997 to 2022. The policy implications drawn from the results of the study are expected to further improve the performance of the Nigerian economy.

The rest of the paper is divided into four sections. In addition to Section 1, covering the introduction, Section 2 covers the literature review. Section 3 discusses the methodology while Section 4 analyses the data and discusses the findings of the paper. The paper is concluded in Section 5.

2. Literature Review
2.1. Theoretical review

The thrust of this research is to determine the impact of the sectoral utilization of foreign exchange for transactions valid for foreign exchange as categorized by the Central Bank on economic growth in Nigeria. While various authors have provided theoretical underpinning in support of the catalytic effects of capital inflow on economic growth and their channels into the recipient country, this section highlights the theory of international capital flows, theory of foreign exchange controls, theory of foreign exchange interventions, and the theories of economic growth.

2.1.1. Theory of international capital flows

Li (2018) asserted that the primary motive for international capital flows is to improve the economic growth and development of the recipient country while at the same time providing a source of income to the originating country. The difference in the level of economic development, interest rate spread, exchange rate system, the existence of capital controls, and the degree of capital liberalization play a significant role in determining the level of capital flows between countries. Li, therefore, summarized the four theories driving transnational capital flows as follows: the flow theory explains that the difference in interest rates leads to international capital flow; the portfolio theory further recognises that besides interest rates, the ability of investors and the creditworthiness of capital-importing countries are also important factors that influence transnational capital flow; the monetary analysis theory argues that the country’s monetary policy and level of domestic credit do influence international capital flow; and the transaction cost theory posits that the structure of cost in the economy can also affect capital flows. Thus, the theory highlighted important critical factors influencing foreign exchange flows which, if properly addressed, would enhance foreign exchange utilization and economic growth which are the main thrust of this study.
2.1.2. Theory of foreign exchange controls

Greenwood and Kimbrough (1987) investigated the theory of foreign exchange controls using a choice-theoretic cash-in-advance model. They found that while foreign exchange controls improve the trade balance and the balance of payments, they reduce welfare in a small open economy model because they place a quota on imports. Besides, they found that external shocks are transmitted to the domestic economy through the terms of trade; and devaluation does not affect the real economy. They concluded that foreign exchange controls do not necessarily achieve trade balance objectives, thus providing another view on the ongoing debate on the efficacy of foreign exchange controls on economic growth as evidenced in the Nigerian case.

2.1.3. Theory of foreign exchange intervention

Fanelli and Straub (2020) discussed the theory of foreign exchange interventions with the use of a model of a small open economy. Their theory depends on the proposition that choosing interventions amount to managing interest rate spreads between domestic and foreign bonds. The paper stressed that foreign exchange interventions are costly while opening up opportunities for profits for traders. According to the authors, the cost is convex in spreads, implying that larger spreads attract further speculation. Hence, the optimal intervention policy would be to lean against the wind in stabilizing the exchange rate, especially for macroeconomic stabilization, sectoral heterogeneity, and terms of trade management motives; smooth spreads that allow exchange rates to jump; promising future interventions as the need arises; and requires credibility and commitment by the Central Bank. The paper concluded that countries over-accumulate foreign exchange resources which could lead to welfare reduction and inefficiently low world interest rates. Besides, the paper underscored the importance of non-distortionary foreign exchange intervention policy to minimise the associated cost on foreign exchange availability and utilization which could affect economic performance as discussed in this study.

2.1.4. Economic growth theories

Since the main objective of this study is to investigate the effect of sectoral utilization of foreign exchange on economic growth in Nigeria, an overview of the relevant theories on economic growth is thus provided. The neoclassical theory postulated by Solow (1956) envisages that economic growth is exogenously determined by the interaction of labour quantity and quality (population growth and education), increase in capital consisting of savings and investment, and technological advancements. On the other hand, the new growth theory driven by Romer (1990) which is closely related to the endogenous theory, places emphasis on the quest of individuals to satisfy their personal needs and interests. Thus, the efforts put in by individuals, firms, and the government to meet those needs and want propel the economy to greater heights. Baldwin and Seghezza (1996) in their arguments on the new growth theory provided the basis for international trade contribution to economic growth. Thus, through international trade, foreign exchange inflow improves economic growth generally and in the case of Nigeria in particular. In view of
this, the study adopts the theoretical work of Baldwin and Seghezza as a basis for its theoretical framework.

2.2. Empirical Review

Chukwu, Chimarume, and Ezeaku (2021) investigated the effect of capital importation, one of the sources of foreign exchange inflow, on Nigeria’s economic growth using secondary annual data covering the period 2010 – 2019. The authors focused their study on the types of capital importation, namely, foreign direct investment, portfolio investment, and other financial investment which they used as independent variables and real gross domestic product as a dependent variable as a proxy for economic growth. Using the Vector Autoregressive (VAR) estimation method, the study found that capital importation had a positive and insignificant impact on economic growth in Nigeria during the study period. In view of this, the paper recommended that the government should provide an enabling environment, reduce insecurity, develop a code of conduct on multinational corporation practices, including re-investment of a significant part of their profits, ensure political stability, and avoid interference in the affairs of other arms of government.

Raguideau (2020) used qualitative research through interviews in the quest to investigate the impact of foreign exchange used by non-financial companies. The study found that non-financial business units access foreign exchange from the market to hedge against their commercial margin from potential loss due to currency exposure; and save their cash reserves in order to pay dividends and their suppliers. Besides, the findings showed that since the companies use their foreign exchange to conduct their financial operations for internal (intercompany loans, and increase of capital of subsidiaries) and external (payment of loans, and one-off transactions such as mergers or acquisitions), they hedge to protect their funding and investments. Also, the study found that few companies use their foreign exchange for speculation and earning arbitrage against which they have to hedge against losses. The study concluded that flexibility and adaptation were important components of a successful strategy for the use of foreign exchange.

Lloyd and Teshome (2018) analysed foreign currency access and allocation for businesses in Ethiopia to identify short-term solutions to improve foreign currency access and allocation for businesses, with particular focus on policies and regulations, processes, impacts, comparative experiences, and possible solutions for the identified problems. Using secondary sources and interviews, the summary of the findings of the study was: overvalued currency contributed to a trade deficit leading to persistent current account deficit in Ethiopia; foreign exchange markets were not clearing; foreign currency shortages led to long delays in accessing foreign exchange of between 4-12 months for essential imports and up to 3 years for non-essential imports, creating the opportunity for informal payments to accelerate access to foreign currency; the private sector, especially retailers, wholesalers, and import substituting firms were most affected by currency shortages which impacted negatively on their competitiveness; and Ethiopia exhibited symptoms
associated with overvalued exchange rates and foreign exchange shortages which led to the existence of informal foreign exchange markets, thus, pressuring authorities/regulators to resort to exchange controls or large exchange rate depreciations.

The paper recommended that the authorities should adopt an exchange rate regime that balances the needs of private businesses with those of the broader economy.

Ani and Uddeh (2021) examined the effect of exchange rate on Nigeria’s economic growth using secondary data from the CBN Statistical Bulletin covering the period 2009 – 2018. Applying Ordinary Least Squares estimation techniques, the paper found that the exchange rate was significantly related to economic activities but had non-significant effect on unemployment. The study concluded that exchange rate management should minimize volatility so as to encourage greater economic output and welfare.

Cole and Akintola (2021) investigated the relationship between interest rate and economic growth in the case of Nigeria using annual time series data from the CBN Statistical Bulletin for 1990-2019. Their study, using correlation methodology, concluded that interest rates had a positive but non-significant effect on economic growth in Nigeria during the period. Consequently, the paper recommended that the monetary authority should adopt an appropriate interest rate policy that would encourage a savings culture, and promote a friendly business environment suitable for economic activities.

Olabode (2018) studied the impact of the foreign exchange rate (represented by the real effective exchange rate and parallel exchange rate) on the performance of the manufacturing sector proxied by returns on equity of manufacturing firms in Nigeria using annual time series data covering 1990-2016. Using the Ordinary Least Squares estimation method, the paper concluded that the exchange rate (both real effective and parallel market) had positive and significant effect on the performance of the manufacturing sector. In this regard, the study recommended that the CBN should persist in implementing policies that would ensure exchange rate stability and subsequently improve the performance of the manufacturing sector.

John and Lawal (2019) investigated the effect of sectoral allocation of banks’ credit on economic growth in Nigeria using annual time series data for the period 1986-2015, Vector Error Correction Model (VECM) and Fully Modified Ordinary Least Squares (FMOLS) regression techniques. The findings of the study revealed that credit allocated to the productive sector had a positive and significant impact on economic growth during the period. However, credit allocated to general commerce, service, and other sectors was negative and significantly affected economic growth. The author concluded that sectoral allocation of banks’ credit significantly impacts economic growth in Nigeria, thus, imploring policymakers to implement policies that would enhance credit flows to the productive sector of the economy.
Salami and Kelikume (2011) assessed the linkage between the Nigerian manufacturing sector and the rest of the economy by applying Vector Autoregressive techniques. The findings of their study implied a weak linkage between the manufacturing sector and other sectors of the economy during the study period (1986-2010) after the use of quarterly time series data. However, the results indicated that only the building and construction sector as well as the hotel and restaurant sector seemed to be driving the growth of the manufacturing sector. The paper concluded that the slow response of the sectors to impulses in the other sectors could be traced to the need for policy continuity, consistency, and stability. Furthermore, the authors noted that the challenge of epileptic power supply, poor infrastructure, poor road network, and weak linkage between the manufacturing sector and the various Nigerian research institutions when properly addressed would mitigate the sectoral weak economic linkages.

Chigbu, Ubah and Chigbu (2015) researched the effect of capital inflows on the economic growth of the developing countries using Nigeria, Ghana, and India as case studies for the period 1986-2012. Applying Ordinary Least Squares estimation techniques, the study found that capital inflows had a significant impact on economic growth in the case of the three countries. The paper recommended that developing countries should provide the enabling environment to induce more capital inflows, so as to close the savings-investment gap and elevate economic growth in those countries.

Orji, Uche, and Ilori (2014) examined the impacts of four different types of foreign capital inflows into the economies of the West African Monetary Zone (WAMZ) on economic growth using Seemingly Unrelated Regression Estimation method during the period 1981-2010. The results of the study showed that the different measures of capital inflows had varied output growth impacts. Similarly, the results affected the economies of the Zone in different ways. For instance, the study found that overseas development assistance had a more positive impact on economic output in Sierra Leone and Ghana, while foreign direct investment raised output more in Nigeria and the Gambia. Besides, Liberia benefitted more from remittances while none of the inflows affected Guinea's economic output positively. In view of these, the paper recommended that WAMZ countries should adopt capital inflow enhancing policies to improve the output of their economies.

Djalab and Said (2023) investigated the impacts of international capital flows on economic growth in Algeria during the period 1990-2018, using Auto Regressive Distributed Lag (ARDL) method for co-integration analysis. The study found that only foreign direct investment had a positive and significant effect on economic growth both in the short run and long run. They noted that the outcome could be informed by the fact that most of the capital inflows were attracted to the petroleum industry which is the main source of economic growth in Algeria. As a result, the paper recommended that government should use fiscal policy to attract more foreign investors; comprehensively reform the financial system, including the opening of branches of the
national bank abroad to facilitate the transfer of immigrants funds; provide physical infrastructure; and develop plans, programmes, investment maps and information databases which would be made available to potential foreign investors as a guide to its foreign investment objectives. In addition, the government should tap into and benefit from experiences of successful developing countries in attracting foreign investments.

Akarara and Ouseibai (2022) appraised the effect of foreign capital inflows on economic performance in Nigeria over the period 1981 to 2020 using the Ordinary Least Squares estimation method. The study found that capital inflows had no significant impact on economic growth. Rather, the authors found that gross capital formation (domestic investment) affected economic growth in Nigeria both in the short run and long run. The paper inferred that the ineffectiveness of foreign capital inflows can be attributed to weak economic policies. In light of the above, the study recommended that the government should design policies that would encourage domestic investment; provide physical and social infrastructural development, and maximize the use of foreign donor resources.

Okoro, Nzotta, and Alajekwu (2019) assessed the effect of international capital inflows on the economic growth of Nigeria covering the period 1986 to 2016, categorizing the inflows into foreign direct investment (FDI), official development assistance (ODA), personal remittances (REM) and external debt (EXTDS). The model for the study was based on the theoretical foundation of Harrod-Domar which was estimated by the Ordinary Least Squares method. The results of the analysis showed that international capital inflows had long run positive and significant effects on the economic growth of Nigeria, especially foreign direct investment and personal remittances. On the other hand, external debt stock and official development assistance had no significant impact on economic growth during the period. The paper, thus, concluded by advising policymakers to ensure the proper use of external debts and official development assistance to achieve their desired goals. The study further urged the government to provide the enabling environment for foreign investments to flourish in order to grow the economy.

3. Methodology

3.1. Nature and Sources of Data

The data used in carrying out this study is secondary, comprising of economic growth proxied by Real Gross Domestic Product (RGDP), Foreign Exchange for Visible Transactions valid for foreign exchange (FEVT), Foreign Exchange for Invisible Transactions, mainly services, valid for foreign exchange (FEIT), Exchange rate (EXR) and Treasury Bill Rate (TBR) for 91 day bills. These data were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin for the year 2022. Real Gross Domestic Product is measured in million naira; foreign exchanges for visible and invisible transactions valid for foreign exchange are measured in millions of US dollars. The Exchange Rate is measured in Naira/US dollar while the Treasury Bill Rate is measured in percent.
3.2. Model Specification

In their efforts to estimate the impact of capital importation on economic growth, Chigbu et al. (2015) used foreign direct and portfolio investments, foreign aids, workers' remittances, and foreign borrowings as explanatory variables, while Chukwu et al. (2021) modified the former and utilized foreign direct investment, portfolio investment, and other financial investment in their own specification. Similarly, John and Lawal (2019) in their study of the effect of sectoral allocation of banks' credit on economic growth in Nigeria modeled the relationship as a function of aggregate deposit money banks’ loans to the production sector, general commerce, and service sector as well as total broad money, loan to deposit ratio and total number of bank branches in Nigeria.

Taking cognizance of their models and the need to achieve the objective of this study, the model for this investigation was developed. Specifically, economic growth proxied by real gross domestic product (RGDP), as the dependent variable, is expected to be affected by changes in foreign exchange for visible transactions (FEVT), foreign exchange for invisible transactions (FEIT), exchange rate (EXR) and treasury bill rate (TBR) as independent variables. It is expected that market-friendly interest rate and exchange rate policies will not only encourage foreign exchange inflows and availability but will facilitate their utilization in the various sectors of the Nigerian economy, thereby stimulating economic growth and development.

Functionally,

\[ RGDP = f(FEVT, FEIT, EXR, TBR) \] …………………………………………(1)

\[ RGDP = a_0 + a_1FEVT + a_2FEIT + a_3EXR + a_4TBR + \mu \] ………………… (2)

Where:

- RGDP = real gross domestic product, a proxy for economic growth
- FEVT = foreign exchange for visible transactions valid for foreign exchange
- FEIT = foreign exchange for invisible (services) transactions valid for foreign exchange
- EXR = exchange rate
- TBR = treasury bill rate
- \( a_0, a_1, a_2, a_3, \) and \( a_4 \) are parameters to be estimated while \( \mu \) is an error term.

A prori, \( a_1, a_2, a_3, \) and \( a_4 \) are expected to be positive.

The model will be estimated using the Ordinary Least Squares (OLS) technique after obtaining the summary statistics and validating the unit roots status of the annual time series data of those variables spanning 1997 – 2022.

4. Empirical analysis and discussion of results
4.1. Pre-Estimation Tests

In order to check for compliance of the data for the Ordinary Least Squares (OLS) estimation technique, summary statistics, and unit root tests were performed and the results are presented in Table 1 and Table 2.

Table 1: Summary Statistics

<table>
<thead>
<tr>
<th></th>
<th>RGDP</th>
<th>FEVT</th>
<th>FEIT</th>
<th>EXR</th>
<th>TBR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>508.7413</td>
<td>16703.26</td>
<td>10954.51</td>
<td>181.4054</td>
<td>9.254615</td>
</tr>
<tr>
<td>Median</td>
<td>530.1767</td>
<td>14916.19</td>
<td>9190.625</td>
<td>149.5900</td>
<td>9.000000</td>
</tr>
<tr>
<td>Maximum</td>
<td>757.7228</td>
<td>34201.99</td>
<td>31788.39</td>
<td>425.9800</td>
<td>18.880000</td>
</tr>
<tr>
<td>Minimum</td>
<td>234.6633</td>
<td>4337.50</td>
<td>413.3500</td>
<td>21.89000</td>
<td>3.250000</td>
</tr>
<tr>
<td>Std. Dev.</td>
<td>185.7749</td>
<td>8980.751</td>
<td>9378.420</td>
<td>107.0549</td>
<td>4.223987</td>
</tr>
<tr>
<td>Skewness</td>
<td>-0.183862</td>
<td>0.402250</td>
<td>0.708633</td>
<td>0.863635</td>
<td>0.464208</td>
</tr>
<tr>
<td>Kurtosis</td>
<td>1.495991</td>
<td>2.051589</td>
<td>2.475718</td>
<td>2.883995</td>
<td>2.539946</td>
</tr>
<tr>
<td>Jarque-Bera</td>
<td>2.597037</td>
<td>1.675596</td>
<td>2.473805</td>
<td>3.246665</td>
<td>1.163072</td>
</tr>
<tr>
<td>Probability</td>
<td>0.272936</td>
<td>0.432662</td>
<td>0.290282</td>
<td>0.197240</td>
<td>0.559039</td>
</tr>
<tr>
<td>Sum</td>
<td>13227.27</td>
<td>434284.9</td>
<td>284817.4</td>
<td>4716.540</td>
<td>240.6200</td>
</tr>
<tr>
<td>SumSq. Dev.</td>
<td>862807.4</td>
<td>2.02E+09</td>
<td>2.20E+09</td>
<td>286518.9</td>
<td>446.0516</td>
</tr>
<tr>
<td>Observations</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: E-Views version 10 outputs

The summary statistics showed that the error term violated the assumptions for the application of the OLS estimation technique. Consequently, a unit root test was performed to confirm the order of integration and estimation approach.
4.2. Unit Root Test Results.

Table 2: Unit Root Test Result

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF Test Result</th>
<th>First Difference 1(1) at 5%</th>
<th>Order of Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level 1(0) at 5%</td>
<td>Test Statistic</td>
<td>Critical Value P</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Value</td>
</tr>
<tr>
<td></td>
<td>First Difference 1(1) at 5%</td>
<td>Test Statistic</td>
<td>Critical Value P</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Value</td>
</tr>
<tr>
<td></td>
<td>Order of Integration</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LNRGDP</td>
<td>-5.3850</td>
<td>-3.6121</td>
<td>0.0004</td>
</tr>
<tr>
<td>LNFEVT</td>
<td>-4.2969</td>
<td>-3.6121</td>
<td>0.0123</td>
</tr>
<tr>
<td>LNFEIT</td>
<td>-4.1603</td>
<td>-3.6121</td>
<td>0.0164</td>
</tr>
<tr>
<td>LNEXR</td>
<td>-5.1453</td>
<td>-3.6121</td>
<td>0.0019</td>
</tr>
<tr>
<td>TBR</td>
<td>-3.2435</td>
<td>-3.0048</td>
<td>0.0308</td>
</tr>
</tbody>
</table>

Source: E-Views version 10 outputs

All the variables were stationary at first difference 1(1), implying that the use of the OLS method would require that all the variables should be at the first difference to avoid spurious results.

4.3. Model Estimation Results

The model was estimated with OLS after the data was first differenced in compliance with the dictates of the unit root test. The results of the estimation are presented in Table 3.

Table 3: Model Estimation Results Using Differenced Data

Dependent Variable: DLNRGDP

Method: Least Squares

Date: 11/11/23   Time: 08:29

Sample (adjusted): 1998 2022

Included observations: 25 after adjustments
The results of the estimation using the first differenced data as shown in Table 3 revealed that the variables came out with the expected positive signs and were significant as indicated by their t-statistics. The positive impact of capital importation on economic growth was corroborated with Chukwu, Chimaru & Ezeaku (2021), though their study focused only one aspect of foreign exchange inflow and did not, as with other previous studies, discriminate on foreign exchange valid of not-valid for foreign exchange. Furthermore, the adjusted R-squared for the first differenced data showed that the explanatory variables explained over 62% of the variation in economic growth while the F-statistics also confirmed the model performed well. In addition, the Durbin-Watson statistics indicated the absence of serial correlation.

4.4. Post-Diagnostic Test Results
The post-estimation diagnostic test results implied the absence of serial correlations and heteroskedasticity as indicated by the Breusch-Godfrey serial correlation test in Table 4 and the Breusch-Pagan-Godfrey test in Table 5. Similarly, the normality (Jarque-Bera statistics) and stability (CUSUM and CUSUM Squares) tests were normal as shown in Figure 1, Figure 2, and Figure 3, respectively.

Table 4: Serial Correlation Test

<table>
<thead>
<tr>
<th>F-statistic</th>
<th>1.155699</th>
<th>Prob. F(2, 18)</th>
<th>0.3371</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared</td>
<td>2.844952</td>
<td>Prob. Chi-Square(2)</td>
<td>0.2411</td>
</tr>
</tbody>
</table>

Table 5: Heteroskedasticity Test: Breusch-Pagan-Godfrey

<table>
<thead>
<tr>
<th>F-statistic</th>
<th>0.624286</th>
<th>Prob. F(4,20)</th>
<th>0.6506</th>
</tr>
</thead>
<tbody>
<tr>
<td>Obs*R-squared</td>
<td>2.774955</td>
<td>Prob. Chi-Square(4)</td>
<td>0.5962</td>
</tr>
<tr>
<td>Scaled explained SS</td>
<td>1.703978</td>
<td>Prob. Chi-Square(4)</td>
<td>0.7900</td>
</tr>
</tbody>
</table>

4.5. Normality Test Results

4.6. Figure 1: Normality Test

Source: E-Views version 10 outputs.
Figure 2: Stability Diagnostic Test Result

Source: E-Views version 10 outputs.

Figure 3: Stability Diagnostic Test Result

Source: E-Views version 10 outputs.
4.7. Policy Implications

The results of the study showed that foreign exchange utilization (visible and invisible) had a positive and significant impact on economic growth in Nigeria during the study period (1997-2022). Similarly, the two key policy instruments (treasury bill rate and exchange rate) influenced economic growth positively and significantly during those years.

Thus, the elimination of structural, infrastructural, and technological constraints inhibiting the transformation of Nigerian commodity exports to value-added products exports will not only increase foreign exchange earnings but will improve the availability and absorptive capacity of foreign exchange inflow into the economy, thereby increasing employment and economic growth. In addition, the implementation of sound macroeconomic policies and the provision of a conducive operating environment guided by the rule of law, and protection of lives and properties will further enhance sustainable economic growth and development.

5. CONCLUSION

Generally, it is believed as evidenced in the literature that foreign exchange utilization in various sectors of an economy enhances economic growth. The results of this study support this general notion. Specifically, the results indicated that an increase in the utilization of foreign exchange (visible and invisible) valid for foreign exchange improves economic growth in Nigeria in the study period. Besides, complementary policies on the treasury bill rate and exchange rate also contributed positively and significantly to economic growth during the period.

Recommendations: Hence, to further increase economic growth, the study recommends that the federal government and its agencies as well as other tiers and arms of government should take deliberate actions to:

i. Increase the processing of the country's commodities before export to generate domestic employment and further availability of foreign exchange for domestic use;

ii. Improve domestic productive and infrastructural base to make Nigeria’s exports and products competitive in the global market;

iii. Provide a conducive operating environment (structural, regulatory, and macroeconomic) that would attract and retain both domestic and foreign investments; and

iv. Ensure the rule of law, safety of lives and properties, and political and social stability.

REFERENCES


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