The Role of Private Investment and the Relationship between Monetary Policy and Economic Growth in Nigeria.

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ABSTRACT

Despite government initiatives and policy reforms promoting private investment, such as the Structural Adjustment Programmes and various economic reform policies, Nigeria has experienced minimal improvement in private investment indicators, with the share of private investment in economic growth fluctuating over the years, characterized by intermittent increases and declines. Thus, the study investigates the role of private investment and the relationship between monetary policy and economic growth in Nigeria. The study utilized secondary data obtained from the Central Bank of Nigeria through an ex-post facto research design spanning from 1985 to 2022. Employing an autoregressive distributed lag model, which includes an error correction mechanism and cointegration test, the analysis examined variables, revealing that private investment mediates positively in the relationship between monetary policy and economic growth in Nigeria. The findings underscored the significant impact of private investment on the nexus between monetary policy and economic growth, suggesting policy recommendations including incentivizing private investment through the removal of capital controls and investment regulations, reducing or eliminating taxes and regulatory burdens, and fostering a supportive environment for business creation.

Keywords: Autoregressive Distribution Lag Model, Economic Growth, Gross Domestic Product, Nigeria, Monetary Policy, Private Investment.

INTRODUCTION.

Economic growth, characterized by an increase in an economy's capacity to produce goods and services over time (Raisová & Ďurčová, 2014; Ufoeze et al., 2018), is a central objective for emerging economies such as Nigeria. Recent data from the World Bank's Nigeria Economic Update highlight the country's recovery from the 2016 recession. The government maintained an estimated 2% growth rate in 2019,primarily driven by sectors like telecommunications. However, Nigeria's journey towards economic growth encounters significant hurdles due to its heavy reliance on revenues from the oil sector (World Bank Group, 2019).

Nigeria's dependency on oil revenue has entrenched its economy in a precarious position, susceptible to the unpredictable fluctuations of global oil prices (Gylych et al., 2022; Oguntoye & Oguntoye, 2021). This overreliance poses formidable challenges to achieving sustainable economic growth and fostering diversification, which is imperative for emerging economies like Nigeria (Olayungbo, 2019). Despite abundant natural resources, including renewable and non-renewable energy sources, Nigeria's reliance on

oil revenue has hindered efforts toward broad-based economic development. With oil accounting for over 95% of export earnings, 25% of GDP, and approximately 90% of government revenue (IMF, 2012; Olayungbo, 2019), the country's vulnerability to the volatility of oil prices is starkly evident. Moreover, this dependency has perpetuated a paradoxical scenario where poverty persists despite the abundance of resources, with the poverty rate at a staggering 62.6% (National Human Development Report, 2016). The discourse surrounding the resource curse argument suggests that natural resource abundance may impede economic growth (Lashitew & Werker, 2020). Although Nigeria boasts substantial oil and gas reserves, estimated at 37.2 billion barrels and 187 trillion standard cubic feet, respectively (British Petroleum Statistical Review of World Energy, 2016; African Economic Outlook, 2012), these reserves have not translated into sustainable growth. The dominance of the extractive sector, particularly oil, further exacerbates Nigeria's vulnerability to external shocks, hindering the necessary diversification for long-term resilience and prosperity. As Nigeria navigates its economic trajectory, addressing the perils of overreliance on oil revenue emerges as a pivotal endeavor, necessitating strategic reforms to foster a more diversified and resilient economic landscape.

Insufficient private investment in Nigeria, particularly outside the oil sector, significantly threatens the nation's economic diversification and development goals. Private investment, encompassing various sectors such as private credit, real estate, natural resources, private equity, infrastructure, and hedge funds (Schultz Financial Group, 2022), is essential in economic prosperity. Despite the global growth in private investment assets under management, rising from $4.1 trillion in 2010 to $10.8 trillion in 2019 and projected to reach $17.2 trillion by 2025 (Ekpo, 2016), Nigeria's private investment landscape remains suboptimal. The importance of private investment in economic growth has been ancient and well-documented, with research indicating its direct correlation with economic expansion, particularly in developing countries like Nigeria (Turan et al., 2021; Nguyen & Trinh, 2018; Ofosu-Mensah Ababio, 2022; Ari, & Koc, 2020). Despite government initiatives and policy reforms that promote private investment, such as the Structural Adjustment Programmes (SAP) and various economic reform policies, Nigeria has seen minimal improvement in private investment indicators. The share of private investment in GDP has fluctuated over the years, declining from 14.6% in 1973 to less than 0.5% in 1994, with intermittent increases and declines after that (Ekpo, 2016). This persistent challenge highlights the urgent need for comprehensive strategies to stimulate private investment, foster economic diversification, and propel Nigeria towards sustainable growth and development.

Monetary policy is a critical tool central banks use to manage a nation's money supply and support economic growth and stability (Thomas, 2024). However, in Nigeria, the efficacy of monetary policy is hindered by challenges such as high inflation rates, volatile exchange rates, and restricted access to credit (Ayodeji & Oluwole, 2018). Despite efforts by the Central Bank of Nigeria to regulate the money supply through mechanisms like Open Market Operations (OMO) and Required Reserve Ratio (RRR), the economy struggles with issues like unemployment, inadequate investment, and recurrent inflationary pressures (Inam & Ime, 2017). These difficulties are compounded by structural issues like a poorly developed financial system, weak institutional frameworks, and widespread corruption (Ayodeji & Oluwole, 2018). Inconsistent implementation of monetary policies further complicates matters, highlighting the need for careful analysis and strategic interventions. Effectively addressing these challenges is essential for Nigeria to attain sustainable economic growth and stability as it navigates its economic journey. Thus, the research intends to investigate the role of private investment and the relationship between monetary policy and economic growth in Nigeria.

The remaining sections of this paper comprise the literature review, which includes conceptual, theoretical, and empirical reviews. The third section outlines the materials and methods employed in the study. Subsequently, the fourth section elucidates the results uncovered in the study. Finally, the last section of the study deliberates on the conclusion drawn and necessary recommendations derived from the study.

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LITERATURE REVIEW

Conceptual Review

According to Ekpo (2016), private investment involves the commitment of resources by individuals and firms to acquire capital assets to enhance future earnings and increase productivity. Ancient scholars still argue that this incremental change in capital stock improves the population's living standards and boosts the economy's overall efficiency. The scope of private investment encompasses various activities, ranging from acquiring new machinery to constructing factories and offices, investing in innovative techniques and products, and providing critical infrastructure such as roads and railways.

Monetary policy encompasses a set of measures aimed at regulating the value, supply, and cost of money by prevailing economic activity levels (Nwoko et al., 2016). The inception of the Central Bank of Nigeria in 1958 marked the establishment of the framework responsible for formulating and executing these policies (Onyeiwu, 2012). Evolving, Nigeria's monetary policy has become a versatile tool with diverse macroeconomic objectives, including facilitating economic growth and ensuring price stability (Onyeiwu, 2012). Aligned with international standards, Nigeria's monetary policy objectives focus on fostering sustainable economic growth and development, extending beyond price stability to address broader macroeconomic goals (Central Bank of Nigeria, Monetary Policy Department, 2022). These goals encompass managing inflation, regulating money supply dynamics, and creating an environment conducive to investment, consumption, and overall economic activity (Victor et al., 2022; Nwoko et al., 2016).

Economic growth entails the expansion of a nation's economy over time, measured by the total production of goods and services, known as gross domestic product (GDP) (Reserve Bank of Australia, 2023). This growth can be assessed in nominal terms, considering both changes in production volume and prices, or in real terms, focusing solely on volume changes to eliminate the impact of price fluctuations (Reserve Bank of Australia, 2023). Distinct from economic development, which encompasses qualitative and quantitative improvements in living standards and access to essential services, economic growth primarily quantifies the increase in production output (Kimberly Amadeo, 2022). In Nigeria, key indicators of economic growth include GDP growth rate, employment rates, and income levels, all reflecting the country's economic expansion (The World Bank, 2023). This growth is driven by various factors, including abundant natural resources, investment in human capital through education and healthcare, infrastructure development, and advanced technologies (Madhuri Thakur, 2023; The World Bank, 2023).

Empirical Review

Studies on fiscal policy, private investment, and economic growth in African countries such as Ghana and Kenya guide understanding the relationships between government policies, private sector activity, and overall financial performance. Soli, Harvey, and Hagan (2008) investigated these relationships in Ghana using cointegration and error-correction models, finding significant impacts of government fiscal variables on both private investment and economic growth. They highlighted differences in the direction of effects between fiscal policy and private investment, suggesting the need for tailored policies to promote each. Isaac and Samwel (2012) explored the impact of fiscal policy on private investment and economic growth in Kenya using time series data spanning from 1973 to 2009. Their analysis, employing a two-stage instrumental variable estimation method, revealed that fiscal policy influences investment, which is crucial in determining economic growth. Based on their findings, they recommended policy measures such as reexamining government spending to align it with investment, increasing credit availability to the private sector, and addressing high domestic public debt and budget deficits.

Some determinants shape investment decisions and their implications for economic growth and

development. For instance, RPS Submitter et al. (2021) found that while foreign direct investment (FDI) initially has little effect on private investment in Sub-Saharan African countries, it exhibits significant crowding-in effects in the long run, particularly when interacting with public-domestic investment.

Ajudua (2022) investigated the determinants of private investment in Nigeria, identifying factors such as interest rates, money supply, credit to the private sector, inflation rate, and regulatory quality index as significant influencers. Similarly, Ekpo (2016) highlighted the importance of various factors, including domestic inflation rate, market size, availability of bank credit, interest rate, fiscal deficits, infrastructure provision, and political stability in shaping private investment trends in Nigeria. Obamuyi (2013) emphasized the influence of factors such as past performance of company stocks, expected corporate earnings, and socio-economic characteristics like age, gender, and educational qualifications on investment decisions in the Nigerian capital market. Ahangari and Saki (2012) examined the determinants of private investment in Iran, revealing its dependence on variables such as the instability index, public investment, oil and gas export revenue, industrial value added, and bank credits.

Adugna (2013) explored the determinants of private investment in Ethiopia, demonstrating the adverse effects of interest rates and exchange rates on private investments, alongside favorable impacts on public investment, real GDP per capita, inflation, global trade, corporate tax, and external debt. Kalu and Mgbemena (2015) found a significant connection between actual gross domestic product and domestic private investment in Nigeria between 1970 and 2012, while Oloyede and Kolapo (2018) highlighted the sensitivity of domestic private investment to macroeconomic indicators, particularly its driving role in Nigeria's money supply. Combey (2016) also analyzed factors affecting private investment in the West African Economic and Monetary Union (WAEMU) zone, emphasizing the significant impacts of political stability and economic growth. Nahoussé (2019) examined the factors influencing domestic private investment in Cote de Ivoire, identifying trade, public investment, and foreign direct investment as critical determinants affecting domestic private investment in the short and long run. Meanwhile, gross domestic product and interest rates were not significant.

Aliu (2022) investigated the effectiveness of monetary policy in stimulating economic growth in Nigeria, employing advanced econometric techniques and finding that interest rates and reserve requirements significantly influence economic growth in the long run. Akarara and Azebi (2018) examined the efficacy of monetary policy tools in controlling inflation, highlighting the effectiveness of Treasury Bill Rate in both the short and long run, while Exchange Rate and Money Supply play crucial roles in short-term inflation control. Babatunde and Olasunkanmi (2023) studied the impact of monetary policy on economic performance in sub-Saharan Africa, emphasizing the importance of monetary policy in improving economic growth, attracting foreign investment, and encouraging domestic savings.

John and Udoye (2018) assessed the effect of monetary policy instruments on Nigerian economic growth; the study found a significant positive impact of the inflation rate on economic growth, suggesting inflation as a viable policy instrument for enhancing economic growth. Moreover, Dauda and Muhammed (2023) explored the impact of monetary policy on economic growth in Nigeria, finding that the Monetary Policy Rate and Money Growth Rate exert significant impacts on economic growth, highlighting the importance of monetary policy in driving economic growth. Shaibu and Enofe (2021) investigated the relationship between monetary policy instruments and economic growth in Nigeria. They found the interest rate's positive and significant impact on economic growth in the short run. At the same time, previous gross domestic product and broad money supply significantly influence economic growth in the long run.

Despite the growing significance of monetary policy and economic growth, there is a notable research gap in the context of Nigeria. This research addresses this gap by examining empirical studies that specifically investigate the relationship between private investment, monetary policy, and economic growth in Nigeria. Furthermore, existing literature has not adequately considered the unique challenges and characteristics of

Nigeria concerning these research studies. Therefore, this study contributes by examining the interaction within the Nigerian context, thereby filling this void and expanding our understanding in this area. Additionally, the study revealed a scarcity of studies that effectively bridge the gaps between theoretical findings, empirical evidence, and their practical applicability in the real world, particularly within the context of Nigeria. Most studies in this field have been conducted in other sub-Saharan African countries, leaving regulators, policymakers, and businesses in Nigeria unaware of the real-world implications of monetary policy processes and economic growth. Thus, this study fills this knowledge gap by providing concrete conclusions and recommendations on how to enhance economic growth in Nigeria.

Theoretical Framework

In this work, classical monetary theory, the quantity theory of money and Keynesian theory are the underpinning theory used to investigate the role of private investment and the relationship between monetary policy and economic growth in Nigeria. According to economists such as Jean Baptist Say and Adam Smith, the classical monetary theory posits that the economy tends toward full employment through price adjustment and combating inflation (Imoughele, 2014). This theory asserts that changes in the money supply directly impact the price level and the flow of tangible goods and services in the economy, as demonstrated by the "equation of exchange" (MV = PY) (Inam & Ime, 2017). The Classical Monetary Theory aims to achieve optimal economic growth by emphasizing the importance of maintaining price stability. Adherence to this theory indicates that monetary policies focused on controlling inflation could enhance financial performance by creating a stable environment for investment and consumption.The relevance of classical monetary theory to the role of private investment and the relationship between monetary policy and economic growth in Nigeria lies in its emphasis on maintaining price stability through stable monetary policies, which can create a conducive environment for long-term investment planning and foster sustainable economic growth by reducing uncertainty and inflationary pressures.

The Quantity Theory of Money, associated with scholars like Irving Fisher, suggests that alterations in the quantity of money result in proportionate changes in the price level (Ahuja, 2017). This theory underscores the crucial role of the money supply in determining price levels and economic activity. Equations such as PT = MV illustrate the relationship between the average price level, money supply, and transaction velocity of money (Balogun, 2007). By comprehending these relationships, policymakers can make informed decisions to stabilize prices and foster economic growth. The Quantity Theory of Money suggests that changes in the money supply, if not appropriately managed, can lead to price fluctuations, potentially affecting investment and overall economic growth. The Quantity Theory of Money highlights the impact of changes in the money supply on inflation and nominal economic activity, suggesting that maintaining stable money growth through effective monetary policy is crucial for fostering an environment conducive to private investment and sustainable economic growth in Nigeria.

In contrast, the Keynesian Theory, pioneered by John Maynard Keynes, offers a distinct perspective on the impact of monetary policy on economic activity (Jhingan, 2009). Keynesian economists argue that changes in the money supply indirectly influence economic activity through their effects on interest rates and investment (Ahuja, 2017). Unlike classical economists, Keynesians suggest that the link between the monetary sector and the real economy is weak and advocate for using fiscal and monetary policy to stabilize the economy during periods of recession (Inam & Ime, 2017). By incorporating the Keynesian perspective, policymakers can implement targeted interventions to stimulate economic growth and mitigate the effects of economic downturns. This theory implies that monetary policy alone may not address economic challenges, and a combination of financial and fiscal measures might be necessary to achieve sustainable growth and stability.

Keynesian theory emphasizes the importance of aggregate demand in driving economic activity, suggesting that private investment plays a crucial role in stimulating economic growth through increased spending and

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job creation. In Nigeria, where private investment is vital for infrastructure development and industrial expansion, Keynesian principles suggest that monetary policy can influence investment levels by adjusting interest rates and liquidity in the financial system, thereby impacting economic growth. By employing expansionary monetary policies to lower borrowing costs and encourage investment, Nigeria can potentially spur economic growth, provided that other factors such as political stability and infrastructure development are also addressed.

METHODOLOGY

The research design adopted for this study is an ex-post facto approach, facilitating the exploration of relationships between variables that have already occurred without direct manipulation by the researcher. This design is well-suited for investigating the interplay among monetary policy, private investment, and economic growth in Nigeria using historical data. Monetary policy is evaluated through key indicators such as the liquidity ratio, money supply, and cash reserve ratio, serving as proxies for assessing its impact on economic variables. The liquidity ratio indicates the proportion of liquid assets to liabilities held by banks, while money supply reflects the total circulating money in billions, and the cash reserve ratio signifies the portion of bank deposits mandated for reserve by the central bank. Economic growth is quantified by gross domestic product (GDP), capturing the total value of goods and services produced within Nigeria's borders over a specified period, providing a comprehensive gauge of economic activity.

Data sources

The sources of data are publication of Central Bank of Nigeria (CBN) such as CBN statistical bulletin, CBN statement of account and annual reports, as well as National Bureau of Statistics publication covering the period of study. The relevant variables sourced include: gross domestic product (GDP), liquidity ratio, money supply and private investment for the period of 1985 to 2022.

Measurement of Variable

S/N	Variable Name	Definition	Measurement	Supporting Literature	Source of Data
1	Monetary Policy	Central bank actions to manage a nation's money supply and interest rates for economic stability.	Liquidity Ratio, Money Supply		
	Liquidity Ratio	A financial metric used to measure a company's ability to meet its short-term obligations with its liquid assets.	Liquidity Ratio	Baghebo, & Stephen, (2014).	CBN Statistical Bulletin, 2022
	Money Supply	The total amount of money in circulation within an economy, that individuals and businesses can use for transactions and other financial activities.	Money Supply	Abdullahi, 2022; Dang, 2020; Ufoeze et al, 2018;	CBN Website
	Cash Reserve Ratio	A monetary policy tool used by central banks to regulate the amount of cash that commercial banks must hold as reserves	Cash Reserve Ratio	Balogun, 2021	CBN Statistical Bulletin, 2022

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2	Economic Growth	An expansion in the economy's capacity to produce and generate income, leading to improved living standards and higher levels of prosperity.	Gross Domestic Product (GDP)		CBN Statistical Bulletin, 2022
	Gross Domestic Product (GDP)	The total value of all goods and services produced within a country's borders within a specific time period.	Gross Domestic Product (GDP)	Ufoeze et al, 2018; Abdullahi, 2022	CBN Website
3	Control Variable				
	Private Investment	The capital invested by individuals, businesses, or organizations into assets in businesses.	Private Investment	Dang, 2020	CBN Statistical Bulletin, 2022

Model Estimation

The autoregressive distributed lag (ARDL) model is used in econometrics to analyze the relationship between variables over time. The model specification involves determining the order of the autoregressive and distributed lag terms and selecting the appropriate variables to include in the model. Thus, the general form of an ARDL model is expressed as:

$$\Delta Y_t = \alpha + \beta_1 \Delta Y_{t-1} + \beta_2 \Delta Y_{t-2} + ... + \beta_p \Delta Y_{t-p} + \gamma_0 \Delta X_{t-1} + \gamma_1 \Delta X_{t-2} + ... + \gamma_q \Delta X_{t-q} + \varepsilon_t \ldots\ldots\ldots\ldots \, general\ ARDL$$

$$\Delta Y_t = \alpha + \beta_1 \Delta Y_{t-1} + \beta_2 \Delta Y_{t-2} + \beta_3 \Delta Y_{t-3} + \gamma_0 \Delta X_{t-1} + \gamma_1 \Delta X_{t-2} + \gamma_2 \Delta X_{t-3} + \varepsilon_t \ldots\ldots\ldots\ldots \, Without\ Private\ Investment$$

$$\Delta Y_t = \alpha + \beta_1 \Delta Y_{t-1} + \beta_2 \Delta Y_{t-2} + \beta_3 \Delta Y_{t-3} + \beta_4 \Delta Y_{t-4} + \gamma_0 \Delta X_{t-1} + \gamma_1 \Delta X_{t-2} + \gamma_2 \Delta X_{t-3} + \gamma_3 \Delta X_{t-3} + \varepsilon_t \ldots\ldots\ldots\ldots \, With\ Private\ Investment$$

Where:

- Y_t presents the dependent variable at time t;
- $Y_{t-1}, \ldots\ldots, Y_{t-p}$ are the lagged values of the dependent variable;
- $X_{t-1}, \ldots\ldots, X_{t-q}$ are the lagged values of the independent variables
- α is the intercept or constant term;
- $\beta_1, \ldots, \beta_p$ are the coefficients of the lagged differences of Y_t
- $\gamma_0, \gamma_1, \ldots, \gamma_q$ are the coefficients of the lagged differences of X_t
- ϵ_t represents the error term at time t.

Method of Data Analysis

To investigate the relationships between monetary policy, private investment, and economic growth in Nigeria, an autoregressive distributed lag (ARDL) model was utilized. This econometric technique is well-suited for analyzing dynamic relationships over time, particularly in assessing the impact of monetary policy

on economic variables. The ARDL model will determine lag orders for dependent and independent variables, including key monetary policy indicators like the liquidity ratio, money supply, and cash reserve ratio, with economic growth (GDP) as the dependent variable. Private investment will be a control variable to capture its potential influence on economic growth. Equations within the ARDL model will capture lagged effects and assess the significance of relationships, while diagnostic tests will ensure the model's robustness. Estimation was conducted using R studio, with results providing insights into the magnitude and direction of these relationships, informing policymakers and stakeholders about the efficacy of monetary policy in fostering sustainable economic growth in Nigeria.

DATA ANALYSIS

Descriptive Analysis

The descriptive analysis in Table 1 for the variables Liquidity Ratio, Money Supply, Gross Domestic Product, Private Development Investment, and Cash Ratio provides some useful insights into the summary of these variables. First, the mean and standard deviation for Liquidity Ratio is 49.16 and 14.86, respectively. The data extend from a minimum of 26.39 to a maximum of 104.20. A positive skewness of 1.43 signifies that the distribution is shifted to the right. A positive kurtosis of 3.17 implies a distribution that has heavy tails, which means more observations fall outside the tails on both sides.

Money Supply has a mean of 37079.68 and a standard deviation of 50727.43. The minimum is 98.89 and the maximum is 196525.71. Money Supply, like Liquidity, is also positively skewed, 1.43, and is has positive kurtosis, 1.29, symbolizing a right-skewed distribution with more outliers. Gross Domestic Product has a mean of 41266.58 and a standard deviation of 20964.38. The minimum and maximum for GDP are 17170.08 and 75768.95 respectively. The skewness (0.37) suggests a slightly right-skewed distribution, while the negative kurtosis (-1.56) indicates a distribution with lighter tails and fewer outliers compared to Liquidity Ratio and Money Supply. Private Domestic Investment exhibits a mean of 7331.59 and a standard deviation of 9079.17. The range extends from a minimum of 13.07 to a maximum of 22290.66. The positive skewness (0.71) indicates a right-skewed distribution, while the negative kurtosis (-1.30) suggests a distribution with lighter tails compared to Liquidity Ratio and Money Supply. Cash Ratio has a mean of 8.39 and a standard deviation of 8.99. The data range from a minimum of 1.00 to a maximum of 27.50. The positive skewness (1.12) indicates a right-skewed distribution, while the negative kurtosis (-0.50) suggests a distribution with lighter tails compared to Liquidity Ratio and Money Supply.

Table 1: Summary Statistics of the variables

	Mean	Standard Deviation	Minimum	Maximum	Skewness	Kurtosis
LR	49.16	14.86	26.39	104.20	1.43	3.17
MS	37079.68	50727.43	98.89	196525.71	1.43	1.29
GDP	41266.58	20964.38	17170.08	75768.95	0.37	-1.56
PDI	7331.59	9079.17	13.07	22290.66	0.71	-1.30
CR	8.39	8.99	1.00	27.50	1.12	-0.50

Trend Analysis

Gross Domestic Product Trend Analysis

The Gross Domestic Product (GDP) reveals an upward pattern from 1985 to 2022. The GDP starts at 17170.08 in 1985 and grows over the years with some variations and hits the highest of 75768.95 in 2022. As a result, the GDP exhibits a positive increase within the examined period, which implies the aggregated

value of output produced within an economy of goods and services.

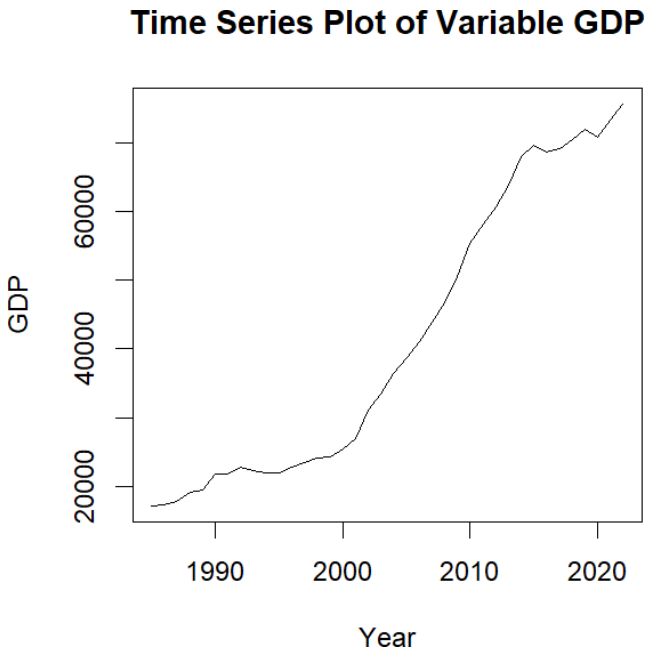

Figure 1. Time Series Plot of Gross Domestic Product

Liquidity Ratio Trend Analysis

The Liquidity Ratio (LR) shows irregular changes throughout the period from the year 1985 to the early 1990s. However, there is an increase up to the early 2005, meaning elevated levels of the LR. These further show a spike up to the mid of 2005 followed by a sharp decline from 2009-2010. Additionally, since the early 2010, the rate has been stabilizing indicating a very constant liquidity trend.

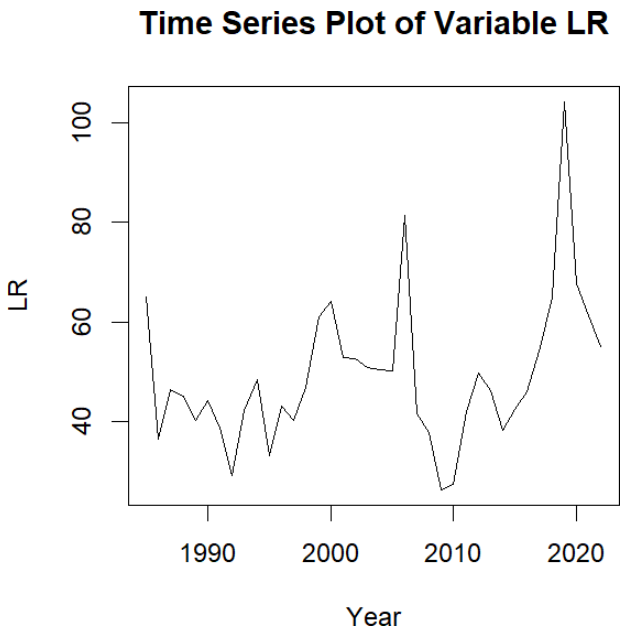

Figure 2. Time Series Plot of Liquidity Ratio

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Money Supply Trend Analysis

It is evident that the MS increases from 1985 to 2022. At 98.891 in 1985, the supply grows over the years and by 2022 equals to 196525.71. Therefore, the data shows that the money supply expands and demonstrate an increasing tendency over the analyzed period, reflecting growth and possible fluctuations associated with the conducting of monetary policy and economic development.

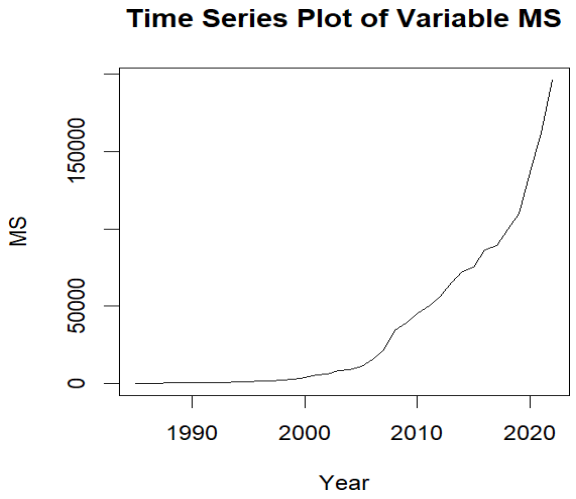

Figure 3. Time Series Plot of Money Supply

Private Development Index Trend Analysis

From 1985 to 2022, the Private Domestic Investment (PDI), demonstrates an upward trend. Specifically, the PDI of 1985 is 13.07, which rise gradually with some fluctuations and reaches its maximum of 22290.66 2017 to 2022. Overall, the available data reveals an increase in the private sector's investments in domestic assets and infrastructure through numerous years.

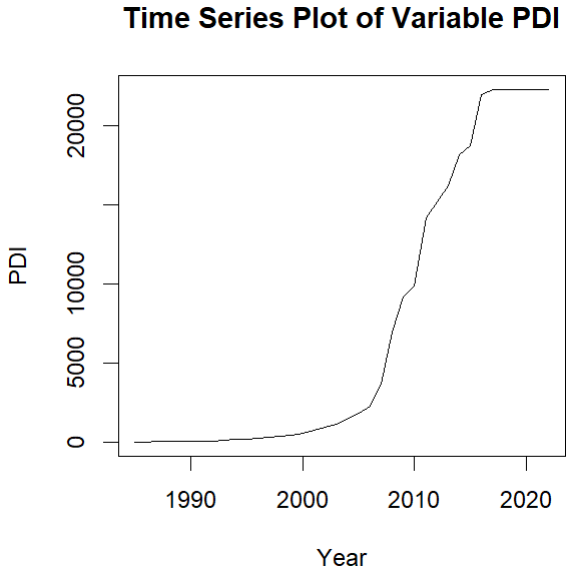

Figure 4. Time Series Plot of Private Domestic Investment

Cash Ratio Trend Analysis

The Cash Reserve Ratio (CR) remained stable at 3% from 1985 to 2005. However, there is a notable decrease in CR starting in 2009, where it drops to 1.3%, indicating a lower proportion of reserves that banks are required to hold. This reduction suggests a policy shift towards increasing liquidity in the banking system to stimulate lending and economic activity during the financial crisis. Subsequently, there is a fluctuation in CR between 2011 and 2016, followed by a gradual increase to 27.5% from 2020 to 2022. This rise indicates a tightening of monetary policy aimed at reducing inflationary pressures and stabilizing the financial system.

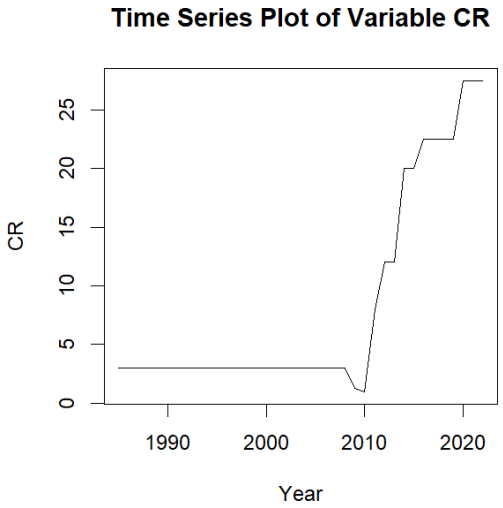

Figure 5. Time Series Plot of Cash Ratio

Stationarity Test

The order of integration of the variables was found. Stationary tests are implemented in the first levels, and then in the first differences to identify the presence of unit roots and the order of integration in all variables. The result of the stationarity test of Augmented Dickey-Fuller presented in Table 1 shows that the variables have different orders of integration. The ADF (lag 0) statistic is -2.316, which implies that the variable shows non-stationarity at the 5% level of significance. However, the ADF (lag 2) statistic of -4.3349 is strong evidence of stationarity at the 1% significance level after two lags, which implies it is integrated of order one. Similarly, with respect to lnLR and lnMS, the ADF results reveal that non-stationarity at lag 0 but strong evidence of stationarity at lags one and two at the 1% significance level. It implies that both lnLR and ln S integrated of order one. As for lnCR , the ADF tests display non-stationarity at lag 0, but there is some strong evidence of stationarity at lags 1 and 2 as this is signified by the 1% level of significance. This indicates that lnCR is also integrated of order one. Finally, for lnPDI , both ADF(lag 0) and ADF(lag 1) suggest non-stationarity, while the ADF(lag 2) statistic of -4.1815 gives strong evidence for stationarity at the 1% level of significance.

Table 2. ADF for Stationarity Test

Variable	**ADF(l(0))**	**ADF(l(1))**	ADF(l(2))
lnGDP	-2.316	−2.0326	−4.3349 ***
lnLR	−0.27	−4.3664 ***	−4.5241 ***
lnMS	−0.7966	−3.938***	−4.512 ***

lnCR	-1.8083	-3.45***	-4.9165***
lnPDI	-0.0259	−2.2986	-4.1815 ***

* Significance at 10%, ** Significance at 5%, *** Significance at 1%. The asterisks indicate the rejection of the null hypothesis of unit root. All the variables are in the natural log form.

Co-Integration Analysis

Table 2 shows the results of the co-integration test using the ARDL-bounds testing approach, which was executed with the help of the R 4.3.1 software. According to the outcomes, the results of the test from all the models whave an F-statistic higher than the critical upper bound at a 5% level of significance. This study also concludes the rejection of the null hypothesis concerning the absence of co-integration, which means that there is a long-run causal relationship between the variables for the Model 1. The Variables in the first model are: GDP, LR, MS, and CR.

The statistic of 2.54 is higher than the critical value, it is an indication that the tested variables are cointegrated. In the second model, where PDI is an additional indicator in the model, the F-statistic value of 1.912 is below the critical value, therefore, the variables when testing the specified order in the model are not cointegrated.

Overall, these results suggest that while there is evidence of a long-run causal relationship among GDP, LR, MS, and CR, the inclusion of PDI disrupts this relationship.

Table 3. Results of Cointegration test.

Models			***F*-Statistic**	**Result**
1	F_{GDP}(GDP|LR, MS, CR)	ARDL(1, 1, 1)	2.54 **	Cointegration
2	F_{GDP}(GDP|LR, MS, CR,PDI)	ARDL(1, 1, 1)	1.912	No Cointegration

Notes: ARDL Models selected on Akaike info criterion (AIC), Restricted intercept and no trend f *** indicate significance at 5%.

Long-Run and Short-Run Estimates

Table 4 illustrates the estimated long-run coefficients of two ARDL specifications. According to the two specifications, the coefficient of constant term C is 0.0011 (-0.452) . Therefore, the coefficient is positive but has significant effect on economic growth. For liquidity ratio LR, the coefficient is -0.0052 (-0.255), which is also negative but has significant impact on economic growth. For money supply MS, the coefficient is -0.0690 (-1.207), negative influence on economic growth and has an indirect correlation with economic growth. Finally, the cash ratio CR coefficient is -0.0055 with a -0.434 t-statistic. The cash ratio has a negative relationship with the dependent variable, but it is significant at the 10% level. In other words, while the variables have positive or negative relationships with economic growth, the coefficient of the variables for long-term growth in Nigeria is statistical.

Table 4. Long-run Coefficients.

Variables	**Coefficient**	**t-statistic**	**P-value**
C	0.0011	-0.452	0.041
lnLR	-0.0052	-0.255	0.061

lnMS	-0.0690	-1.207	0.079
lnCR	-0.0055	-0.434	0.077

The coefficients of the error correction model with the two specifications are shown in Table 5. Specification 1 indicates that none of the variables have statistically significant coefficients. At the same time, the error correction term's coefficient in the specification 2 is negative, and it is significant at the 1 percent level. This implies that the short-term disequilibrium is corrected in the long-term direction. In the specification 2 additionally, the short-term coefficient of liquidity ratio is negative, and it is significant at the percent level.

Similarly, the short-run coefficient of money supply (MS) is negative and significant at the 1% level in the second specification, indicating a significant negative impact on economic growth. The short-run coefficient of cash ratio (CR) is negative and significant at the 5% level also in the second specification, implying a negative influence on economic growth. Additionally, the short-run coefficient of private development investment (PDI) is positive and significant at the 5% level in the second specification, suggesting a positive effect on economic growth.

The adjusted R-squared values are very low, indicating that the model explains only a small portion of the variation in the dependent variable. The Durbin-Watson statistics suggest the presence of positive autocorrelation in both specifications. The heteroscedasticity test results affirm that there is no significant heteroscedasticity in both specifications.

Table 5: Short-run error correction estimates.

	Without Private Investment		**With Private Investment**	
Variables	Coefficient	P-value	Coefficient	P-value
ECM	-0.0031	0.070	-0.5453	0.001***
lnLR	-0.0099	0.067	0.0376	0.064*
lnMS	-0.0778	0.081	-0.1329	0.000***
lnCR	-0.0093	0.065	-0.0257	0.076*
lnPDI			0.0676	0.084*
Adj. R^2	0.0016		0.0029	
D-W stat	3.0506 (0.002)		2.9832 (0.000)	
Het	1.1286 (0.7702)		0.914 (0.9225)	

*: Significant at the 10% level, **: Significant at the 5% level, and ***: Significant at the 1% level

Notes: Adj. R^2 means Adjusted R-squared. Het is the ARCH test for, t-statistics in [], p-values in ().

This study shows the importance of private investment in shaping long-term economic dynamics, as highlighted by the disruption of the long-run causal relationship among GDP, liquidity ratio (LR), money supply (MS), and cash ratio (CR) with the inclusion of private development investment (PDI) in the analysis. This aligns with past studies that have consistently emphasized the critical role of private sector

investment in driving economic growth, both in Nigeria and globally (Aruna *et al.*,2024; Ikechi et al. 2023).

Moreover, the mixed results regarding the impact of monetary policy variables on economic growth resonate with previous research. While the coefficients suggest certain directional relationships between liquidity ratio, money supply, and cash ratio with economic growth, the lack of statistical significance aligns with results from prior studies that have often found limited effectiveness of monetary policy measures in stimulating long-term economic growth (Ufoeze, 2018)

However, the significant positive impact of private development investment on economic growth in the short run shows the importance of private sector participation in driving immediate growth impulses. This finding is in line with past studies that have highlighted the pivotal role of private investment, particularly in emerging economies like Nigeria, where private sector dynamism is often considered a key driver of economic growth (Awoyemi *et al.).*

Diagnostic and Stability Tests

None of the specified Autoregressive Distributed Lag (ARDL-Bounds) models exhibits heteroscedasticity. The coefficients of the ARDL model in each of the specifications are stable, as shown by Figures 1 and 2, which also demonstrate that the cumulative sum of recursive residuals (CUSUM) are within the critical bounds for the 5% significance level.

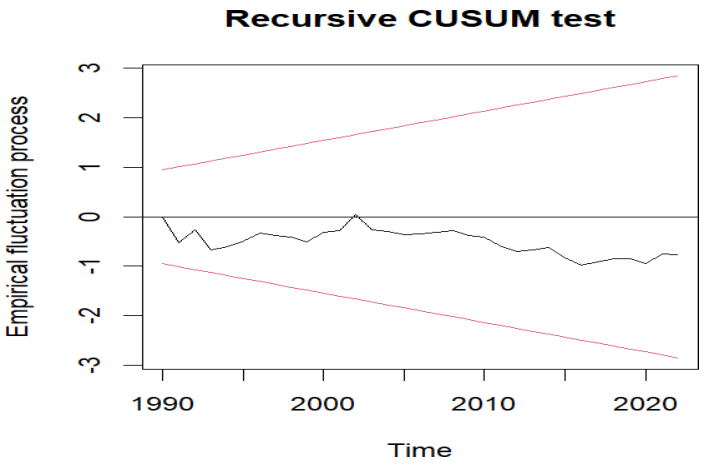

Figure 6. Plot of CUSUM for coefficient stability of Error Correction term (ECM) model 1

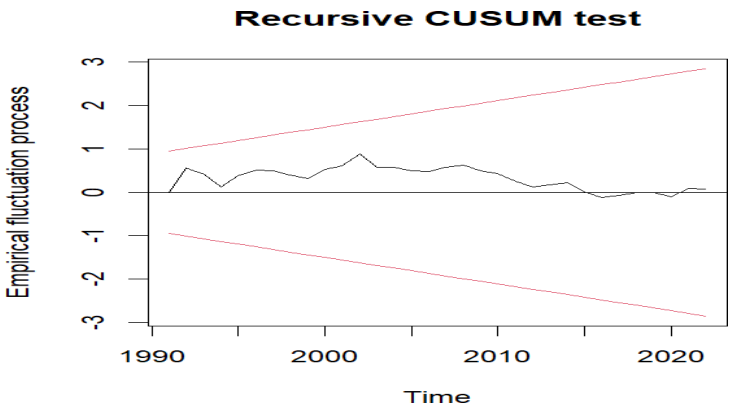

Figure 7. Plot of CUSUM for coefficient stability of Error Correction term (ECM) model 2

Discussion of Findings

The study demonstrates the essential contribution of private investment to economic growth in Nigeria. The findings reveal that private investment significantly spurs economic growth, notably in the short term. The result is consistent with studies conducted by Ezeibekwe (2020), Bora et al. (2020), and Ikechi et al. (2023), which show that private investment has a positive effect on economic growth in Nigeria. This study tests the effectiveness of monetary policies in enhancing economic growth, which is found wanting. The findings imply that, even though quantitative easing and related monetary policy variables have some directionality with economic growth, their actual effect is statistically insignificant in the long run. A similar conclusion was also reached by Akpunonu and Orajaka (2021) and Tule et al. (2020), who studied the long-term impact of monetary policy on Nigerian growth.

The study also shows the need for private investment to power immediate growth creates because private development investment positively affects economic growth in the short run. This implies that the policies must be implemented immediately in the short run to encourage private sector participation and establish an enabling environment for investment. This statement is also supported in the findings of Anthony-Orji et al (2023). that support private investment stimulates economic growth. Oyegoke and Aras (2021) also support the findings in their research. Therefore, the findings form a basis for future findings that will promote inclusive and sustainable economic growth. This shown has shown the government and other stakeholders the importance of private investments as well as the impact of various monetary policy measures examined. Looking ahead, the government should give more attention to policies that will increase private sector investments, make monetary policy instruments more effective and create an enabling environment for investment. With these measures, Nigeria will assuredly be on track a vigorous and sustainable growth path.

CONCLUSION

This study has answered the question of how private investment and monetary policy measures influence economic growth over the given period. Econometric techniques, including: the ARDL model, co-integration analysis and error correction modeling have been utilized to determine some of the dynamics behind Nigeria's economic growth. The findings of this study can contribute a perspective to the effectiveness of private investment and monetary policy in Nigeria's economic growth. At this point, it is also necessary to point out the findings regarding the role of private investment. While the variables linked to monetary policy demonstrate relationships with economic growth, they do not appear to be particularly effective in promoting the long-term growth of the economy. Therefore, these findings are corroborated by current research and show how monetary policy influences short-term dynamics. Hence, the importance of an enabling environment for private participation in the economy to ensure sustainable economic growth. However, the significant positive impact of private development investment on economic growth in the short run explains the immediate growth impulses driven by private sector participation.

According to these findings, the governments of Nigeria should take steps to spur private investment to make the opportunity more attractive to businesses, remove capital controls and other investment regulations, reducing or eliminating other taxes and regulatory regimes, and support business creation by creating supportive tax and regulatory regimes. Moreover, such an integrated policy that administers fiscal policy and structural reforms and promotes entrepreneurship is required to overcome structural obstacles to sustainable development.

REFERENCES

1. Abdullahi, K. (2022). Monetary policy impact on private sector performance in Nigeria. *Journal of Economics and Allied Research, 7*

(3), 1-12.
2. Adugna, H. (2013). Determinants of private investment in Ethiopia. *Journal of Economics and Sustainable Development, 4*(20), 186-194. ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online).
3. Ahangari, A., & Saki, A. (2012). A study on the effect of macroeconomics instability index on private investment in Iran. *Management Science Letters, 2*(6), 1939-1946.
4. Ahuja, H. L. (2017). *Advanced economic theory*. S. Chand Publishing. ISBN: 978-93-5253-332-9.
5. Ajudua, E. I. (2022). Determinants of Private Investment in Nigeria. *Lapai Journal of Economics, 6* (2), 1-12. DOI:https://dx.doi.org/10.4314/lje.v6i2.1
6. Akarara, E. A., & Azebi, O. I. (2018). The effectiveness of monetary policy in the control of inflation in Nigeria: an ECM approach. *IOSR Journal of Economics and Finance (IOSR-JEF), 9*(1), 86-94.
7. Aliu, T. I. (2022). Effectiveness of Monetary Policy in Stimulating Economic Growth in Nigeria. *International Journal of Research in Social Science and Humanities (IJRSS), 3*(2), 34–42.https://doi.org/10.47505/IJRSS.2022.V3.2.5
8. Babatunde, A. S. A., & Olasunkanmi, A. S. (2023). Monetary Policy and Economic Performance in sub-Saharan Africa. *African Journal of Economic Review, 11*(1), 83-100.
9. Baghebo, M., & Stephen, E. T. (2014). Monetary policy and economic growth in Nigeria (1980-2011). Asian Economic and Financial Review, 4(1), 20.
10. Balogun, E. D. (2007). Monetary policy and economic performance of West African Monetary Zone countries. Online athttps://mpra.ub.uni-muenchen.de/4308/.
11. British Petroleum Statistical Review of World Energy 2016,http://www.bp.com/ statisticalreview Accessed 15th August, 2019.
12. Central Bank of Nigeria, Monetary Policy Department. (2022).https://www.cbn.gov.ng/Out/EduSeries/Series1.pdf.
13. Chimezie, E.M. (2012). The Performance of Monetary Policy in the Nigerian Economy. Unpublished B.Sc. Thesis, Caritas University, Amorji-Nike Enugu, Enugu State
14. Combey, A. (2016). The Main Determinants of Private Investments in the WAEMU Zone: The Dynamic Approach. *Journal of Economics and Political Economy, 3*(4). Available at SSRN:https://ssrn.com/abstract=2901267.
15. Dang, T. T., Pham, A. D., & Tran, D. N. (2020). Impact of monetary policy on private investment: Evidence from Vietnam's provincial data. *Economies, 8*(3), 70.https://doi.org/10.3390/economies8030070.
16. Dauda, R. O., & Muhammed, A. (2023). Impact of monetary policy on economic growth in Nigeria (1990-2020). *Journal of Emerging Economies and Islamic Research, 11*(1), 71-90.
17. DOIAri, I., & Koc, M. (2020). Economic growth, public and private investment: A comparative study of China and the United States. *Sustainability, 12*(6), 2243.https://doi.org/10.3390/su12062243.
18. Ekpo, U. N. (2016). Determinants of private investment in Nigeria: An empirical exploration. *Journal of Economics and Sustainable Development, 7*(11), 80-92. ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online).
19. Fasanya, I.O. and Onakoya, A.B.O. (2013) Does Monetary Policy Influence Economic Growth in Nigeria? *Asian Economic and Financial Review, 3*, 635A-646.
20. Gylych, J., Ahmad Jibrin, A., Celik, B., & Isik, A. (2022). Impact of Oil Price Fluctuation on the Economy of Nigeria, the Core Analysis for Energy Producing Countries. *IntechOpen* .https://doi.org/10.5772/intechopen.94055.
21. Haruna, Abel & Nwakoby, Clement & Okaro, Celestine. (2024). Effect of Private Foreign Capital on Economic Growth in Nigeria: 1999-2021. IIARD INTERNATIONAL JOURNAL OF BANKING AND FINANCE RESEARCH. 9. 97-108. 10.56201/ijbfr.v9.no4.2023.pg97.108.
22. Inam, U. S., & Ime, B. S. (2017). Monetary policy and economic growth in Nigeria: Evidence from Nigeria. *Advances in Social Sciences Research Journal, 4*(6).https://doi.org/10.14738/assrj.46.2806.
23. International Monetary Fund, 2012. 700 19th Street, N.W. Washington, D.C. 20431
24. Isaac, M. K., & Samwel, K. C. (2012). Effects of fiscal policy on private investment and economic

growth in Kenya. *Journal of Economics and Sustainable Development, 3*(7), 8-16. ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) Vol.3, No.7, 2012

25. Isik, A., Turan, T., & Yanikkaya, H. (2021). Economic growth effects of public and private investment: Evidence from dynamic panel estimation for developed and developing countries. *Prague Economic Papers, 30*(5), 613-631https://doi.org/10.18267/j.pep.781.
26. John, E. I., & UDOYE, O. (2018). Effect of monetary policy on Nigerian economy. *Journal of Humanities, Management and Social Sciences, 1*(1), 190-217.
27. Kalu, C. U., & Onyinye, M. O. (2015). Domestic private investment and economic growth in
28. Nigeria: Issues and further consideration. *International Journal of Academic Research in Business and Social Sciences, 5*(2), 302.
29. Khan, M. and C. Reinhart (1990), Private Investment and Economic Growth in Developing Countries. *World Development, 18.*
30. Lashitew, A., & Werker, E. (2020). Are natural resources a curse, a blessing, or a double-edged sword?.
31. Madhuri Thakur. (2023, November 9). Economic Growth vs Economic Development | Best 7 Differences. *EDUCBA*.https://www.educba.com/economic-growth-vs-economic-development/.
32. McDowell, M., Thom, R., Frank, R., & Bernanke, B. (2009). *Principles of economics*. McGraw-Hill.
33. National Human Development Report, 2016.www.ng.undp.org 29th June 2019.
34. Nguyen, C.T. and Trinh, L.T. (2018), "The impacts of public investment on private investment and economic growth: Evidence from Vietnam", *Journal of Asian Business and Economic Studies, 25*(1), 15-32.https://doi.org/10.1108/JABES-04-2018-0003.
35. Nigeria Economic Update: Accelerating Economic Expansion, Creating New Job Opportunities. (2019). *World Bank Group*. Retrieved fromhttps://www.worldbank.org/en/country/nigeria/publication/nigeria-economic-update-accelerating-economic-expansion-creating-new-job-opportunities
36. Nigeria Overview. World Bank. (2023). Retrieved fromhttps://www.worldbank.org/en/country/nigeria/overview
37. Obamuyi, T. M. (2013). Factors influencing investment decisions in capital market: A study of individual investors in Nigeria. *Organizations and markets in emerging economies, 4*(07), 141-161.https://doi.org/10.15388/omee.2013.4.1.14263.
38. Ofosu-Mensah Ababio, J., Aboagye, A. Q., Barnor, C., & Agyei, S. K. (2022). Foreign and domestic private investment in developing and emerging economies: A review of literature. *Cogent Economics & Finance, 10*(1), 2132646.https://doi.org/10.1080/23322039.2022.2132646.
39. Oguntoye, M., & Oguntoye, A. (2021). An appraisal of the impact of the oil sector on the Nigerian economy. *LLM Thesis Faculty of Law University of Lagos*.
40. Olayungbo, D. O. (2019). Effects of oil export revenue on economic growth in Nigeria: A time varying analysis of resource curse. *Resources Policy, 64* ,101469.https://doi.org/10.1016/j.resourpol.2019.101469.
41. Olayungbo, D. O. (2019). Effects of oil export revenue on economic growth in Nigeria: A time varying analysis of resource curse. *Resources Policy, 64*, 101469.https://doi.org/10.1016/j.resourpol.2019.101469.
42. Oloyede, J. A., & Kolapo, F. T. (2018). Sensitivity of foreign direct investment to macroeconomic variables in Nigeria. *Advances in Social Sciences Research Journal, 5*(7).
43. Onyeiwu, C. (2012). Monetary policy and economic growth of Nigeria. *Journal of Economics and Sustainable development, 3*(7), 62-70. ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) Vol.3, No.7, 2012
44. Onyishi, A., & Ikechukwu, A. (2018). Assessing the Impact of Government Expenditure on Private Investment in Nigeria Mmo-Oyeleke, Shakirat.https://internationalpolicybrief.org/wp-content/uploads/2023/10/ARTICLE3-47.pdf ISSN Print: 2354-4236 | ISSN Online: 2354-4244
45. Oseni, I. O., & Oyelade, A. O. (2023). The Effects of Monetary Policies on Economic Growth in

Nigeria. *African Journal of Economic Review, 11*(3), 13-28.

46. Raisová, M., & Ďurčová, J. (2014). Economic growth-supply and demand perspective. *Procedia Economics and Finance, 15*, 184-191. DOI:https://doi.org/10.1016/S2212-5671(14)00476-6.
47. Reserve Bank of Australia. (2023). Economic Growth | Explainer | Education. *Reserve Bank of Australia*.https://www.rba.gov.au/education/resources/explainers/economic-growth.html#:~:text=Economic%20growth%20refers%20to%20an,'%20or%20'real'%20terms.
48. RPS Submitter, B. D. F., Askandarou, D., Jacolin, L., & Rabaud, I. (2021). Foreign direct investment and domestic private investment in Sub-Saharan African countries: crowding-in or out?.
49. Schultz Financial Group. (2022, August 25). What is a Private Investment? *Nasdaq.com* .https://www.nasdaq.com/articles/what-is-a-private-investment
50. Schultz Financial Group. (2022, August 25). What is a Private Investment? *Nasdaq.com* .https://www.nasdaq.com/articles/what-is-a-private-investment
51. Shaibu, I., & Enofe, E. E. (2021). Monetary Policy Instruments and Economic Growth in Nigeria: An Empirical Evaluation. *International Journal of Academic Research in Business and Social Sciences, 11*(5), 864–880.
52. Turan, T., Yanikkaya, H., & Özer, H. A. (2021). Economic growth effects of public and private investment: Evidence from dynamic panel estimation for developed and developing countries. *Prague Economic Papers, 30*(5), 613-631https://doi.org/10.18267/j.pep.781.
53. UDEH, S. N., ONWUKA, I. O., & AGBAEZE, E. (2015). Resolving Nigeria's dependency on oil-The derivation model. *Journal of African studies and development, 7*(1), 1-14.
54. Ufoeze, L. O., Odimgbe, S. O., Ezeabalisi, V. N., & Alajekwu, U. B. (2018). Effect of monetary policy on economic growth in Nigeria: An empirical investigation. *Annals of Spiru Haret University, Economic Series, 9*(1), 123-140.
55. Victor, Jane and Iheukwumere, Ikechi Victor and Ogonda, Gift Orokwele, Analysis of the Impact of Monetary Policy on the Nigerian Economic Growth (June 21, 2022). Available at SSRN:https://ssrn.com/abstract=4142494 orhttp://dx.doi.org/10.2139/ssrn.4142494.
56. World Bank Group. (2019). *Nigeria Economic Update: Accelerating Economic Expansion, Creating New Job Opportunities.* Retrieved fromhttps://www.worldbank.org/en/country/nigeria/publication/nigeria-economic-update-accelerating-economic-expansion-creating-new-job-opportunities
57. Yolopoulost, P. A. and J. B. Nugent (1976). *Economics of Development: Empirical Investigations*, New York, Harper and Row Publishers.