

# Impact of Financial Sector Development, Trade and Economic Growth in Nigeria

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## ABSTRACT

This paper investigated the impact of financial sector development and trade sector development on economic growth in Nigeria using quarterly data between 2010Q1 and 2023Q4. The paper adopted the Fully Modified Least Squares (FMOLS) technique, to regress real gross domestic product on the independent variables which included credit to private sector (measured as financial development), foreign trade balance (measured as value of exports minus value of imports), exchange rate spread and inflation rate which were used as proxied for trade sector development. The coefficient of credit to private sector (CPS) and exchange rate spread (EXR) had positive influences on real GDP and were statistically significant while trade balance (TB), had positive influence on real GDP and was statistically insignificant. However, the result of inflation rate revealed a negative and significant relationship with real GDP. Therefore, the paper concluded that financial sector development, exchange rate spread, trade balance are positive and statistically significant variables that influence real GDP growth while inflation rate negatively influences real output growth in Nigeria. The paper recommended that the exchange rate liberalization and increase in credit to the private sector should be sustained by the monetary policy authorities to sustain growth. At the same time the Nigerian Export Promotion Council should create incentives to promote exports to improve the country's trade balance to correct its insignificant influence on growth. It is also recommended that inflation targeting should be adopted to anchor inflation.

**Key words:** Financial Sector Development, Trade Balance, and Economic Growth.

**JEL Classification:** B26, B27, F43

## INTRODUCTION

The relationship between financial sector development, trade sector development and economic growth has been a focal point of economic research and policy debates, particularly in the emerging economies including Nigeria. Financial sector development which for the purpose of economic growth, refers to the improvement in the size, efficiency, and stability of financial institutions and markets, plays a crucial role in mobilizing savings, allocating resources, facilitating transactions, and managing risks (World Bank, 2016). A well-developed financial and trade sectors are considered vital for sustainable economic growth as it enhances capital accumulation, promotes innovation, and improves productivity. According to National Bureau of Statistics (NBS, 2024), Nigeria's gross domestic product (GDP) grew by 2.74 percent in 2023 however, down from 3.10 percent in 2022. In the fourth quarter of 2023, Nigeria's GDP grew by 3.46 percent year-on-year, slightly lower than the 3.52 percent growth in the same quarter of 2022 but higher than the 2.54 percent growth in the third quarter of 2023. The fourth quarter growth was said to have been primarily driven by the services sector, which grew by 3.98 percent and contributed 56.55 percent to the overall gross domestic product (GDP). The agriculture sector grew by 2.10 percent, showing a slight increase from 2.05 percent in the previous year, while the industry sector improved significantly, growing by 3.86 percent showing a 0.94 percent contraction in the fourth quarter of 2022 (CBN, 2023).

The trade sector in Nigeria serves as a critical component of the economy, contributing significantly to GDP, employment, and foreign exchange earnings. The growth of the trade sector, which includes both domestic and international trade activities, is influenced by various factors including the accessibility and affordability of

financial services. The interplay between financial sector development, trade sector development and the overall growth of the economy is particularly important in Nigeria, where trade openness and financial liberalization have been central to ongoing economic reforms aimed at spurring growth and development. Nigeria's total annual trade in 2023 reached N71,880.01 billion, with imports and exports totaling N35,917.62 and N35,962.39 billion respectively. Significantly, total trade in the fourth quarter of 2023 amounted to N26,801.95 billion, with exports recording N12,693.62 billion and imports recording N14,108.33 billion. Exports in the fourth quarter of 2023 increased by 22.68 percent compared to the third quarter of 2023 and by 99.60 percent compared to the fourth quarter of 2022. Imports rose by 56.04 percent from the third quarter of 2023 against 163.08 percent in the fourth quarter of 2022 (NBS, 2024).

This paper explores the impact of financial development and trade balance on economic growth in Nigeria. By examining the mechanisms through which a developed financial sector can enhance trade activities, this research aims to provide a comprehensive understanding of how financial policies and trade dynamics influence overall economic performance. Through an analysis of key financial and trade indicators, this paper also seeks to uncover the extent to which financial sector improvements can drive trade sector output growth in Nigeria, thereby contributing to broader economic growth. The findings are expected to offer valuable insights for policymakers, helping them to design strategies that simultaneously promote financial sector robustness and trade sector vitality, and ultimately fostering a more resilient and dynamic Nigerian economy.

Following this introduction, the next section reviews some relevant literatures including concept of financial and trade sectors development, economic growth, theoretical framework and empirical evidence. Section 3 outlines the methodology, followed by data analysis and results in section 4. Section 5 concludes with recommendations.

## **LITERATURE REVIEW**

### **Concept of Financial and Trade Sectors Development**

#### **Financial Sector Development**

Conceptually, the financial sector development of an economy comprises the deregulation and restructuring for market forces, institutions, markets, and regulators that deal in financial instruments under the framework within which the participants operate. Thus, it can be sub-divided into its main sub-sectors of banks, non-bank financial institutions, and financial markets (Beck et al. 2000).

Financial markets provide essential services to a modern economy by facilitating trade and, therefore, production. In addition, they offer access to various financial institutions that enable economic agents to pool, price and exchange risks. Financial markets are money, capital and foreign exchange markets. Indeed, a money market is a segment of the financial market which deals in short-term securities (Beck et al. 2010). The capital market, on the other hand, deals in long-term securities investments and operations. Each of the markets can be sub-divided into primary and secondary markets. The primary market deals with selling new securities when first issued, while the secondary market is where existing securities are exchanged or marketed and bought (Ebajemito et al. 2004). In the foreign exchange market, it is related to both money and capital markets. It is particularly striking in the money market, where the determination of foreign exchange and money market rates through interest rates is connected. Dealings in the foreign exchange market in Nigeria were centralised in the Central Bank of Nigeria when it was conventional, and the determination of the exchange rate relied on domestic market conditions, developments in the international oil market and the performance of the naira vis-à-vis the weighted basket of Nigeria's major trading partners' currencies.

The foreign exchange market is the medium for buying and selling foreign currencies. The management of foreign exchange, consummated through a regime of exchange rate management, aims at ensuring a stable exchange rate for the domestic currency, the smooth payment for international transactions, and the maintenance of a favourable balance of payments position. Implicit in the various regimes is the general expectation that a real exchange rate for the national currency would emerge at any point in time. Thus, in line

with these expectations, the foreign exchange market in Nigeria has been characterised by exchange rate regimes that oscillated between the two extremes of fixed and floating rates (Ibeabuchi et al. 2004).

### **Financial Intermediation**

Among other components of financial sector development, financial intermediation facilitates transferring some economic units' savings to others for consumption or investment at a price generally referred to as financial intermediation. The intermediation process involves mobilising funds from the surplus economic units to the deficits economic units that have business ideas but lack financial capacity. This intermediating function is not only restricted to banking and financial institutions only but non-banking financial institutions like insurance companies, pension and administrative institution. For intermediation to take place, there must be operators, financial instruments and financial institutions operating together with the ultimate objective of producing goods and services for the purpose of growing the economy of the country (Beck et al. 2010).

### **Financial Deepening**

Čihák et al. (2012) defined financial deepening “as the capacity of financial institutions in an economy to effectively mobilise savings for investment purposes”. Therefore, by this definition, financial deepening attracts the pool of savings and unused funds and allots same to entrepreneurs, businesses, households and government for investments, projects and other trading or production purposes with a view of getting returns, which contributes to economic growth. It helps to improve economic performance through improved competitive efficiency within the financial market, hence it indirectly promotes non-financial sectors of the economy (Torruan, et al. 2003). However, exists a correlation between financial deepening and the standard of living of the citizenry in society (Nzotta & Okereke, 2009). Accordingly, economists have long held the view that the development of the financial system (financial deepening) and economic development are closely intertwined (Nobuhiro & Moore, 2005). However, Thorsten (2009) argues that the level of financial development is not measured by its contribution to GDP but rather by the value of credit to the private sector relative to GDP. Although this does not accurately measure financial intermediation, but it is the closest to the functions of finance which according to Ross, Levine and others cited in Thorsten (2009) i) easing the exchange of goods and services; ii) mobilising and pooling savings from a large number of depositors; iii) allocating society's saving to its most productive use; and iv) diversifying and reducing liquidity and intertemporal risk.

### **Trade Sector Development**

World Bank (2016) refers to trade sector development as a strategic effort aimed at stimulating economic growth through trade and investment in specific sectors. More so, Trade plays a crucial role in creating better jobs, reducing poverty, and increasing economic opportunity. World Bank outline some effective strategies which include National Export Strategies (NES); Trade Development Roadmaps; Sector Strategies; Trade Support Function Strategy; trade facilitation and logistics International Market Access; Promoting Cooperation; Embracing Advanced Technologies; Capacity Building in supporting small businesses and developing countries including Nigeria through training, credit availability, and non-discriminatory policies ensures inclusive growth and Leveraging trade for environmental action, such as rethinking value chains for the circular economy, encourages sustainable practices (World Bank 2016).

### **Economic Growth**

Economic growth simply means a positive change in the level of production of goods and services by a country over a certain period, that is usually brought about by technological progress or innovation and positive external force(s). It is the increase in the amount of goods and services produced by an economy over a period of time (Jones, 2009). Economic growth is a measure of the level of economic activities, value and quantity of goods and services produced within a country. It infers to an annual increase of productivity expressed in value or GDP growth rate (Ivic, 2015). According to Maganya (2020) economic growth is reflected by aggregate increase in the capacity to produce within an economy and is depicted as an increase in a country's GDP. Furthermore, International Monetary Fund, IMF (2012), defines economic growth as the

increase in the inflation-adjusted market value of the goods and services produced by an economy over time and is conventionally measured as the percent rate of increase in real GDP (IMF, 2012). Jhingan (2003), economic growth as the quantitative and sustained increase in a country's per capita output or income which is accompanied by labour force, consumption, volume of trade etc. He therefore describes the determinant of economic growth as technology and structural changes. Palmer (2012) also defines economic growth as an increase in the productive capacity of an economy as a result of which the economy is capable of producing additional quantities of goods and services. Thus economic growth is synonymous with enhancement in the general living standard as measures by the value of per capita income.

## **THEORETICAL FRAMEWORK**

### **Demand-Following Hypothesis and Trade-Led Growth Hypothesis**

This paper is anchored on the Demand-following hypotheses and Trade-Led Growth Hypothesis. Fundamentally, it is widely accepted among economists that economic growth is an extremely complex process, which depends on many variables such as capital accumulation (both physical and human), trade, financial sector development, price fluctuations, political conditions income distribution, and even more on geographical characteristics (Medina-Smith, 2001). On this note, the export-led growth hypothesis (ELGH) postulates that export expansion is one of the main determinants of growth and translates into robust financial sector development. It holds that the overall growth of countries can be generated not only by increasing the amounts of labour and capital within the economy, but also by expanding exports. According to its advocates, exports can perform as an “engine of growth” (Medina-Smith, 2001). The association between exports and growth is therefore often attributed to the possible positive externalities for the domestic economy arising from participation in world markets; for instance, from the reallocation of existing resources, economies of scale and various labour training effects. However, these mechanisms are frequently invoked without any theoretical support or any empirical proof. The Demand-following Hypothesis states that the changes that occur in the real sector affect financial development, that is financial sector output growth. Keynesian theory of financial deepening occurs due to an expansion in government expenditure. To reach full employment, the government should inject money into the economy by increasing government expenditure. An increase in government expenditure increases aggregate demand and income, thereby raising the demand for money (Mckinnon, 1973). More so, this theory suggests that an increase in demand for goods and services stimulates production, which in turn drives investment and economic growth.

### **Empirical Evidence**

Atoyebi et al. (2024) examined the impact of trade liberalization and economic growth on financial development in Nigeria between 1990 and 2021. The study employed Autoregressive Distributed Lag Model and the variables were, financial development which was proxied by domestic credit to the private sector as dependent variables while real GDP, interest rate and exchange rate as control variable. The result revealed that there is a positive long-term relationship between trade openness and financial expansion, while economic growth has a negative short-term impact on financial expansion. The paper concluded that trade openness has a positive impact on the expansion of Nigeria's financial sector in both the short and long term. It was recommended policymakers should focus on implementing financial sector reforms in Nigeria to enhance trade finance, expand credit access, strengthen regulatory frameworks, and improve financial infrastructure.

As study by Efonayi (2024) explored the impact of financial intermediation on financial sector development in Nigeria between 1990 and 2021. The Autoregressive Distributed Lag Model (ARDL) was employed, using variables such as financial sector development, interest rate, total loans and advances of commercial banks, and total market capitalization. The study revealed that total loans and advances of commercial banks, total market capitalization of the stock exchange, and interest rate do not significantly affect the contribution of the financial sector to gross domestic product. The paper recommended that regulators focus on policies to make financial institutions more liberal to encourage loan disbursement, increase capital market activities participation, and make interest rates more appealing to boost financial intermediation, thereby influencing financial sector development's contribution to Nigeria's GDP.



Oluranti et al. (2024) investigated financial development and real sector growth in Nigeria from 1970 to 2022 using the Vector Error Correction Model. Variables included Real GDP as dependent variable, government expenditure, trade openness, private credit, interest rate spread, and liquid liabilities. Findings indicated that in the long run, the ratio of liquid liabilities to GDP and trade openness negatively influenced real sector growth, while the ratio of credit to the private sector, total government expenditure, and interest rate spread positively affected real sector growth. The paper recommended financial reforms to liberalize the economy, enhance financial intermediation to encourage trade openness, attract investors, and direct government borrowing towards entrepreneurship development to boost real sector growth.

Between 2010 and 2017, Taddese et al. (2023) examined the effect of financial sector development on economic growth in Sub-Saharan African countries using the System Generalized Method of Moments (GMM). Variables included foreign direct investment, net inflow per GDP, government consumption expenditure per GDP, inflation, unemployment rate, remittance inflow, trade openness, and GDP per capita was the dependent variable. The study found that financial sector depth, access, and efficiency positively and significantly affected economic growth. The paper recommended expanding financial institutions to increase accessibility and promote efficiency.

Appiah et al. (2023) evaluated the impact of financial development, economic growth, and foreign direct investment on industrial (GDP) growth in Sub-Saharan Africa from 1990 to 2017 using the Augmented Mean Group (AMG) and Common Correlated Effect Mean Group (CCEMG) techniques. Variables included industrial (GPD) growth, foreign investment, industrialization, trade openness, and financial development. The study revealed that financial development and economic growth enhance industrial development, with finance showing significance, while foreign direct investment was seen as adverse. It was recommended that government officials provide a suitable environment for public-private partnerships, essential for industrial development.

Yusuf et al. (2023) investigated the impact of financial sector development on economic growth in Nigeria between 1990 and 2020 using the ARDL Model. Variables included Real GDP, economic growth, financial intermediaries, financial depth, and the size of the stock market. The study concluded that the relationship between financial sector expansion and economic growth was long-term, with financial sector development having a favorable short-term impact on Nigeria's Real GDP. The expansion of the financial sector was found to improve access to credit, facilitate risk management, and boost investment and productivity, thereby increasing income generation and playing a vital role in the economy.

Ofori et al. (2022) explored financial development thresholds for economic policy in 42 African countries between 1996 and 2020. Variables included ICT diffusion, human capital, inflation, foreign direct investment, financial institution efficiency, control of corruption, financial institution depth, financial institution access, financial development, Gini index, remittances, and Palma ratio. The Baseline Model revealed that remittances increase income inequality, and Africa's financial system is not potent enough to repurpose remittances towards income equalization. The paper recommended expanding financial access through mobile and online banking, ATMs, and rural banking to deepen financial inclusion.

Wen et al. (2022) analyzed the impact of financial development on major economic indicators in Pakistan from 1997 to 2017, using the System GMM Estimation Technique. Variables included Real GDP growth rate, inflation rate, employment growth rate, investment, money and quasi-money, domestic bank credit, foreign direct investment, liquid liability, domestic bank private credit, and government expenditure. The findings showed that financial development negatively impacted economic growth, contradicting the traditional supply-leading hypothesis. It was recommended that central banks impose strict credit standards to avoid excess liquidity and allocate credits to more productive firms.

Afolabi (2022) investigated the impact of financial development, trade openness, and economic growth in Nigeria between 1981 and 2018, using the Dynamic Ordinary Least Square Technique (DOLS). Variables included exchange rate, trade openness, gross domestic product, interest rate, and financial development. The study found that financial development, exchange rate, and interest rate spread significantly influence real GDP, while trade openness and its interaction with financial development did not significantly impact

economic growth. The paper recommended policies to enhance financial intermediation and deposit mobilization and integrating the financial sector with Nigeria's productive sectors.

Batayneh et al. (2021) examined the effect of inflation on financial sector development in Jordan between 1993 and 2018, using the Autoregressive Distributed Lag (ARDL) Bound Testing Technique. Variables included credit to the private sector, real GDP, financial sector development, real total trade, and inflation rate. The results showed a significant long-run and short-run negative effect of inflation on financial sector development and a positive impact of economic growth on financial sector performance. The paper recommended flexible exchange rates and economic policies to maintain price stability and promote economic growth for better financial sector performance in Jordan.

Ustarz and Fanta (2021) explored financial development and economic growth across sectors in Sub-Saharan Africa from 1990 to 2018 using the Generalized Method of Moments. Variables included GDP growth financial market index, financial development, agriculture, investment, industry, consumption, service, financial institution index, labor, and trade openness. The study found that financial development positively affected the service and agricultural sectors, with a certain threshold needed to positively impact the industrial sector. The paper recommended that policymakers should consider the optimal level of financial development when formulating sectoral growth policies and promote financial sector development to boost industrial growth.

Ejemeyovwi et al. (2021) explored the interaction of information and communication technology (ICT) adoption and innovation on financial development in 54 African countries between 2000 and 2017 using the Bayesian Vector Auto-Regressive (BVAR) Model. Variables included the number of internet users, mobile cell subscribers, financial development index, GDP growth rate, ICT innovation interaction, and institution. The study found that ICT innovation interaction positively impacts financial development. The paper recommended applying ICT-innovation interaction across all sectors to drive financial development, as all sectors require finances to perform.

Using the Multiple Regression Technique, Omodero (2021) examined FinTech innovation of e-money products on GDP growth in Nigeria between 2006 and 2019. Variables included GDP, web-based or internet transactions, automated teller machines, mobile money, and point-of-sale. The findings revealed that all banks' e-money products significantly positively influence the economy except the POS. The paper recommended educating the public on e-money products' economic benefits, reducing cash transactions, and boosting FinTech usage. Additionally, policies to reduce electronic money theft were recommended to enhance e-payment channel usage to boost the economy.

Chen et al. (2020) investigated the asymmetric impacts of financial development on economic growth in Kenya between 1972 and 2017, using the Non-Linear Auto-Regressive Distributive Lag (NARDL) Model. Variables included domestic credit, trade openness, broad money, and real interest with GDP as the dependent variable. The study concluded that increasing financial development, reducing government expenditure, and maintaining sustainable inflation would promote long-term economic growth. The paper recommended policies favoring low inflation, reduced government spending, reformed financial institutions, capital accumulation, and increased resource mobilization for positive real growth.

Camara and Diallo (2020) evaluated financial sector development and economic growth in ECOWAS countries between 1991 and 2017 using the Quantile Regression Model. Variables included liquid liabilities, private credit, and domestic credit and GDP growth was the dependent variable. The findings showed that financial development positively and significantly impacted economic growth regardless of the economic development level. The paper recommended that government authorities should encourage developing a sound banking system.

Puatwoe and Piabuo (2017) studied the relationship between financial sector development and economic growth in Cameroon between 1980 and 2014, using the ARDL Model. Variables included private investment, financial depth, government expenditure, financial efficiency, and GDP growth rate. The study found a positive and significant relationship between financial development and economic growth. The paper

concluded that increasing the money supply, enhancing financial institutions' functions, and improving the investment environment would boost economic growth. It recommended financial sector recognition and support, including suitable financial reforms, to position the financial sector as a key economic growth determinant.

## METHODOLOGY

### Method of Data Analysis

The ex post facto research design was adopted for this paper. The design was adopted considering the nature of the paper which requires the use of data on events that had already taken place. Data for the paper were collected from the Central Bank of Nigeria (CBN) Statistical Bulletin, National Bureau of Statistics (NBS) and Debt Management Office (DMO) 2023, respectively. Nigerian time series data on the variables for the period 2010Q1 to 2023Q4 were used and the choice of the period was informed by the availability of data on all the variables. The data on financial sector development (measured as credit to private sector), trade sector (measured as trade balances of import and export in millions of Naira) percentage of GDP, exchange rate (measured as percentage), inflation rate (measured as Percentage) and economic growth (measured as real gross domestic product constant 2010 US\$). The time series data obtained were analysed using fully modified least squares (FMOLS). FMOLS is an econometric technique used to estimate the long-run relationships in cointegrated time series data. FMOLS adjusts for both serial correlation and endogeneity in the regressors, which are common issues in cointegrated systems. This adjustment helps to produce more reliable and consistent parameter estimates than the Ordinary Least Squares (OLS) method. The method was selected based on the number of observations that is between 2010Q1 to 2023Q4 and it is applicable to estimating I (1) variable and more importantly FMOLS is more efficient for estimating small sample size data. This is important for financial formulation and economy policy.

### Model Specification

The model was specified based on Afolabi (2022) who linked financial sector, trade openness and economic growth in Nigeria. The paper augmented the trade openness using trade balance and exchange rate with inflation rate in a Fully Modified Least Squares (FMOLS) techniques. FMOLS model is given in equation (3.3). Hence, this paper adopts credit to the private sector (CPS) as a proxy for financial sector development and trade balance as a proxy for trade sector development as the value of exports less the value of imports. Moreover, the real gross domestic product growth in Nigeria is used as a proxy for economic growth. Exchange rate is an important determinant of trade liberalisation while inflation rate measures the rate at which the general price level for goods and services rises over a period of time, resulting in a decrease in the purchasing power of money. Hence, exchange rate and inflation rate have been incorporated into the model as control variables to capture respectively, the effects of the external and internal workings of the economy.

All the variables, except inflation rate and real GDP growth which are in percentage, are expressed in their natural logarithm to aid the interpretation of results in proportionate terms. Routine pre-estimation tests such as stationarity test and cointegration test have been needfully conducted as they examine the order of integration of individual macroeconomic variables to prevent against spurious regression and track the existence of a long-run relationship among the variables respectively. In view of this, the basic model employed in the paper was developed by Phillips and Hansen (1990). The original FMOLS model is as follows:

$$Y_t = \beta'X_t + \mu_t \text{ ----- (3.1)}$$

$$LRGDP_t = f(FDEV, LTROP, LEXR \& IRS) \text{ ----- (3.2)}$$

The slight modification of the model

$$LRGDP_t = f(CPS, TB, EXR \& INF) \text{ ----- (3.3)}$$

$$RGDP_t = \beta_0 + \beta_1 CPS + \beta_2 TB + \beta_3 EXR + \beta_4 INF + e_t \text{ ----- (3.4)}$$

$$LRGDP_t = \beta_0 + \beta_1 \text{LogCPS}_t + \beta_2 \text{TB} + \beta_3 \text{LogEXR} + \beta_4 \text{INF} + e_t \text{ --- (3.5)}$$

Where:

LRGDP = Log of Gross Domestic Product (measured as Real GDP growth)

LCPS = log of Credit to Private Sector (proxy for Financial Development)

TB = Trade Balance (measured as Value of Exports minus Value Imports) as percentage to GDP

LEXR = Log of Exchange Rate (₦: \$)

INF = Inflation Rate (measured as percentage)

$\beta_0$  = is the intercept parameter

$\beta_1 - \beta_4$  = are the coefficients of slope parameters

log = Logarithmic function

**Apriori Expectation**

The theoretical expectation of the explanatory variables is expected to be of the form with regard to the dependent variable:

CPS >0, TB>0, EXR>0 INF </>0

The Description of the Variables are presented in Table 1

**Table 1: Description of Variables**

S/N	Variables	Acronyms	Measurement	Sources
1	Real Gross Domestic Product	RGDP	Measured in Million Naira	CBN Statistical Bulletin, 2023
2	Credit to Private Sectors	CPS	Measured in Million Naira	CBN Statistical Bulletin, 2023
3	Trade Balances	TB	Percentage %	DMO Bulletin, 2023
4	Exchange Rate	EXR	Percentage %	CBN Statistical Bulletin, 2023
5	Inflation Rate	INF	Percentage %	CBN Statistical Bulletin, 2023

Source: Author’s Compilation, 2024.



## DATA ANALYSIS AND RESULTS PRESENTATION

Table 2 presents the descriptive statistics of the macroeconomic variables used in this paper. It shows that the average value of Real GDP growth, credit to private sector, trade balance, exchange rate, and inflation rate are 16835555 million, 23840772 million, 336116.2 million, 312.99/US\$, and 13.76 percent respectively. Skewness which measures the shape of the distribution shows that one of the variables has a negative value, which suggests that its distribution tail is left of the Mean while four variables have positive Skewness which suggests that their distribution tails are to the right of their means. Variables with a value of kurtosis greater than four are called Leptokurtic and one variable is less than three are called platykurtic (fat or short-tailed). These are CPS, TB, EXR, INF and RGDP, respectively. The Jarque-Bera probability values are also shown in Table 2. However, the normality of the data does not affect the regression result. Furthermore, all the variables have a relatively high standard deviation.

**Table 2: Descriptive Statistics**

Statistic	RGDP	CPS	TB	EXR	INF
Mean	16,835,555	23,840,772	336,116.2	312.9934	13.76667
Median	16,718,238	22,261,493	611,059.6	360.5307	12.66500
Maximum	21,773,263	62,538,678	2,865,017	843.1400	28.92179
Minimum	12,583,478	8,853,787	-2,879,688	152.4922	7.780000
Std. Dev.	1,961,811	12,273,343	1,148,196	149.3046	4.756422
Skewness	0.097732	1.297962	-0.662871	1.093983	1.059421
Kurtosis	2.899623	4.587305	3.493852	5.061211	4.014250
Jarque-Bera	0.112657	21.60283	4.670120	21.08349	12.87578
Probability	0.945229	0.000020	0.096805	0.000026	0.001600
Sum	9.430008e+08	1.340009e+09	18,822,509	17,527.63	770.9335
Sum Sq. Dev.	2.120014e+13	8.280015e+14	7.250013e+13	1,226,052	1,244.295
Observations	56	56	56	56	56

**Source: Author’s Computation, 2024.**

Table 3 presents results of the correlation analysis. It revealed a positive correlation between the variables with the output variable as expected. However, the correlation matrix is used to determine the non-causal relationship between the dependent and independent variables and to observe the relationship among the independent variables. All the variables has positive and significant except TB correlation with RGDP growth. This is also reflected in the other variables.

**Table 3: Correlation Analysis**

	RGDP	EXR	CPS	INF	TB
<b>Covariance</b>					
<b>RGDP</b>	3.780000				
<b>EXR</b>	2.040000	21,893.78			
<b>CPS</b>	1.720013	1.650000	1.480000		
<b>INF</b>	4,245,109	586.8115	46,917,540	22.21956	
<b>TB</b>	-5.660000	-28,544,208	-3.040000	-355,962.5	1.290000

	RGDP	EXR	CPS	INF	TB
<b>Correlation</b>					
<b>RGDP</b>	1.000000				
<b>EXR</b>	0.710082	1.000000			
<b>CPS</b>	0.729020	0.916911	1.000000		
<b>INF</b>	0.463209	0.841338	0.818309	1.000000	
<b>TB</b>	-0.255880	-0.169533	-0.219817	-0.066364	1.000000

**Stationarity Test of Variables**

The stationarity of the series employed was checked first using the Phillip Perron (PP) and Augmented Dickey-Fuller (ADF) developed by Dickey and Fuller (1979). The results are shown in Table 4

**Table 4: Results of Stationarity Test**

<b>Augmented Dickey-Fuller (ADF) Unit Root Test</b>						
		<u>At First Difference</u>				
		d(LRGDP)	d(LCPS)	d(TB)	d(LEXR)	d(INF)
With Constant	t-Statistic	-2.5961	-6.2369	-9.2872	-4.9607	-4.6492
	<b>Prob.</b>	<b>0.1004</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0001</b>	<b>0.0004</b>
		n0	***	***	***	***

Without Constant & Trend	t-Statistic	-2.0364	-5.0827	-9.3653	-4.4866	-4.5508	
	<b>Prob.</b>	<b>0.0410</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	<b>0.0000</b>	
		**	***	***	***	***	

**Notes: (\*)Significant at the 10%; (\*\*)Significant at the 5%; (\*\*\*) Significant at the 1%. and (no) Not Significant**

### Cointegration Test Result and Interpretation

If two or more time series are not stationary, it is important to test whether there is a linear combination among them. Variables are cointegrated if they have a long term or equilibrium relationship between them (Zirra and Ezie 2017).

Table 5 shows the results of the cointegration test using the Engel and Granger methodology test. It showed that linear combination exists among the variables of interest; thus, indicating a long run associationship among the variables.

**Table 5: Engel and Granger Cointegration Test**

Dependent	tau-statistic	Prob.*	z-statistic	Prob.*
LRGDP	-1.922	0.9532	-27.108	0.0969
LC PSS	-3.5337	0.3543	-3755.7	0.0000
LEXR	-2.1482	0.9167	-8.4302	0.9364
TB	-3.8844	0.2144	-24.878	0.1713
INF	-3.0131	0.6011	-16.218	0.5730

**Source: Author’s Computation, 2024.**

Unit root analysis is a test conducted to ascertain if the variables under consideration are stationary. The unit root /stationary tests results are as shown in Table 4. The Phillip Perron (PP) and Augmented Dickey-Fuller (ADF) test was employed. However, as indicated in Table 4 the variables are in first order of integration I (1) according to ADF test. Since all the variables were found to be stationary I (1) order one, it was safe to employ Fully Modified Least Squares (FMOLS) techniques. Table 6 shows the regression results

<b>Table 6: Regression Results: Dependent Variable: LRGDP</b>				
<b>Method: Fully Modified Least Squares (FMOLS)</b>				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
LCPS	0.20316	0.02135	9.51759	0

LEXR	0.05923	0.02333	2.53853	0.0143
TBGDP	0.00049	0.00121	0.40432	0.6877
INF	-0.0085	0.00144	-5.92	0
C	12.9877	0.27997	46.3893	0
R-squared	0.65211	Mean dependent var		16.6374
Adjusted R-squared	0.62428	S.D. dependent var		0.11223
S.E. of regression	0.06879	Sum squared resid		0.2366
Long-run variance	0.00082			
F-statistic (0.0000)	165.9900			

Source: Author’s Computation, 2024.

## DISCUSSION OF FINDINGS

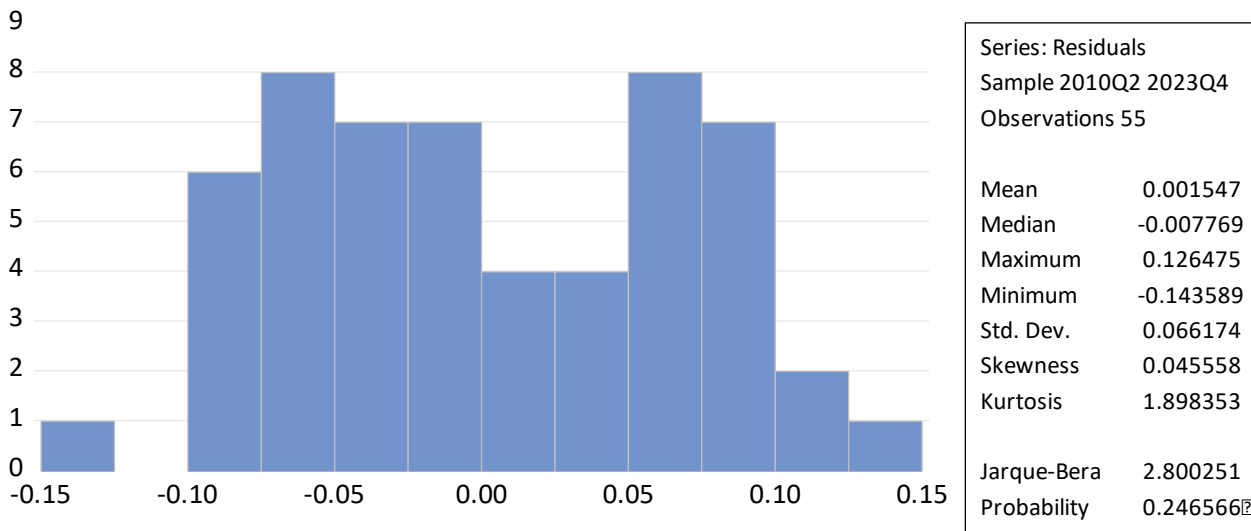
The results of the estimated FMOLS models are presented in Table 6. The lags of the independent variables are fixed at 2, including observations of 55 after adjustment of the sample size. The FMOLS results revealed that the coefficient of the credits to private sector (CPS) (a proxy for financial development) has a positive and statistically significant impact on economic growth in Nigeria such that the Nigerian economy will grow by approximately 0.20 Percent if the share of credits to private sector in total GDP should increase by one percent. This implied that the degree of responsiveness of real GDP to a change in the share of credits to private sector in total GDP is moderate. This result supports the demand-following hypothesis and the findings of Olurantiel, et al. (2024); Appiah, et al. (2023) and Afolabi, (2022). This suggested that financial sector development is a veritable tool for ensuring the growth of the Nigerian economy. Consequently, efforts should be geared towards enhancing the regulatory and supervisory framework to ensure the stability and efficiency of financial institutions. In addition, the result indicated that exchange rate has a positive and statistically significant relationship with real GDP growth in Nigeria. This showed that exchange rate is an important macroeconomic fundamental in driving economic growth in Nigeria. In particular, the Nigerian economy will grow by approximately 0.059 percent if exchange rate depreciates by one percent. This result parallels a priori expectation and supports theoretical postulation which states that exchange rate depreciation cheapens exports and makes import more expensive thereby instigating both price and volume effect which tends to help increase local production to match the increasing foreign and domestic demand, thereby increasing aggregate output and engendering economic growth. This is in line with the finding of Afolabi, (2022) and theoretical intuition.

Furthermore, with regards to trade balance (exports minus imports) (a proxy for trade sector development) percentage of GDP, the result shows that the coefficient of trade balance is positive and statistically and insignificantly affects output growth in Nigeria. This implies that a 1% (percent) increase in the trade balance improve economic performance by 0.00490 percent. This is according to the trade-Led Growth Hypothesis. However, the result of inflation rate revealed that it has a negative and statistically significant relationship with real GDP growth with implies that higher inflation is associated with lower economic growth. This is in line



with the findings of Taddes, et al. (2023); Afolabi, (2022); Batayneh, et al. (2021) and theoretical intuition. This is contrary to the finding of Chen, et al. (2020). The result of the adjusted R-squared values of FMOLS revealed that financial development, trade balance, exchange rate, and inflation rate explained about 65 percent of the variation in real GDP growth in Nigeria. This indicated that the models have good fits. The overall significance of the paper is measured by the F-statistics, whose result implied that there is a positive and statistically significant impact of financial sector development, trade balance, exchange rate, and inflation rate on real GDP growth in Nigeria. Hence, these findings equally met a priori expectation and can be used for policy formulation.

**Post-Estimation Diagnosis Test Result.**



Source: Author’s Computation, 2024.

**CONCLUSION AND RECOMMENDATIONS**

The key findings of the paper were that financial sector development, exchange rate and trade balance variables were positively related to real GDP growth in Nigeria while inflation spread were inversely related to real GDP growth in Nigeria during the study period. The results of the credits to private sector (a proxy for financial sector development) have a positive and statistically significant impact on economic growth in Nigeria. This implied that the degree of responsiveness of real GDP to a change in the share of credits to private sector in total GDP is moderate. It further suggested that financial sector development is a veritable tool for ensuring the growth of the Nigerian economy. Consequently, efforts should be geared towards enhancing the regulatory and supervisory framework to ensure the stability and efficiency of financial institutions. In addition, the result indicated that exchange rate had a positive and statistically significant relationship with real GDP. This indicated that exchange rate is an important macroeconomic fundamental in driving economic growth in Nigeria. In particular, the Nigerian economy would grow by approximately 0.059 percent if exchange rate depreciated by one percent. This result reflected a priori expectation and supported theoretical postulation which states that exchange rate depreciation cheapens exports and makes import more expensive, thereby stimulating both price and volume effect which tends to help increase local production to match the increasing foreign and domestic demand, thereby increasing aggregate output and engendering economic growth.

Furthermore, with regards to trade balance (exports minus imports) (a proxy for trade sector development) percentage of GDP, the result showed that the coefficient of trade balance is positive and has statistically insignificant effects on economic output in Nigeria. This implied that a 1 percent increase in trade balance would improve economic performance by 0.00490 percent. However, the result of inflation rate revealed that there is a negative and statistically significant relationship between inflation and real GDP growth. It implied that higher inflation is associated with lower economic growth. The result of the adjusted R-squared values of FMOLS revealed that financial sector development, trade balance, exchange rate, and inflation rate explained

about 65 percent of the variation in real GDP in Nigeria. This indicated that the models have good fits. The overall significance of the paper was measured by F-statistics implying that there is a positive and statistically significant impact on the real GDP on financial development, trade balance, exchange rate, and inflation rate in Nigeria. Hence, these findings are valid and can be used for policy formulation and equally met a priori expectation as it was expected.

### The paper therefore recommends as follows:

On the strength of the paper findings

- i. The monetary and fiscal policies authorities should promote and ensure expansion and sustenance of financial inclusion in order to increase credit facilities to greater participants in the private sector, especially the Small, and Medium Enterprises (SMEs), such as guarantees or subsidized interest rates.
- ii. The monetary authorities should sustain the current exchange rate policy to cheapen exports and make import more expensive.
- iii. The Nigerian Export Promotion Council (NEPC) should provide incentive for more exports goods production to engender economic growth. To maximize the positive impact of the exchange rate on GDP, exchange rate and inflation targeting policies should be coordinated by monetary policy, fiscal policy and trade policy authorities.
- iv. The monetary and trade policies authorities should ensure macroeconomic stability to create a more conducive environment to encourage trade towards improvement of Nigeria's trade balance for positive impact on GDP growth. Also subduing inflation through appropriate policy, maintaining a stable exchange rate, and ensuring fiscal discipline are crucial in this direction.
- v. Finally, appropriate macroeconomic policies should be designed to curtail inflation and maintain price stability in the country, to ensure economic growth.

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