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# Effect of Stock Market Private Investment on Economic Growth in Nigeria

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#### Abstract

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Corresponding author Chide Ochimana ochimanachide@gmail.com Tel: +2348023247552 This study examines the effect of stock market private investment on economic growth in Nigeria using quarterly data spanning from 2000q1 to 2021q4. Auto-Regressive Distributive Lag (ARDL) Model was used and the findings unveiled that private investment has a positive but statistically insignificant effect on gross domestic product in Nigeria. In contrast, market capitalization has a positive and statistically significant effect on Nigeria's gross domestic product. Furthermore, the interest rate has a negative but statistically significant effect on gross domestic product in Nigeria. In contrast, the inflation rate has a negative and statistically insignificant effect on Nigeria's gross domestic product. Additionally, the exchange rate has a negative but statistically significant effect on gross domestic product in Nigeria. The study strongly recommends that the Nigerian government should address the shortage of investment assets through effective policy measures that enhance the performance of the stock market in Nigeria and to restore the confidence of the investors. Also, the Government should stabilize the exchange rate to encourage foreign private investment.

### 1. Introduction

Private investment in the stock market offers distinct advantages, such as potential access to high-growth opportunities and the ability to diversify beyond traditional public stocks. For investors, it represents a strategic avenue to potentially higher returns, albeit with a different risk profile and liquidity considerations compared to public market investments. Each of these avenues (including private equity, venture capital, and private placements) provides unique opportunities and challenges, reflecting the complex landscape of investing in less visible, but often more rewarding parts of the stock market.

The stock market stands as a vital pillar of the global financial system, facilitating the buying and selling of ownership stakes in publicly traded companies. It serves as a marketplace where investors can acquire shares of companies, thereby becoming partial owners and participating in the company's potential growth and profits. This exchange of ownership and capital plays a crucial role in enabling businesses to raise funds for expansion and innovation while providing investors with opportunities to earn returns on their investments.

Beyond its role in financial markets, the stock market private investment reflects the broader economic environment, often serving as a barometer for economic health and investor sentiment. Through its dynamic nature, it provides opportunities for individuals and institutions to participate in the economic growth of companies, manage risks, and pursue financial goals. Understanding the stock market private investment is essential for every nation looking to navigate its complexities, whether as an investor, analyst, or financial professional towards economic development.

In the United States of America, private equity backs over 33,000 businesses and more than 11 million employees with a strong record of supporting small businesses and driving economic growth (AIC, 2020). For economic development, the 2020 Security and Exchange Commission (SEC)'s regulations on private investments, including Rule 506 of Regulation D, facilitate private equity fundraising (US-SEC, 2022). In line with the provisions, Private Equity (PE) activity saw its strongest quarter in Second Quarter of 2024 with 122 deals valued at US\$196 billion, an increase from US\$100 billion announced in First Quarter of 2024 (Witte, 2024). In addition, the U.S. private equity market which has \$925 billion in Assets Under Management (AUM), created over 440,000 U.S. jobs and generated US\$33 billion in Gross Domestic Product (GDP) through an investment of US\$230 billion on venture capital market in July 2024 (Larry, 2024). Stock market private equity investments in the USA thus, enhanced economic growth through job creation and enhancement of GDP.

In Africa, the Egyptian Exchange (EGX) market is a major player in the economy, with a diverse array of private investment in infrastructure, real estate, and consumer goods. The Egyptian stock market private investment also offers potential through private equity and venture capital. To support their investment plan, the Structural Economic Reform Program, Ezdehar's Investment Strategy and Egypt's Vision 2030 was implemented in 2020 with support from international experts and various entities such as the General Authority for Investment (GAFI), the Commercial Registry, the Capital Market Authority, and financial and business associations. This effort boosted the percentage of private investment to 36.4 per cent (LE 499.2 billion) for the year 2022/2023, from 25.5 per cent as well as created 3.5 million jobs and contributed over 12 per cent to national GDP in 2023 (ETS, 2023). The significant increase in private investment reflects a robust and growing economy, demonstrating a positive response from stock market private investors in Egypt.

In Nigeria, contrary to common assumption, capital market is still expanding at a relatively slow rate

compared to the size of the country's economy (Nwaolisa, Kasie, & Francis, 2013). Furthermore, according to data from the National Bureau of Statistics (2020), Nigeria's Capital Market underperformed when compared to that of its adjacent African neighbours. At the end of the 2020 trading session, South Africa, Ghana, and Kenya were up by 11.46%, 36.16%, and 12.83%, respectively. The Nigerian market on the other hand underperformed in 2020, with aggregate capital market indices scores falling to about -6.49% (Ifeanyi, 2020). This is an indication of the poor performance of the Nigerian Capital Market.

Over the years, Nigeria's Capital Market indices have fluctuated, which has had an impact on the nation's economic development. For instance, from the First Quarter of 1990 to the Second Quarter of 2007, the Market Capitalization index's measure of Capital Market performance was N8.3 trillion on average (Yusuf, 2022). Due to a decline in private investments following the start of the global financial crisis in 2007/2008, it fell to N5.3 trillion by the First Quarter of 2008. Thus, from an annual growth rate of 1.6% to 0.9% in 2008, Nigeria's economic growth stagnated. But from June 2008 to May 2022, capital market performance increased quickly to an average of N16.9 trillion, hitting an all-time high of N51.02 trillion in November 2022 (Funmilayo, 2022). Similarly, the GDP of Nigeria increased from US\$339.48 in 2008 to US\$477.39 in 2022 (Macrotrends, 2022). The underperformance and fluctuations in the Nigerian Capital Market could be attributed to various factors such as high interest and exchange rates, inflation and most importantly, poor private investments. The primary objective of this study is to examine the nature of the relationship between stock market private investment and economic growth in Nigeria. The other segments of this research are organized into literature review, methodology, presentation, and analysis of empirical findings, conclusion, and recommendations.

### 2. Literature review

This section will discuss the concepts, theories and review related studies on stock market private investment and economic growth in Nigeria.

#### 2.1 Conceptual Discourse

The key variables in this paper are stock market private investment as the independent variable and economic growth as the dependent variable. These variables are subsequently conceptualized.

# 2.1.1 Stock Market Private Investment

Stock market private investment plays a critical role in providing capital to companies, influencing resource allocation, and shaping consumer and investor confidence. However, this dynamic is complex and influenced by factors such as market stability, the regulatory environment, and broader economic conditions.

The concept of stock market private investment has been analyzed from various perspectives by different authors and economists. Smith's (1776) concept of the "invisible hand," as discussed by Majaski (2024), underscores how individuals acting in their self-interest within competitive markets lead to efficient resource allocation and economic growth. In the context of private investment, Smith's idea suggests that individual investors pursuing personal gains contribute to the efficient allocation of resources, thereby driving overall economic growth (Majaski, 2024).

However, while Smith highlights the importance of self-interest and resource allocation, his analysis does not explicitly address how stock market private investment facilitates mechanisms such as private equity, venture capital, and private placements. These mechanisms play a critical role in modern financial markets by fostering innovation, supporting entrepreneurship, and driving business expansion (Ejem, Ogbonna & Chigozie, 2020). Incorporating these aspects provide a more comprehensive understanding of the role of stock market private investment in economic growth.

Keynes (1936, cited in Lishego, 2018) emphasized the psychological aspects of investment, introducing the concept of "animal spirits" to describe how investor behaviour and sentiment drive market fluctuations and influence economic stability. He argued that private investment decisions are significantly shaped by psychological factors and market confidence, which, if unmanaged, can lead to economic instability. This perspective highlights the critical need to understand and manage investor behaviour, not just to foster economic growth but also to mitigate the risks of market-driven instability.

Eugene (2022), through the Efficient Market Hypothesis (EMH), posited that financial markets are efficient, with stock prices fully reflecting all available information. This theory implies that stock markets facilitate efficient capital allocation, thereby promoting economic growth. However, the applicability of EMH in emerging markets like Nigeria has been contested due to market inefficiencies such as information asymmetry and regulatory challenges (Nnadi & Akinniranye, 2020). Nigerian studies reveal that despite inefficiencies, stock markets in Nigeria significantly contribute to private investment through mechanisms like private placements and venture capital, albeit with limited depth and liquidity (Onisanwa & Adaji, 2020; Ezeibekwe, 2021).

Ndanusa Adamu and Madu (2024) highlight the potential of the Nigerian Stock Exchange (NSE) in driving private investment, particularly in sectors like technology and agriculture. However, they caution that market volatility, regulatory bottlenecks, and weak corporate governance remain significant challenges. These findings align with global perspectives but emphasize the need for tailored policies to enhance the Nigerian stock market's contribution to private investment.

# 2.1.2 Economic Growth

Economic growth is a fundamental concept in economics, with various scholars offering perspectives on its drivers and measurement. According to Marx (1867, cited in Liberto, 2024), economic growth is intertwined with class struggle and labor exploitation. He argued that capitalist growth exacerbates inequality, leading to economic crises and potentially resulting in the overthrow of capitalism. Building on this, Schumpeter introduced the concept of "creative destruction," where innovation and entrepreneurship drive growth by disrupting and replacing older industries. Paul's work further elaborates on internal growth factors, emphasizing the role of human capital, knowledge, and innovation, suggesting that investment in these areas fosters continuous growth.

Romer (2020) used a metaphor likening economic growth to cooking, where resources (ingredients) are transformed into valuable outputs (products) through innovative combinations. While insightful, this perspective lacks mention of practical growth metrics such as GDP or per capita income. Grier (2023) defines economic growth as an increase in an economy's capacity to produce goods and services, typically measured by GDP or GNP. He emphasizes the significance of technological innovation, human capital, and supportive policies like education and research for sustainable long-term growth.

In Nigeria, Onyeoma, Omogiade and Okoduwa (2024) found that stock market development, including private equity and venture capital, significantly contributes to GDP growth. They emphasize that addressing inefficiencies in financial markets can enhance economic outcomes. Similarly, Adebayo (2021) linked infrastructural investment and regulatory reforms to improved economic growth, arguing that these factors stimulate private sector activities and attract foreign investments.

Garba and Chanda (2024) highlight the role of capital markets in Nigeria's economic growth, noting that increased investor participation in private placements and venture capital has led to job creation and industrial expansion. However, they caution that political instability and inconsistent policies remain key challenges. These studies underscore the importance of private investment, regulatory stability, and innovation in driving Nigeria's economic growth, aligning with broader theoretical frameworks while addressing localized factors.

# 2.2 Theoretical review

The Financial Intermediary Theory is adopted for this works. The term "financial

intermediation" was first used formally in the writings of Goldsmith (1969), Shaw (1973), and Mckinnon (1973). According to Goldsmith (1969), a nation's level of growth and financial development are directly related. In his research, Mckinnon (1973) suggested that the demand for money reflects the complementary link between physical capital and money. Through financial intermediation, the process of building up physical capital is closely related to the need for money. Shaw (1973) put forth the Financial Intermediary Theory, which holds that there is financial intermediation between investors and money savers. The idea also states that financial intermediation financial development promotes and liberalization. Because there is more credit available, it also makes saving and investing more appealing and ultimately determines how the economy grows and develops. The Financial Intermediary theory was adopted for this study as it is more applicable and encompassing of the variables under consideration. The theory facilitates financial transactions between borrowers and lenders, where businesses are the borrowers and private investors the lenders. It relates financial development through mediums such as the capital market to economic growth.

### 2.2 Empirical review

Okekwu-ate et al. (2022) analyzed the influence of the capital market on Nigeria's economic growth from 1986 to 2021. The study employed the Autoregressive Distributed Lag (ARDL) model for its empirical analysis. The findings demonstrated that the capital market had a significant and positive impact on the Nigerian economy. Notably, Market Capitalization was found to exert a substantial positive influence on economic growth in both the short and long run. In light of these results, the study recommends several measures to enhance the performance of the capital market. These include increasing coordination among regulatory bodies under the Securities and Exchange Commission, promoting efficiency in market operations, raising small investors' awareness of risks and financial literacy,

ensuring the availability of long-term financing, and providing access to the capital market exclusively for legitimate enterprises.

Ogunleye and Adeyemi (2022) examined the impact of stock market development on economic growth. Cointegration Analysis and Error Correlation Mechanism were adopted as the estimating techniques to verify the existence of long-run relationship between stock market development and economic growth. Questionnaires were administered to access investors' confidence in the Nigerian stock exchange and to authenticate the impact of stock market development on economic growth in the period under review. The empirical results revealed that there is an existence of a long-run relationship between stock market development and economic growth in Nigeria. The findings concluded that there is a positive relationship between market capitalization and money supply with economic growth while total value traded, turnover ratio and gross capital formation have inverse relationship with economic growth. Also, market capitalization is highly significant and appears to be the major stock market indicator.

Ogbuabor Anthony-Orji and (2018)examined the impact of stock market development and foreign private investment on economic growth in Nigeria from 1985 - 2016 employing secondary data from Central Bank of Nigeria publications. The study used the Ordinary Least Square (OLS) technique while the long run relationship between the variables was determined using the Angel and Granger Co-integration technique. The result revealed that market capitalization, all share index, and real exchange rate have statistically significant impact on economic growth while foreign direct investment, trade openness and gross national savings have insignificant impact on economic growth. The study also established a long run relationship among stock market development, foreign private investment and economic growth in Nigeria. The study recommended that policy makers and monetary authorities should gear efforts towards formulating policies that will fine tune stock

market performance and reduce issues such as unpaid dividends, delay in dividend payments and unhealthy transfer of stock.

Another study conducted in Ghana by Ofori-Abebrese *et al* (2016) found a positive relationship between Market capitalization and private investment in the long-run. However, inflation has a negative effect on private investment using Dynamic Ordinary Least Squares (DOLS) method of estimation. The study recommends that authorities of Ghana should further develop the stock market since doing so will attract more investors and ultimately increase private investment.

Ezeoha, et al (2009) examined the nature of the relationship existing between stock market development and the level of investment flows in a country with a high degree of macroeconomic instability; and whether the stock market plays a uniform role in attracting both domestic and foreign investments in such economic situation. Extrapolated macroeconomic quarterly data from 1970 to 2006 were used. The Johanson Cointegration model was adopted to examine the long-run trends in the variables. While controlling other variables, a vector error correction model was used in estimating the relationship between investment growth on one hand and stock market development on the other. The study shows that development in the Nigerian stock market over the years was able to spur growth in domestic private investment flows but unable to do so in the case of foreign private investment.

of Most the literature reviewed concentrated on the relationship between market capitalization on economic growth in Nigeria and other countries in the world and employed different methodology in their analysis like Johansen cointegration, Granger causality, Error Correlation Mechanism and Vector Autoregressive except for Boboye et al (2017) and Ofori-Abebrese et al (2016) that considered private investment in their analysis. In view of the above the current study specifically examines of the nature of the relationship between stock market development and private investment on economic growth in Nigeria.

# 3. Methodology

The study used quarterly data spanning from 2000q1 to 2021q4. It employs the Augmented Dickey Fuller (ADF) and Philip Perron (PP) unit root tests. Also, the Auto-Regressive Distributed Lag (ARDL) Model was employed. Thus, this section of the study covers the model specification and the description of the ARDL Model, ADF and PP tests.

#### 3.1 Model Specification

The model of the study is adapted from the work of Okekwu-ate et al. (2022) as follows:

$$RGDP = F(MC, INTR, MS)$$
 1

The model is modified as:

$$RGDP = F(MC, PI, INTR, INFl and EXR)$$
 2

where RGDP =Real Gross Domestic Product measured as economic growth. PI = private investment is measured as domestic private investment in Naira; MC = market capitalization measured in Naira; INTR = interest rate measured as MPC rate and; INFI = inflation rate measured as consumer price percentage. EXR = exchange rate measured as official exchange rate.

3.2 Autoregressive Regressive Distributed Lag (ARDL) Model

For the purpose of achieving the objectives of the study, the Auto Regressive Distributed Lag (ARDL) Model was employed. When variables are found to be stationary at different order of co-integration, then the suitable test for such model is ARDL (Asteriou et al, 2007). It is needful to test for both co-integration and stability to ensure long-run relationship among the variables and that the data-generation process conforms to the model respectively (Asteriou et al, 2007). If the variables are cointegrated, then there is the need to test for Error Correction Model (ECM) which shows how much of the disequilibrium is being corrected over a period in what is called 'adjustment effect'. The ECM possesses advantages of resolving the problem of spurious regression because it eliminates trend in the variables involved. It also ensures that the disequilibrium error term is a stationary variable and is prevented from exploding over time (Asteriou et al, 2007). The general ARDL ECM is presented in Equation 3.

$$\Delta y_{t} = \mu + \sum_{i=1}^{n-1} a_{i} \Delta y_{t-i} + \sum_{i=0}^{m-1} Y_{i} \Delta x_{t-i} -\pi \hat{e}_{t-1} + \varepsilon_{t} \qquad 3$$

Where  $\Delta$  is the difference operator,  $y_t$  is a vector of dependent variable,  $x_{t-t}$  is the matrix of lag values of explanatory variables and  $\pi$  is the adjustment effect or error correction coefficient which is expected to be negative for the error to be corrected. Specifically, the ECM model to be tested is specified in equation.

$$\Delta RGDP_{t} = \mu + \sum_{i=1}^{n-1} a_{i} \Delta RGDP_{t-1} + \sum_{i=0}^{m-1} \beta_{i} \Delta MC_{t-i} + \sum_{i=0}^{m-1} Y_{i} \Delta PI_{t-i} + \sum_{i=0}^{m-1} u_{i} \Delta INTR_{t-i} + \sum_{i=0}^{m-1} w_{i} \Delta INFL_{t-i} + \sum_{i=0}^{m-1} Y_{i} \Delta EXR_{t-i} - \pi \hat{e}_{t-1} + \varepsilon_{t}$$

If  $\pi = 1$  then 100% of the adjustment takes place within single period (instantaneous/full adjustment). If  $\pi = 0$  then there is no adjustment. Thus, any other value is interpreted accordingly; a value of  $\pi$  closer to 1 implies quick adjustment, and value closer to 0 implies slow adjustment.

4

The null and alternative hypotheses for bound test concerning the test for co-integration are:

Ho:  $a_i = \beta_i = \Upsilon = u_i = v_i = \omega_i = 0$  (No long run relationship).

H1: $a_i \neq \beta_i \neq Y$   $l \neq u_i \neq v_i \neq \omega_i \neq 0$  (there is long run relationship).

Decision rule: If F-statistics is greater than any of the critical values of all bounds, reject the null hypothesis and accept the alternative hypothesis.

### 3.3 Granger Causality Model Specification

To investigate the direction of causality between Real Gross Domestic Product (RGDP) and Stock Market Private Investment (PI), the Granger causality test is employed. The test determines whether past values of one variable can predict the current values of another variable, thus indicating the direction of causality. The Granger causality test can be represented as follows for two variables.

$$RGDP_{t} = a_{0} + \sum_{i=1}^{p} a_{i} RGDP_{t-1} + \sum_{j=1}^{q} \beta_{i} PI_{t-j} + \xi_{t}$$
$$PI_{t} = \delta_{0} + \sum_{i=1}^{p} \theta_{i} PI_{t-1} + \sum_{j=1}^{q} \lambda_{i} RGDP_{t-j} + \mu_{t}$$

where RGDP and PI are as defined above, p,q, are optimal lags determined using criteria like Akaike Information Criterion (AIC),  $\xi$  and  $\mu$  are error terms.

Decision Rule:

- Null Hypothesis: The lagged values of PI do not Granger-cause RGDP, or vice versa.
- *Alternative Hypothesis*: The lagged values of PI Granger-cause RGDP, or vice versa.

The null hypothesis is rejected if the F-statistic exceeds the critical value, indicating that PI Granger-causes RGDP, or vice versa.

This approach helps identify whether private investment drives economic growth in Nigeria, or if economic growth stimulates private investment, providing deeper insights into their interdependence.

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#### 4. Empirical results and discussion

This section covers the results of the descriptive statistics, unit root test, Bound Test for Long run, and the ARDL.

#### 4.1 Descriptive statistics

The result of the descriptive statistics is presented in Table 1.

Statistics	LRGDP LMC	LPI	INTR	INFL	EXR	
Mean	11.36	4.11	3.25	6.12	26.71	183.72
Median	11.58	3.92	1.46	5.99	13.76	152.08
Maximum	11.76	5.10	5.54	18.18	99.16	374.35
Minimum	4.61	3.65	1.26	-5.63	9.50	101.70
Std. Dev.	0.79	0.40	1.98	4.83	23.60	78.93
Skewness	-0.47	0.21	0.12	-0.25	0.12	0.12
Kurtosis	64.15	3.22	1.03	2.95	6.66	2.76
Jarque-Bera	14034.21	20.78	13.99	0.91	111.44	17.83
Probability	0.56	0.95	0.44	0.63	0.21	0.22
Sum	965.94	349.41	75.92	520.55	2270.55	15616.56
Sum Sq. Dev.	52.56	13.74	328.64	1957.63	46783.59	523381.0
Observations	85	85	85	85	85	85

Table 1. Descriptive statistics

Source: Researcher computation using E-views 10.

Table 1 depicts the result of the descriptive statistics conducted in the study. The result shows that, the average mean of the variables in question are not far away from their standard deviations except for exchange rate, the maximum and minimum value. This implies that, there is no wide range of fluctuations in the financial market. The skewness in the result shows market capitalization, private investment, inflation rate and exchange rate are less than one and skewed to the left while GDP and interest rate are skewed to the right. This means that all the variables of interest are normally distributed. The Kurtosis also indicates that all the variables under study are less than 3 except for GDP and inflation rate. The Jarque-Bera statistics indicate that all the variables employed are normally distributed.

# 4.2 Unit Root Test

The Unit Root Test was conducted using the Augmented Dickey Fuller (ADF) and Phillips Perron (PP). The study conducted the unit root test with a view to know the order of integration among the variables under consideration as shown in Table 2.

Table 2. Augmented Dicke	v Fuller (ADF	) and Phillips Perroi	1 (PP)
		,	- ( )

	Test at Level		Test at first differ	rence
Variables	ADF test	PP test	ADF test	PP test
LRDGP -0.39	-0.39	-9.18	-9.18	
LMC	-1.83	-1.83	-9.22	-9.22
LPI	-1.08	-1.08	-9.13	-9.13
INTR	-3.40**	-2.87***	-	-
INFL	-2.30	-2.30	-9.27	-9.29
EXR	-1.41	-1.48	-8.97	-8.97

Asterics,<sup>\*\*</sup>indicates stationary or non-stationary at 1% or 5% level of significance. Source: researcher computation using E-views 10.

Table 2 presents the results of unit root test of ADF and PP. The test shows that GDP, market capitalization, private investment, inflation rate and exchange rate are stationary at first difference while interest rate is stationary at level. Therefore, we can conclude that there is a mixture of order of integration among the variables in question.

### 4.3 Bound Test for Long run

From table 3, the result of Co-Integration Bound Test shows a higher value of F-statistics of 6.26 than any of the critical values, that is, lower and upper bounds. Therefore, there is a strong evidence of co-integration in the model. This serves as a strong evidence of employing ARDL model in the study.

Statistics	Value	Critical bounds				
<b>F</b> -statistics	6.26		1%	2.5%	5%	10%
		I(0) Bound	3.93	3.49	3.12	2.75
		I(1) Bound	5.23	4.67	4.25	3.79

Table 3. Result of Co-Integration Bounds Test

Source: Researcher computation using E-views 10.

### 4.4 Results of Autoregressive Distributed Lag (ARDL) Model

Evidence from the unit root tests and bounds test conducted in the study suggests the adoption of ARDL Model. The appropriate model (number of lags) is selected automatically using Akaike Information Criterion (AIC) which is seen as a more robust model. Both the short run and long run parameters of the model are discussed subsequently.

# 4.4.1 Long Run Relationship

The result of the long run parameters of the ARDL model is presented in Table 4. AIC suggests a (2, 0, 2, 0, 2) model after testing for several models.

Variables	•	Coefficient		Std. Error	t	-Statistic	
Prob.							
$\Delta$ (LMC)	-0.15		0.077		-1.99	0.05	
$\Delta$ (INTR)	-0.02		0.01		-3.66	0.00	
$\Delta(INTR(-1))$	0.01		0.01		2.23	0.03	
$\Delta(\text{EXR})$	0.04		0.005		57.13	0.00	
$\Delta(\text{EXR}(-1))$		-0.03	0.002		-12.48	0.00	
R-squared		0.78					
Adjusted R-squa	red	0.77					
S.E. of regression	n	0.09					
Sum squared res	id	0.57					
Log likelihood		88.69					
F-statistic		523.20					
Prob(F-statistic)		0.00					
Dubin-Watson s	tat	2.20					

Table 4. Long run parameters of the ARDL model

Source: Researcher computation using E-views 10.

Table 4 present the long-run parameters of the ARDL model. The result shows that the coefficient of market capitalization indicates negative and statistically significant effect on GDP in Nigeria. Interest rate shows negative and statistically significant effect on GDP in Nigeria. At Lag 1, it indicates a positive and statistically significant effect on GDP in Nigeria. The variable exchange rate indicates a positive and statistically significant effect on GDP in Nigeria while at Lag 1, it indicates a negative but statistically significant effect on GDP in Nigeria while at Lag 1, it indicates a negative but statistically significant effect on GDP. R-squared and the adjusted R-Square of the model are very high at 0.78 and 0.77

respectively. This means that 78% change in GDP is explained by market capitalization, private investment, interest rate, inflation rate and exchange rate in Nigeria. The p-value of f-statistics indicates (0.000000) which suggests that market capitalization, private investment, interest rate, inflation rate and exchange rate have 100% significance influence on the GDP in Nigeria.

#### 4.4.2 Short Run Error Correction Result

The result of the Short Run Error Correction test is presented in Table 5.

Variables	Coefficient	Std. Error	t-Statistic	Prob.
LMC	0.104073	0.039661	2.624047	0.0107
LPI	0.011271	0.015337	0.734886	0.4649
INTR	-0.003620	0.001358	-2.665716	0.0095
INFL	0.498706	0.000348	0.018683	0.9851
EXR	-0.003479	0.000230	-15.11010	0.0000
ECM	-0.73	0.43	-6.34	0.00

Table 5. Auto Regressive Distributed Lag Short Run Form Results and Error Correction Model

Source: Researcher computation using E-views 10.

Table 5 depicts short-run results and ECM of the ARDL model. The result indicates that the coefficient of market capitalization shows a positive and statistically significant effect on GDP in Nigeria. This simply means that single digit increase in market capitalization will bring about 10% increase in GDP in Nigeria, all things being equal. Also, variable private investment shows positive but statistically insignificant effect on GDP in Nigeria. By implication, a single digit increase in private investment will result in 1% increase in economic growth in Nigeria, all things being equal. The positive effect is in consonance with the economic appriori expectation which assumed a positive relationship between stock private investment and GDP. Interest rate shows a negative but statistically significant effect on GDP in Nigeria. This means that 1% increase in interest rate will bring about a decrease in GDP in Nigeria. Also, inflation rate shows positive and statistically insignificant effect on GDP in Nigeria. Exchange rate shows a negative but statistically significant effect on GDP in Nigeria. The coefficient of Error Correction Term (ECT) satisfied its necessary conditions of sign and size as it shows that 72% of the disequilibrium are as a result of the shock in the previous years which are adjusted back to the long-run equilibrium in the current year.

4.4.3 Granger Causality Test Results Table 6. Results of Granger Causality between RGDP and Private Investment

Null Hypothesis:	Obs	F-Statistic	Prob.
PI does not Granger Cause RGDP	84	0.37296	0.5431
RGDP does not Granger Cause PI		3.79931	0.0350

Source: Authors' computation

The results of the Granger causality test between Real Gross Domestic Product (RGDP) and stock market private investment (PI) in Nigeria presented in Table 6 yield two key findings. First, for the null hypothesis stating that PI does not Granger-cause RGDP, the Fstatistic is 0.37296 with a p-value of 0.5431. Since the p-value is greater than the conventional significance level of 0.05, we fail to reject the null hypothesis. This indicates that stock market private investment does not Granger-cause economic growth in Nigeria. In other words, past values of private investment do not provide significant information for predicting current values of RGDP.

In contrast, the second null hypothesis posits that RGDP does not Granger-cause PI. The F-statistic for this relationship is 3.79931, with a p-value of 0.0350. Here, the p-value is less than 0.05, leading us to reject the null hypothesis. This implies that RGDP Grangercauses stock market private investment, indicating that past values of economic growth are useful for predicting current levels of private investment. Essentially, as the economy grows, it influences investment decisions in the stock market.

# 4.4.3 Post estimation tests

The model is free from serial correlation and Heteroscedasticity but failed Ramsey reset test and normality test, because their p-values are greater than 5%. Therefore, we can conclude that the model is robust.

#### 4.4.4 Stability

The study employed stability test with a view to ensure that the data generating process is compatible with the estimated coefficient of the model.

Tests	P-value	
Serial correlation	0.2541	
Heteroscedastics	0.5909	
Normality	0.0000	
Ramsey test	0.0000	

 Table 7. Post estimation tests

Source: Researcher computation using E-views 10.



Source: Researcher computation using E-views 10.

Figure 1 presents the CUSUM plot which is within 5% level of significant. This implies that the model is stable because the blue line is within the red lines of positive and negative values. This indicates that there is no chance of having spurious regression in the

model estimated. Figure 2 presents the Cumulative sum square plot which is within 5% level of significant. This implies that the model is stable. This shows that there is no chance of having spurious regression.



Source: Researcher computation using E-views 10.

# 5. Conclusions

This study explores the relationship between stock market private investment and economic growth in Nigeria using quarterly data from 2000 Q1 to 2021 Q4. The study employs traditional unit root tests such as ADF and PP. The result shows that GDP, market capitalization, private investment, inflation rate and exchange rate are stationary at first difference under ADF and PP tests while interest rate is stationary at level. The ARDL Model results indicate that while market capitalization positively and significantly affects GDP, private investment has a positive but insignificant impact. In contrast, the interest rate negatively impacts GDP, and the exchange rate also has a significant negative effect.

These findings suggest important policy implications for Nigeria's economic management and investment strategies. To stimulate economic growth, policymakers should focus on initiatives that enhance infrastructure, education, and technology, creating a more favorable environment for private investment in the stock market. Since the study found no evidence that private investment drives economic growth, it is essential for the government to improve overall conditions market and build investor confidence. This includes strengthening regulatory frameworks and ensuring stability in the economy.

Additionally, policies should encourage long-term investments by offering tax incentives, improving access to financing, and supporting key sectors that contribute to growth. Ongoing monitoring of economic indicators, such as GDP growth rates and inflation, will help refine investment strategies and align them with broader economic goals.

Finally, enhancing the efficiency and transparency of financial markets is crucial. Efforts to reduce corruption and improve regulatory practices, along with increasing financial literacy among investors, can promote greater participation in the economy. Overall, this study emphasizes the need for comprehensive economic policies to foster sustained growth and enhance stock market investment in Nigeria.

This study acknowledges certain limitations. First, potential data gaps arising from missing or incomplete historical data may affect the robustness of the findings. While extensive datasets were employed, inconsistencies in data coverage for specific years or variables could introduce bias. Second, reliance on historical trends may not fully capture the dynamic and rapidly changing nature of Nigeria's economic and investment landscape. Third, macroeconomic shocks or structural reforms during the study period might have influenced the variables in ways not fully addressed by the models. These limitations highlight the need for further studies employing real-time data, more advanced econometric techniques, and sectorspecific analyses.

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