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EFFECTS OF STOCK MARKET DEVELOPMENT ON NIGERIA'S ECONOMY: 1990 – 2024

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Abstract: This study examines the effects of stock market development on Nigeria's economy, spanning 1990 to 2024. Stock markets are widely recognized as being pivotal to economic growth, yet studies linking them to Nigeria's economy remain limited and often yield conflicting results. Using real GDP as a proxy for economic growth, this study analyses the impact of stock market capitalization, value of traded stocks, All-Share Index, and consumer price index (included as a control variable). Time-series data were sourced from the Central Bank of Nigeria's Statistical Bulletin. Employing the Fourier LM unit root test, Maki cointegration test and autoregressive distributed lag (ARDL) model, the study accounts for structural breaks and short-run dynamics. Findings revealed no long-run equilibrium relationship among the variables, and short-run estimates showed all stock market indicators were statistically insignificant, indicating limited direct short-term impact on Nigeria's economy. However, Granger Causality Test results confirmed unidirectional causality from stock market indicators to real GDP, validating the supply-leading hypothesis. The study highlights systemic inefficiencies in Nigeria's stock market and recommends innovative securities, capital market literacy initiatives, and strengthened regulatory frameworks to optimize the market's contribution to economic growth.
Keywords: Stock Market Development, Economic Growth, Real GDP, Supply-Leading Hypothesis, Structural Breaks, Maki Cointegration Test, ARDL Model

Introduction

Stock markets play a crucial role in economic growth and are widely recognized as essential intermediaries by scholars, academics, and policymakers (Azimi, 2022). Over time, stock markets have evolved into fundamental platforms for capital trading, serving as vehicles for economic development (Dada, 2021). A well-functioning stock market supports sustainable capital formation by efficiently channelling surplus funds into productive sectors of the economy, ultimately fostering growth (Ugbogbo & Aisien, 2019; Njemcevic, 2017).

The extent to which a stock market contributes to economic growth depends on its efficiency and overall performance within a country. As a highly specialized and organized financial market, the stock market facilitates savings mobilization and investment, enabling businesses and governments to raise long-term funds by selling stocks (Echekoba, Ezu, & Egbunike, 2013). An efficient, market-driven stock exchange accelerates transformational change by providing development capital, thereby strengthening economic stability and expansion (Adonri, 2021).

In Nigeria, the stock market has played a pivotal role in capital formation and economic growth, notably supporting the 2005 banking recapitalization and financing various business ventures (Adonri, 2021). The equities market has demonstrated remarkable growth, with market capitalization increasing from ₦2.9 trillion in 2005 to ₦62.76 trillion in 2024—an expansion driven by high-profile listings that enhanced market liquidity and diversified investment opportunities (Nigerian Exchange Group, 2025). This upward trajectory has positioned the Nigerian Exchange (NGX) as one of Africa's leading stock markets, outperforming several comparable indices. However, despite these advancements, challenges such as high transaction costs, information asymmetry, monetary tightening, low trading volumes, and wide bid-ask spreads continue to hinder market liquidity and broader economic integration (Proshare Research, 2025).

Statement of problem

Stock market development has received comparatively less academic attention in relation to economic growth than banking system development, largely due to low equity issuance (Kapaya, 2020). Businesses often depend on short-term financing for long-term projects, which poses significant risks under the maturity matching concept (Agu, 2018). Moreover, the relationship between stock market operations and economic growth remains contentious, with studies yielding conflicting results—while some assert that stock markets drive growth (Alam & Hussein, 2019; Bui & Doan, 2021), others argue they fail to contribute meaningfully (Amu, Nwezeaku, & Akujuobi, 2015). Some researchers emphasize long-term effects (Esian & Ebipre, 2020), whereas others highlight short-term impacts (Adaramola & Popoola, 2019). Additionally, findings on finance-growth causality remain inconsistent, reporting unidirectional, bi-directional, or no causal relationship (Kapaya, 2020). Country-specific factors, including market size and institutional frameworks, contribute to these discrepancies. Njemcevic (2017) suggests that economies with well-developed stock markets tend to outperform bank-centric financial systems. These debates have given rise to four theoretical perspectives: the supply-leading, demand-following, feedback, and causally independent hypotheses (Kapaya, 2020; Naik & Padhi, 2015).

Despite these discussions, existing studies have largely overlooked structural breaks, a critical characteristic of time series data. Structural breaks refer to sudden shifts in regression parameters driven by changes in regime, policy direction, or external shocks (Antoch, Hanousek, Horváth, Hušková, & Wang, 2019; Shrestha & Bhatta, 2018). Failure to account for these breaks can result in misleading conclusions, as conventional models and unit root tests lack the ability to adjust for such disruptions. Prominent examples include the global financial crisis of 2008–2009, the oil price crash in 2015, the ensuing recession in 2016, and the COVID-19 pandemic—all of which significantly altered economic trends.

Objectives and Hypothesis

In light of the existing research gaps and the need to contribute to academic discourse, this study aims to examine the effects of stock market development on Nigeria's economy from 1990 to 2024. Specifically, the study seeks to evaluate the impact of stock market capitalization, the value of traded stock, the all-share index, and the consumer price index (as a control variable) on real GDP.

To test these relationships, the study formulates the following null hypothesis:

- **H_0**: Stock market performance indicators (stock market capitalization, the value of traded stock, and the all-share index) have no significant effect on Nigeria's real GDP.

Conceptual Review

The stock market serves as a structured platform for trading financial assets and liabilities, encompassing various securities such as common stocks and derivatives. Nyong (1997) describes the stock market as a complex institution equipped with mechanisms that mobilize and allocate long-term funds across key sectors of the economy—including households, firms, and government—facilitating economic growth.

Demirguc-Kunt and Levine (1995) emphasize the importance of market size in evaluating stock market performance, noting that market capitalization serves as a fundamental indicator of market value. Market size is commonly assessed using the stock market capitalization-to-GDP ratio, which helps determine whether a market is undervalued or overvalued. Olson (2005) defines market capitalization as the total value of outstanding shares, calculated by multiplying the number of shares by their current price.

Market liquidity is another critical characteristic of stock markets, reflecting their ability to efficiently allocate capital while enabling investors to easily divest their assets. A liquid market allows for large-volume trades with minimal price impact, reducing uncertainties in execution prices (van der Merwe, 2015). One of the primary measures of stock market liquidity is the total value traded, which represents the cumulative financial value of transactions conducted over a given period.

The All-Share Index (ASI) is a key indicator of stock market performance in Nigeria. Sutcliffe (2006) notes that various stock market indices have been developed to meet the growing demand for aggregate measures of market activity. These indices track broad fluctuations in stock prices, helping investors assess overall market trends. In Nigeria, the ASI serves as a benchmark, reflecting changes in the average value of publicly traded shares and providing insights into market performance.

A nation's economy is fundamentally tied to its productivity and value-creation capacity, which is evidenced in how resources are managed to ensure the well-being of its citizens. The most widely used indicator of economic well-being is the Gross Domestic Product (GDP), which quantifies the monetary value of all goods and services produced within a country over a specified period. Real GDP, on the other hand, accounts for inflation-adjusted economic output, providing a more accurate measure of long-term growth. Vibrant capital markets—particularly robust stock exchanges—are essential for fostering economic prosperity. By facilitating capital formation through equity and debt markets, financial systems play a crucial role in mobilizing domestic savings, allocating funds, and attracting foreign investments to support economic development (Bayraktar, 2014; Keji, 2020).

Theoretical Review

This study is guided by four key hypotheses that explain the finance-growth nexus: the supply-leading hypothesis, demand-following hypothesis, feedback hypothesis, and causally independent hypothesis.

The Supply-leading Hypothesis, first introduced by Schumpeter (1911), proposes that financial development drives economic growth. It suggests a one-way causality, where advancements in the financial sector facilitate economic expansion, without reciprocal effects from economic growth (Adeyeye, Fapetu, Alukob, & Migiro, 2015). Schumpeter (1911) further argues that a well-functioning financial system supports real-sector growth, making financial deepening a critical determinant of economic progress. Several studies support this hypothesis both theoretically and empirically (Beck & Levine, 2004; Chakraborty & Ray, 2006; Levine & Zervos, 1998; Naik & Padhi, 2015).

In contrast, Robinson (1952) challenges the supply-leading perspective, arguing that financial deepening is a consequence (not a driver) of economic growth. Known as the growth-led hypothesis, this theory suggests that

in economies experiencing high growth, rising demand for financial services leads to the establishment of new financial institutions and markets (Naik & Padhi, 2015). Empirical support for this hypothesis comes from various studies, including Apergis, Filippidis, & Economidou (2007), Hou & Cheng (2010), and Levine & Zervos (1998).

Patrick (1966) introduced the Feedback Hypothesis, also referred to as the stage of development hypothesis, which integrates both the supply-leading and demand-following perspectives (Adeyeye, Fapetu, Alukob, & Migiro, 2015). According to Patrick (1966), financial development and economic growth exhibit mutual causality—each reinforcing the other over time (Puryan, 2017). In early-stage economies, financial development precedes economic expansion (aligning with the supply-leading hypothesis), but as the economy matures, growth begins to drive financial sector advancements (consistent with the demand-following hypothesis). This hypothesis has been empirically supported by studies such as Demetriades & Hussein (1996), Greenwood & Jovanovic (1990), and Greenwood & Smith (1997).

Lastly, the Causally Independent Hypothesis argues that financial development and economic growth are not interrelated. According to this perspective, neither sector significantly influences the other, implying an absence of causal linkage between finance and economic development (Anwar & Sun, 2011; Mukhopadhyay, Pradhan, & Feridun, 2011; Nyasha & Odhiambo, 2018).

Empirical Review

Numerous studies have examined the relationship between stock market development and economic growth, employing diverse methodologies and analysing various economies.

Naik & Padhi (2015) investigated this linkage across 27 emerging markets using annual panel data from 1995 to 2012. Applying a dynamic panel GMM estimator and a heterogeneous panel causality test, they found that stock market development significantly contributed to economic growth, with macroeconomic variables—such as investment ratio, trade openness, and exchange rates—playing key roles. The study also established a unidirectional causality flowing from stock market development to economic growth.

Kapaya (2020), analysing quarterly time-series data from 2001 to 2019, adopted the autoregressive distributed lag model (ARDL) with bound testing procedures to explore stock market development in Tanzania. The findings revealed both positive and negative effects in the short and long run. While bidirectional causality was observed, the predominant causal direction flowed from stock market development to economic growth, with partial causality evident through stock market turnover.

Nyasha and Odhiambo (2018) examined the finance-growth nexus in six countries from 1980 to 2012, focusing on bank-based and market-based financial development. Using the Granger causality model within an autoregressive distributed lag (ARDL) bounds-testing framework, the study found varying causal relationships across countries and time periods. The results showed unidirectional causality from market-based financial development to economic growth in the United States, a feedback loop in Kenya, a demand-following hypothesis in South Africa and Brazil, and a neutrality view in Australia and the United Kingdom. Additionally, the study observed unidirectional causality from bank-based financial development to economic growth in the United Kingdom and Australia (long-term for Australia), a feedback loop in Brazil and Australia (short-term for Australia), and a neutrality hypothesis for Kenya, South Africa, and the United States.

Puryan (2017) investigated the causal relationship between economic growth, banking sector development, and stock market development in selected Middle Eastern and North African countries. Using annual panel data and

a Granger causality test based on vector autoregression of the error correction model, the study found a one-way causal relationship from banking sector development to economic growth, a mutual causal relationship between stock market development and economic growth, and a one-way causality from banking sector development to stock market development. The study concluded that stock market development had a long-term positive effect on economic growth.

Adaramola and Popoola (2019) analyzed the long- and short-run relationships between stock market development and economic growth in Nigeria using quarterly data from 1986 to 2017. Employing the ARDL model, their findings revealed that stock market development indicators exerted a positive effect on real GDP in the short term, further supporting the argument that stock market growth contributes to economic expansion.

Algaeed (2020) examined capital market development and economic growth in Saudi Arabia between 1985 and 2018, applying the ARDL model, fully modified ordinary least squares (FMOLS), and the Johansen cointegration test. The study found that the share price index, the number of shares traded, and the ratio of share transactions positively influenced economic growth. Additionally, unidirectional causality was observed running from the share price index and market capitalization to real per capita GDP.

Pokharel (2020) explored the causal relationship between capital market development and economic growth in Nepal using annual time-series data from 1994 to 2019. Using total market capitalization as a proxy for secondary market development and total public securities issued as an indicator of primary market development, the study applied the Johansen cointegration test and vector error correction model (VECM) to analyze the data. The results indicated that Nepal's capital market supported economic growth, with unidirectional causality flowing from capital market development to economic growth in both the short and long term.

Udo, Nwezeaku, and Kanu (2021) adopted the ARDL model to investigate the effects of capital market development on Nigeria's economic growth. Analyzing annual time-series data from 1983 to 2016, the study found that the number of listed securities and the All-Share Index maintained a significant relationship with economic growth in both the short and long term.

Toby and Dibiah (2021) explored the relationship between Nigeria's capital market and economic growth using quarterly time-series data from 1981 to 2017. The study employed a vector autoregression (VAR) procedure for estimation, revealing a weak causal link between capital market development and economic growth.

Dada (2021) examined the impact of capital market development on economic growth in Nigeria from 1990 to 2015. Applying the ARDL model and Granger causality technique, the study used GDP as the dependent variable, with foreign direct investment, government expenditure, market capitalization, the All-Share Index, the number of transactions, credit to the private sector, and stock turnover ratio as independent variables. The findings indicated that capital market development positively influenced economic growth.

Aguwamba and Osimen (2023) investigated stock market indicators and economic growth in Nigeria from 1989 to 2021 using the pooled mean group (PMG) estimation technique. The study found that market capitalization had no significant long-term impact on economic growth, although short-term effects were observed. The All-Share Index (ASI) exhibited a significant positive impact on economic growth, both directly and through investment rate improvements. Additionally, total value traded (TVT) did not significantly enhance economic growth directly, but its influence was evident through investment rate increases in the long run.

Demir (2025) explored the link between stock market development and economic growth using panel data from 36 countries spanning 2003 to 2022. Applying fully modified ordinary least squares (FMOLS) and the panel

vector error correction model (PVECM), the study captured both short- and long-term dynamics. The findings suggested a two-way relationship between stock market capitalization and economic output in the short run, but only for high-income countries. Conversely, low- and middle-income countries experienced short-term positive effects of stock market capitalization on economic growth, but the reverse causal direction was not observed. In the long term, stock market capitalization exerted a unidirectional positive influence on economic growth.

Hamouda (2022) investigated the causal relationship between stock exchange development and economic growth in three Arab countries (Egypt, Morocco, and Tunisia) over the period 1988 to 2017. The study employed the Granger causality test and the non-linear Kyrtsou-Labys test to analyze the interaction between stock market expansion and economic growth. The Granger causality test revealed a unidirectional causal link from economic growth to market capitalization in Tunisia, while a bidirectional relationship was observed in Egypt and Morocco. Additionally, the non-linear causality test confirmed significant bidirectional causality across all three countries. The study concluded that stock exchange development contributes positively to economic growth in these economies, reinforcing the importance of a well-functioning financial market in fostering sustainable economic expansion.

Research Methodology and Model

To assess the impact of stock market development on Nigeria's economy, this study employed annual time-series data spanning from 1990 to 2024. The base year 1990 was chosen as it marks the enactment of the Companies and Allied Matters Act, which provided companies with greater access to capital through the stock market. Real GDP (2010 constant basic price), serving as a proxy for economic growth, was designated as the dependent variable, while stock market capitalization, the value of traded stock, the All-Share Index, and the consumer price index (a control variable) were used as independent variables. The data were sourced from the 2024 Annual Statistical Bulletin of the Central Bank of Nigeria.

Model Specification

The study adopted the model specification used by Tan & Shafi (2021):

$$LGDPPC_t = \beta_1 + \beta_2 LSUKUK_t + \beta_3 LCB_t + \beta_4 LSMC_t + \beta_5 LSAVR_t + \beta_6 LNE_t + e_t \quad \text{(i)}$$

Where L represents natural logarithms, GDPPC denotes real gross domestic product per capita, SUKUK signifies Sukuk issuance, CB refers to conventional bonds excluding Sukuk, SMC stands for stock market capitalization, SAVR represents real gross fixed capital formation, NE denotes the employment growth rate and e is the error term.

For this study, the model was modified as follows:

$$LRGDP = \beta_0 + \beta_1 LSMC + \beta_2 LVTS + \beta_3 LASI + \beta_4 LCPI + e_t \quad \text{(ii)}$$

Where LRGDP = log form of real gross domestic product, LSMC = log form of stock market capitalization, LVTS = log form of the value of traded stock, LASI = log form of the All-Share Index, LCPI = log form of the consumer price index, β_1 - β_4 = coefficients of the independent variables and e_t = error term.

Model Justification. The selection of variables aligns with the classification of stock market development indicators into size indicators, liquidity indicators, and volatility indicators. According to Adu, Marbuah, & Tei Mensah (2013) and Demirguc-Kunt & Levine (1996), financial development cannot be effectively represented

by a single indicator; thus, this study incorporates both size and liquidity indicators, specifically stock market capitalization and the value of traded stock.

Structural Breaks and Unit Root Tests

To assess the presence of structural breaks, graphical illustrations of the variables were analyzed. Structural breaks were formally identified using the Bai-Perron structural break test (Bai & Perron, 1998; 2002), which allows for multiple breaks and is based on least-squares estimation principles:

$$Y = X\beta + \bar{z}\delta + U \quad \text{(iii)}$$

Where Y = (y1, …, yT)′, X = (x1, …, xT)′, U = (u1, …, uT)′, δ = (δ1′, …, dm+1′)′, and z̄ is a matrix that partitions Z at (T1, …, Tm), such that z̄ = diag(Z1, …, Zm+1).

To further account for structural breaks, the Fourier LM unit root test (Enders & Lee, 2012) was employed. Unlike traditional unit root tests, which assume linearity, the Fourier LM test accommodates non-linear behaviour and smooth structural shifts by incorporating a flexible Fourier transformation.

Cointegration Analysis

The Maki Cointegration Test (Maki, 2012) was used to determine the existence of long-term equilibrium relationships among variables while accounting for multiple structural breaks. This test extends the Gregory & Hansen (1996) and Hatemi-J (2008) approaches, enabling the detection of an unknown number of breakpoints in time-series models.

Estimation Technique

The study employed the autoregressive distributed lag (ARDL) model, an ordinary least squares (OLS)-based approach that simultaneously estimates short-run and long-run parameters. ARDL is particularly effective for time-series datasets with mixed orders of integration; I(0) and I(1) (Shrestha & Bhatta, 2018).

$$\Delta y_t = \alpha_0 + \sum_{i=1}^{p} \beta_i \Delta y_{t-i} + \sum_{i=1}^{p} \delta_i \Delta x_{t-i} + \sum_{i=1}^{p} \varepsilon_i \Delta z_{t-i} + \lambda_1 y_{t-1} + \lambda_2 x_{t-1} + \lambda_3 z_{t-1} + u_t \quad \text{(iv)}$$

Where the first part with β_i and δ_i represents short-run dynamics, while the second part with λs captures the long-run relationship.

Diagnostic Tests

To ensure model robustness, the study conducted Breusch-Godfrey Serial Correlation LM Test (to detect autocorrelation), ARCH Heteroskedasticity Test (to examine variance instability), CUSUM and CUSUMSQ Stability Tests (to verify structural stability).

Granger Causality Test

To explore causal relationships among variables, the Pairwise Granger Causality Test was applied using the following equations:

$$\Delta x_t = \sum_{i=1}^{n} \beta_i \Delta x_{t-i} + \sum_{i=1}^{n} \delta_i \Delta y_{t-1} + u_{1t} \quad \text{(v)}$$

$$\Delta_{yt} = \sum_{i=1}^{n} \alpha_i \Delta y_{t-1} + \sum_{i=1}^{n} \lambda_i \Delta x_{t-1} + u_{2t} \quad \text{(vi)}$$

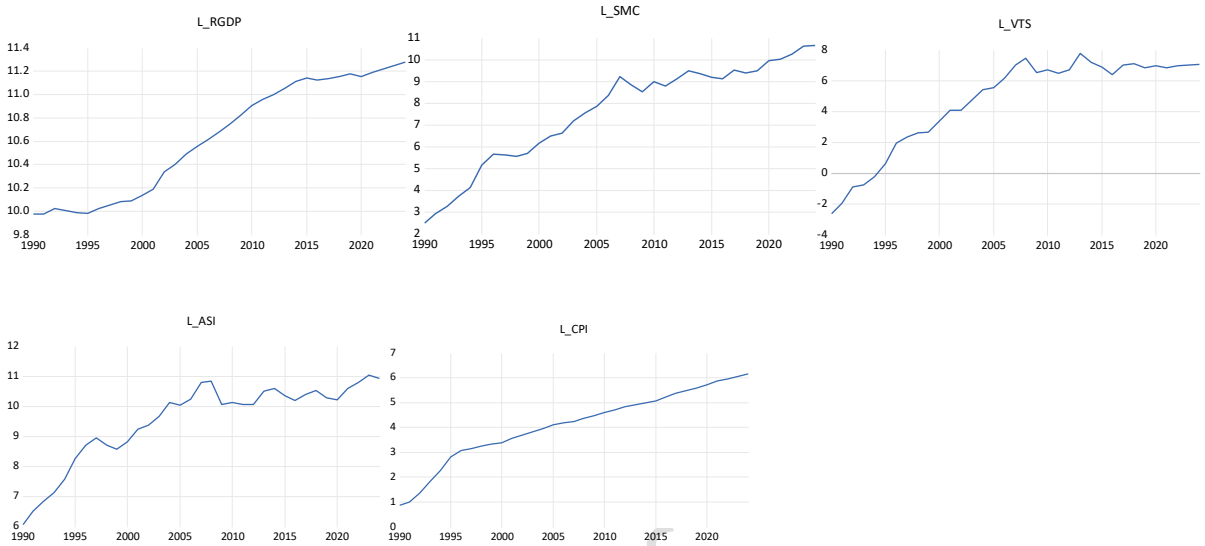
Where H_0 ($\delta_i = 0$) implies that Δx does not Granger-cause Δy in equation (v) and H_0 ($\lambda_i = 0$) implies that Δy does not Granger-cause Δx in equation (vi).

The rejection or non-rejection of the null hypothesis was based on the F-statistic and p-value, with the null hypothesis rejected if F-statistic > F-critical or p-value < 0.05.

Data Presentation, Analysis, and Findings

The data and model parameters were estimated using E-Views 13 and Gauss 25 software packages. A graphical illustration of all variables was plotted and presented in Fig. 1 to provide a visual representation of trends and movements.

Fig 1: Graphical illustration of input Variables



Source: Authors' computation using E-views 13

Test for Structural Breaks

Given the nature of the graphs in Fig. 1, it is essential to assess the presence of structural breaks. Structural break testing was conducted using the Bai-Perron structural break test, with the results summarized in Table 1. The findings indicate that all variables exhibited multiple (at least two) structural break dates, as determined by the LWZ criterion.

Table 1: Bai-Perron Structural Break Test

Variable	Structural Break(s)	LWZ Criterion
LRGDP	3: 2002, 2008, 2013	-3.984037
LSMC	4: 1995, 2001, 2006, 2020	-0.423865
LVTS	3: 1996, 2001, 2006	0.040828
LASI	2: 1995, 2003	-1.220570
LCPI	4: 1995, 2003, 2010, 2018	-1.052894

Source: Authors' computation using E-Views 13

Test for Stationarity

To determine whether the variables exhibit unit root properties, the Fourier LM unit root test was applied, allowing for multiple structural breaks. The results, presented in Table 2, indicate that only LCPI is stationary at level I(0), while all other variables attain stationarity at first difference I(1).

Table 2: Fourier LM Unit Root Test

Level				First Difference			
Variable	**T-statistic**	**5% C. Value**	**I(d)**	**Variable**	**T-statistic**	**5% C. Value**	**I(d)**
LRGDP	-2.658	-4.100	-	**ΔLRGDP**	-5.205	-4.100	I(1)
LSMC	-3.024	-4.100	-	**ΔLSMC**	-5.188	-4.100	I(1)
LVTS	-4.042	-4.100	-	**ΔLVTS**	-5.204	-4.100	I(1)
LASI	-4.012	-4.100	-	**ΔLASI**	-5.615	-3.180	I(1)
LCPI	-4.964	-4.100	I(0)	**ΔLCPI**	-2.902	-4.100	-
Decision Rule: Reject the null hypothesis (i.e presence of unit root) if the t-statistic exceeds the critical values.							

Source: Authors' Computation using Gauss 25

Maki Cointegration Test

The Maki cointegration test, which accounts for multiple structural breaks, was employed to assess the long-run relationship between variables. The results, summarized in Table 3, suggest that the null hypothesis of no cointegration is accepted, indicating that the variables do not exhibit a long-run equilibrium relationship.

Table 3: Maki Cointegration Test

Test Statistics	Estimated Test Value	Critical Values		
		1%	**5%**	**10%**
Maki	-4.548	-6.741	-6.214	-5.974
Decision Rule: Reject the null hypothesis of no cointegration if the Maki test statistic is less than the 5% critical values.				

Source: Authors' computation using Gauss 25

Short-Run Estimation Using ARDL Model

Given the absence of cointegration, the autoregressive distributed lag (ARDL) model was employed to estimate short-run parameters using equation (ii). This approach is justified by the mixed order of integration among variables I(0) and I(1)**,** as revealed by the stationarity test.

$$\Delta LGDP_t = \beta_{01} + \sum_{t=1}^{q} \beta_{1t} \Delta LGDP_{t-1} + \sum_{t=1}^{q} \beta_{2t} \Delta LSMC_{t-1} + \sum_{t=1}^{q} \beta_{3t} \Delta LVTS_{t-1} + \sum_{t=1}^{q} \beta_{4t} \Delta LASI_{t-1} + \sum_{t=1}^{q} \beta_{5t} \Delta LCPI_{t-1} + \varepsilon_t \quad \text{(vii)}$$

Table 4: Short-Run Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(L_SMC)	0.001625	0.020532	0.079141	0.9376
D(L_VTS)	-0.021613	0.018695	-1.156107	0.2600
D(L_ASI)	0.032129	0.027630	1.162804	0.2574
D(L_CPI)	-0.008102	0.039879	-0.203173	0.8409

Source: Authors' computation using E-Views 13

The short-run coefficients of all stock market performance indicators were statistically insignificant, as indicated by their p-values. This suggests that stock market development had no significant short-term impact on Nigeria's economy during the study period. These findings align with Algaeed (2021), Naik & Padhi (2015), Pradhan et al. (2020), and Thumrongvit, Kim, & Pyun (2013) but contradict Adaramola & Popoola (2019) and Kapaya (2020).

Pairwise Granger Causality Test

To establish causality between stock market performance indicators and economic growth, the Pairwise Granger Causality Test was conducted, with results presented in Table 5.

Table 5: Pairwise Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
L_SMC does not Granger Cause L_RGDP	31	5.31413	0.0116
L_RGDP does not Granger Cause L_SMC		1.16004	0.3292
L_VTS does not Granger Cause L_RGDP	31	5.72678	0.0087
L_RGDP does not Granger Cause L_VTS		0.02881	0.9716
L_ASI does not Granger Cause L_RGDP	31	2.67341	0.0879
L_RGDP does not Granger Cause L_ASI		1.41143	0.2619
L_CPI does not Granger Cause L_RGDP	31	1.20450	0.3160
L_RGDP does not Granger Cause L_CPI		4.91572	0.0155
Decision Rule: Accept Null Hypothesis if P value > 0.05			

Source: Authors' computation using EViews 13

The results indicate unidirectional causality running from stock market capitalization and the value of traded stock to real GDP, meaning past values of stock market capitalization and traded stock predict economic changes in Nigeria. This finding is consistent with Acha & Akpan (2019), Kapaya (2020), Kolapo & Adaramola (2012), Dada (2021), and Tang (2013).

Diagnostic, Fitness, and Structural Test

To ensure robustness and reliability, several diagnostic and stability tests were conducted. The outcomes are summarized in Table 6 and Fig. 2, highlighting the model's structural integrity and absence of issues such as serial correlation and heteroskedasticity.

Model Diagnostics. As reported in Table 6, the model's residuals exhibited no signs of serial correlation or heteroskedasticity, as evidenced by the p-values obtained from the Breusch-Godfrey Serial Correlation LM Test and the ARCH Heteroskedasticity Test, which were both greater than the significance threshold (0.05).

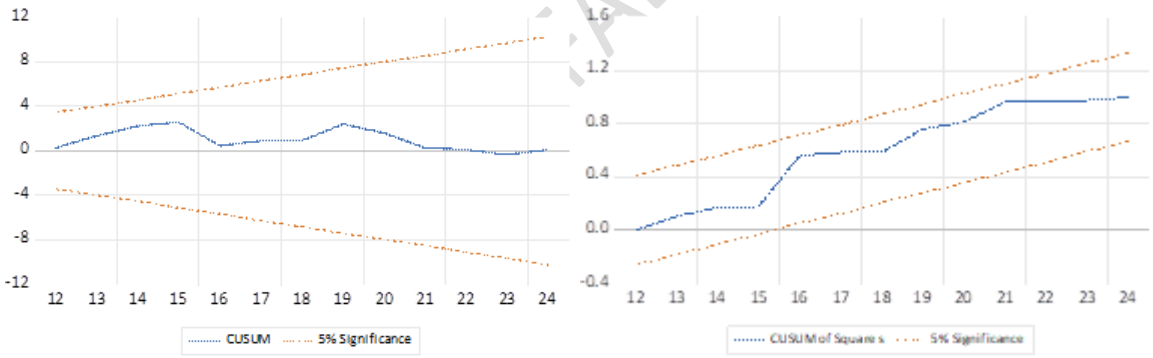
Table 5: Summary of Diagnostic Test

Diagnostic Test/Stability Tests	P-value (P)	Sig. (S)	Null Hypothesis	Decision Criteria	Result
Breusch-Godfrey Serial Correlation LM Test	0.3463	0.05	No Serial Correlation	Reject H0 if P<S	No Serial Correlation
ARCH Heteroskedasticity Test	0.3308	0.05	No Heteroskedasticity	Reject H0 if P<S	No Heteroskedasticity
CUSUM Stability Test					Model is Stable
CUSUMSQ Stability Test					Model is Stable

Source: Authors' computation using E-Views 13

Structural Stability Analysis. The Cumulative Sum of Recursive Residuals (CUSUM) and Square of Cumulative Sum of Recursive Residuals (CUSUMSQ) tests, illustrated in Fig. 2, confirmed the stability of the model. The blue CUSUM and CUSUMSQ lines remained within the 5% boundary, indicating that the model is structurally stable over the study period.

Fig 2: CUSUM and CUSUMSQ Test



Source: Authors' computation using Eviews 13

Summary and Conclusion

This study analysed the effect of stock market development on Nigeria's economy from 1990 to 2024, focusing on both short-run dynamics and potential long-run relationships. The results of the Maki cointegration test revealed the absence of a long-run relationship among the variables. Consequently, only short-run estimates were examined.

The analysis demonstrated that all the variables (stock market capitalization, the value of stock traded, the All-Share Index, and the consumer price index) were statistically insignificant in the short run. This implies that the Nigerian stock market had no meaningful short-term impact on the country's economy during the period under study.

However, the Pairwise Granger Causality Test identified unidirectional causality from stock market capitalization and the value of traded stock to real GDP, indicating that past values of these stock market indicators predict economic growth in Nigeria. This finding aligns with the supply-leading hypothesis, which asserts that financial development drives economic growth. The results are consistent with the conclusions of Beck and Levine (2004), Chakraborty and Ray (2006), and Naik and Padhi (2015), further validating the role of stock market indicators as facilitators of economic growth.

Recommendations

Based on the findings of the study, the following recommendations are proposed:

1. **Enhancing Stock Market Capitalization and Liquidity:** Given the insignificant effect of stock market capitalization on real GDP, the demutualization of the Nigerian stock market is a step in the right direction. The Nigerian Exchange should strategically focus on increasing market size, liquidity, and overall activity by sustaining the automation of its operations. This could improve efficiency and attract greater investor participation.
2. **Promoting Stock Market Awareness:** The Nigerian Exchange should actively promote awareness of stock market opportunities to foster wider participation. Efforts could include disseminating regular updates via the Exchange's official website, sponsoring essay competitions on relevant financial topics for tertiary students, and allocating significant funds for corporate social responsibility initiatives.
3. **Improving Conflict Resolution Mechanisms:** Transparent and timely conflict resolution among capital market participants should be prioritized. This includes strengthening the Investment and Securities Tribunal by appointing qualified judges through the Securities and Exchange Commission. Additionally, the Nigerian Exchange should uphold robust internal codes of conduct by enforcing responsive rulemaking and maintaining zero tolerance for infringements.
4. **Strengthening Regulatory Frameworks and Sensitization Efforts:** Given the short-term insignificance of stock market variables on real GDP, it is essential to reinforce the regulatory framework governing stock market operations. Furthermore, the Nigerian Exchange and the Securities and Exchange Commission should implement aggressive sensitization programs to raise awareness about available investment opportunities in the market, targeting both institutional and retail investors.

Implications for Policy and Practice

The findings of this study, which reveal the insignificance of stock market indicators on economic growth in the short run, have several implications for policy and financial market reforms:

1. **Economic Growth and Financial Sector Development:** The study underscores the importance of aligning stock market development with broader economic objectives. The insignificant short-term effects of stock market capitalization, traded stock value, and the All-Share Index on real GDP highlight systemic inefficiencies within Nigeria's capital market. Policymakers and market regulators must address these challenges to ensure that the stock market can play a more impactful role in driving sustainable economic growth.
2. **Supply-Leading Hypothesis Validation:** The evidence of unidirectional causality from stock market indicators to real GDP supports the supply-leading hypothesis, which asserts that financial development precedes economic growth. This implies that the Nigerian stock market has predictive

relevance for economic trends, though its immediate impact may be limited. This insight can guide policy efforts toward fostering financial market innovations that align with long-term economic goals.

3. **Structural Reforms:** The absence of a long-term equilibrium relationship among variables suggests the need for structural reforms to improve the functioning and efficiency of the stock market. Strengthening market infrastructure, enhancing transparency, and addressing liquidity challenges are critical steps to boost investor confidence and ensure the stock market contributes to long-term economic stability.
4. **Investor Engagement and Awareness:** Poor market literacy and limited participation among institutional and retail investors hinder the stock market's effectiveness as a growth catalyst. Sensitization campaigns and financial literacy programs could foster a culture of active investment, enabling more Nigerians to leverage the capital market for wealth creation.
5. **Integration of Financial Indicators:** The predictive relationship observed in the Granger causality test highlights the need for better integration of stock market indicators into economic planning frameworks. Real GDP forecasts could incorporate stock market trends to improve the accuracy of macroeconomic models and inform policy decisions.
6. **Focus on Long-Term Growth:** Given the study's findings, short-term expectations of the stock market's impact on economic growth may be unrealistic. Policymakers should focus on strategies that enhance long-term contributions, such as fostering innovation in financial products, encouraging foreign portfolio investments, and implementing stable macroeconomic policies.

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