DETERMINANTS OF STOCK MARKET DEVELOPMENT IN EMERGING ECONOMIES: EXPERIENCE FROM NIGERIA

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Keywords

Stock market, economic growth, foreign direct investment, trade openness, and financial development

Abstract

Research Problem: *Although stock market development is widely recognized as a driver of economic transformation, limited empirical research has thoroughly examined its key macroeconomic determinants within Nigeria over an extended period. Despite ongoing financial reforms and increasing integration into the global economy, the mechanisms through which foreign direct investment (FDI), trade openness, economic growth, and financial development influence Nigeria's stock market remain insufficiently explored, particularly in the context of persistent structural and institutional vulnerabilities.*

Methods/Theory: *This study adopts the Endogenous Growth Theory and the McKinnon–Shaw Hypothesis to provide a theoretical foundation for understanding stock market behaviour in a developing economy. Annual secondary data spanning 1990 to 2024 were sourced from the World Bank. The analysis combined descriptive statistics, unit root diagnostics, Johansen cointegration, and the Vector Error Correction Model (VECM) to capture both long-run equilibrium relationships and short-run adjustment dynamics among the variables.*

Results: *The findings indicate that FDI exerts a negative and significant long-run effect on stock market capitalisation, reflecting the predominance of foreign investment in non-market sectors and the impact of profit repatriation. In contrast, financial development and trade openness show positive and statistically significant influences, underscoring the importance of domestic financial deepening and global integration in stimulating stock market growth. Economic growth, however, demonstrates an insignificant relationship, suggesting weak linkages between macroeconomic expansion and capital market performance. Short-run results further reveal sluggish adjustment processes, with financial development imposing a contractionary effect on the stock market.*

Conclusion: *Stock market development in Nigeria is shaped by complex macroeconomic interactions and remains sensitive to structural challenges. While openness and financial deepening support long-term growth, the negative role of FDI and weak short-run adjustments highlight institutional gaps that constrain market performance.*

Key Contribution to Knowledge: *This study enriches financial economics literature by offering a robust long-term analysis of macroeconomic determinants of stock market development in Nigeria using contemporary data and advanced econometric techniques. It provides new insights into how external and domestic factors collectively shape capital market outcomes.*

Recommendation: *The study recommends targeted policies that redirect FDI toward productive, market-linked sectors, reinforce the capacity and governance of financial institutions, and enhance transparency within the capital market. Further comparative research across African and emerging economies is encouraged to strengthen regional financial integration and inform broader policy reforms.*

Introduction

The stock market is a vital pillar of economic growth and development, particularly in developing economies, where access to capital and the efficient allocation of resources are crucial for sustainable progress. It facilitates the mobilisation of savings and channels them into productive investments, thereby fostering industrial expansion, entrepreneurship, and economic diversification. A well-developed stock market improves liquidity, reduces transaction costs, and provides investors with a platform to diversify risks, ultimately boosting investor confidence and stimulating long-term growth (Salik & Aras, 2022; Shehab, 2024). In emerging economies such as Nigeria, stock markets play an essential role in integrating the domestic economy with global financial systems, promoting foreign capital inflows, and creating opportunities for local firms to access funding (Owoade & Ogunlowo, 2020). However, despite these benefits, many emerging markets remain underdeveloped, volatile, and vulnerable to macroeconomic shocks, policy inconsistencies, and external financial crises. Understanding the determinants of stock market development in such contexts is therefore crucial for designing effective policies to strengthen market performance and economic resilience.

Nigeria's stock market, represented by the Nigerian Exchange Group (NGX), has experienced significant structural reforms over the past few decades aimed at enhancing transparency, investor confidence, and operational efficiency. Despite these reforms, the Nigerian stock market continues to face multiple challenges, including low investor participation, inadequate financial literacy, and over-reliance on a few key sectors such as oil and gas (Oke et al., 2023; Nguyen et al., 2023; Olufemi et al., 2023). Macroeconomic factors such as FDI, trade openness, GDP per capita

and financial development have been identified as key determinants of stock market development (Shehab, 2024; Ugbaja, 2025). Trade openness promotes competitiveness and global integration, enabling local firms to access foreign markets and capital, while FDI inflows bring additional resources and advanced technology that can drive corporate growth and expand stock market activities (Owoade & Ogunlowo, 2020). Likewise, financial development, measured by domestic credit to the private sector, ensures that businesses have access to adequate funding to support their operations, thereby increasing the volume and variety of securities traded (Emmanuel & Torutein, 2023). Moreover, rising per capita income enhances the investment capacity of households and businesses, leading to greater market participation and increased demand for securities.

Despite the potential for stock market growth, the Nigerian market has been characterised by periods of instability and vulnerability to both domestic and international economic shocks. For instance, the 2008 global financial crisis led to a sharp decline in market capitalisation and eroded investor confidence, exposing the instability of the Nigerian financial system. Similarly, the COVID-19 pandemic disrupted global economic activities, resulting in capital flight and significant volatility in the Nigerian market. These challenges have been compounded by policy inconsistencies, weak regulatory enforcement, and political instability, which have undermined efforts to create a robust financial ecosystem (Oke et al., 2023; Olufemi et al., 2023). The heavy dependence of the Nigerian economy on crude oil exports has also intensified stock market volatility, as fluctuations in oil prices directly impact government revenues, investor sentiment, and macroeconomic stability. Addressing these challenges requires a deeper understanding of the factors driving stock market development, particularly in the context of an emerging economy like Nigeria, where market growth is closely tied to structural reforms and external economic conditions.

Several empirical studies (Owoade & Ogunlowo, 2020; Emmanuel & Torutein, 2023; Oke et al., 2023; Olufemi et al., 2023; Shehab, Adegoke et al., 2025; Evan, 2023; Ugbaja, 2025)) have explored the connection between macroeconomic variables (FDI, trade openness, financial sector depth, and income levels) and stock market development in emerging economies. However, many of these studies have limitations, including a narrow focus on individual determinants and inadequate consideration of structural changes within the Nigerian economy. Furthermore, past research often overlooked the combined effects of these factors and their dynamic interactions over time. This study seeks to fill these gaps by adopting a comprehensive approach to examine the determinants of stock market development in Nigeria, using key variables such as trade openness, FDI, financial development, and GDP per capita. The findings are expected to provide policymakers, regulators, and investors with valuable insights, offering practical recommendations to strengthen the Nigerian stock market and enhance its role in driving sustainable economic growth. By identifying the critical drivers of stock market development, this study contributes to the broader discourse on financial sector reform and economic modernisation in emerging economies.

Theoretical and Empirical Review

Demirguc-Kunt & Levine (1993) Stock Market Theory

This theory originated from the financial development literature, particularly building on the earlier works of Bagehot (1873) and Schumpeter (1912). These theories were advanced by Demirguc-Kunt and Levine to explain the interrelationship between economic growth and financial markets (Demirguc-Kunt

& Levine, 1993). The theory assumes that well-functioning stock markets perform four critical roles in promoting development. First, they reduce the cost of equity capital by providing efficient avenues for firms to raise long-term financing. Second, continuous adjustment of share prices promotes discipline by monitoring firms' investment decisions. Third, stock markets allow investors to price and hedge risks effectively, which enhances liquidity and stability. Finally, they act as a magnet for foreign portfolio investment, expanding the pool of investible resources within an economy (Yartey & Adjasi, 2007). These functions collectively stimulate private sector growth, innovation, and resource allocation, which are vital in emerging economies like Nigeria.

A major limitation of this theory is its heavy reliance on the assumption of market efficiency, which rarely exists in emerging economies characterised by corruption, information asymmetry, and weak institutional frameworks (Arestis et al., 2001). Despite this limitation, the theory remains relevant as it highlights mechanisms through which reforms and technological advances can gradually improve market efficiency and foster growth, even in developing economies with structural weaknesses (Demirguc-Kunt & Levine, 1996).

Applied to this study, the theory explains how Nigeria's stock market development depends on variables such as domestic credit, trade openness, FDI inflows, and GDP per capita. For instance, foreign portfolio investment, a component of FDI, provides essential capital inflows that enhance market depth. Similarly, trade openness fosters competition and innovation, leading to more firms seeking stock exchange listings to finance expansion. Domestic credit availability supports corporate growth, encouraging participation in equity markets. By linking these variables, the theory provides a strong foundation for understanding how macroeconomic and financial reforms influence stock market capitalisation and liquidity, particularly in an emerging economy like Nigeria, where structural inefficiencies remain prevalent.

McKinnon-Shaw Theory

The McKinnon-Shaw Theory of Financial Liberalisation, proposed independently by Ronald McKinnon and Edward Shaw in 1973, emerged as a response to the failures of financial repression policies prevalent in many developing countries (Shaw, 1973; McKinnon, 1973). The theory assumes that financial repression, such as interest rate caps, trade restrictions, and excessive state control of credit, suppresses savings, discourages investment, and slows financial market development. It argues that liberalising financial markets through deregulation, competitive interest rates, and open capital markets promotes savings mobilisation and efficient resource allocation (Ikhide & Alawode, 2001). Trade liberalisation attracts foreign capital and encourages export-led growth, while an open financial system allows the private sector to access credit for productive investments. In turn, these reforms stimulate stock market development by increasing firm listings, improving liquidity, and integrating domestic markets into the global economy (Akinlo & Akinlo, 2009). Thus, liberalisation acts as a catalyst for sustainable economic and financial sector growth.

One limitation of this theory is that liberalisation can initially trigger financial instability, including speculative bubbles and banking crises, especially in countries with weak regulatory institutions (Stiglitz, 2000). However, when accompanied by strong institutions and effective regulation, financial liberalisation enhances capital flows, credit allocation, and investor confidence, ultimately leading to stronger and more resilient stock markets (McKinnon, 1973).

In relation to this study, the McKinnon-Shaw theory helps explain how trade openness, FDI inflows, and domestic credit to the private sector shape Nigeria's stock market development. For example, greater openness encourages cross-border investment and foreign portfolio flows, directly boosting market capitalisation. Similarly, liberalised domestic credit policies enable businesses to access financing, fostering expansion and public listing. By focusing on the removal of barriers to capital and trade flows, the theory provides insight into the structural reforms necessary for Nigeria to achieve a vibrant stock market capable of mobilising resources for sustainable growth. This reinforces the need for policy frameworks that balance openness with financial stability to enhance stock market development in emerging economies.

Empirical Reviews

Trade Openness and Stock Market Development

Trade openness has long been examined as a potential driver of stock market development, yet empirical evidence remains inconclusive across different contexts. In the Nigerian setting, Owoade and Ogunlowo (2020) employed a VECM and Granger causality tests covering 1981–2017 to explore the relationship between exchange rate, trade openness, and stock market capitalisation growth. Their analysis revealed that trade openness and the balance of payments exerted statistically positive significant effects on stock market capitalisation, whereas exchange rate fluctuations and foreign direct investment produced negative and significant impacts. These findings suggest that Nigeria's stock market is highly sensitive to external trade shocks, lending support to the adverse side of the demand–supply theory. Furthermore, the causality analysis indicated a unidirectional flow from trade openness and related macroeconomic variables to stock market capitalisation, implying that external trade dynamics influence financial markets rather than the reverse. However, contrasting results emerge from Alajekwu, Ezeabasili, and Nzotta (2013), who employed cointegration and causality techniques to assess the impact of trade openness on the connection between economic growth and stock market development in Nigeria. Their study concluded that openness to global markets exerted no significant influence on either economic growth or stock market development, thereby challenging the positive association reported by Owoade and Ogunlowo (2020). These conflicting findings underscore the ongoing debate over whether trade liberalisation meaningfully contributes to financial market deepening in emerging economies.

Evidence from beyond Nigeria further highlights the complexity of the issue. Nguyen et al. (2023), analysing data from 20 Asian countries between 2011 and 2019 using an autoregressive distributed lag model, found that trade openness negatively affected growth stability but improved exchange rate stability in the short run, with no significant impact on inflation stability. This suggests that while trade liberalisation may enhance certain macroeconomic indicators, its benefits for growth and financial market expansion are neither automatic nor uniform. Likewise, Salik and Aras (2022), examining the influence of trade openness, FID, and exchange rates on Nigeria's non-oil GDP, reported a nonlinear pattern: trade openness initially dampened non-oil growth but turned positive after one year, implying that any economic gains from openness are delayed and contingent on consistent policy frameworks. Although this study did not directly assess stock market development, its findings reinforce the view that the influence of openness on financial and economic performance is often indirect, time-dependent, and shaped by institutional and policy conditions.

Shehab (2024), examining Oman's stock market using ARDL models, found that trade openness, alongside other macroeconomic variables, is cointegrated with financial market development. However, long-term drivers of stock market growth were identified as liquidity, oil prices, and banking sector development, while trade openness did not emerge as a dominant factor. This aligns with Alajekwu et al. (2013), who found limited direct contributions of openness to financial development in Nigeria, but contrasts with Owoade and Ogunlowo (2020), who reported significant positive effects. Collectively, these studies reveal that the role of trade openness in stock market development is highly context-specific, shaped by macroeconomic structures, exchange rate regimes, and sectoral dynamics. While some evidence supports its positive contribution, particularly in Nigeria (Owoade & Ogunlowo, 2020), others demonstrate insignificance or even adverse short-term effects (Alajekwu et al., 2013; Nguyen et al., 2023; Salik & Aras, 2022; Shehab, 2024). This divergence underscores the need for stronger domestic institutions, policy stability, and structural reforms to ensure that trade openness translates into tangible stock market development in emerging economies.

Foreign Direct Investment and Stock Market Development

Foreign direct investment has been linked to stock market development through its role in enhancing liquidity, capitalisation, and efficiency, though empirical findings across countries and methodologies remain divergent. Emmanuel and Torutein (2023) explored the influence of stock market valuations on FDI inflows into Nigeria using OLS estimations and found that stock market capitalisation and value of deals exert positive impacts on FDI inflows, although only capitalisation was statistically significant. Conversely, the all-share index exhibited a significant negative effect, suggesting that while broader market performance might deter inflows, capitalisation as a measure of depth and resilience stimulates foreign investment. Their findings underscore the duality of Nigeria's market signals, highlighting that while valuation and capitalisation attract investors, volatility in the index discourages inflows. This contrasts with Oke, Adegoke, and Akosile (2023), who found that FDI positively correlates with market capitalisation both in the long and short run, though not always statistically significant, when considered alongside macroeconomic variables like money supply and inflation. Using co-integration and ECM analysis over 1986–2020, they revealed that about 96% of variations in market capitalisation were explained by FDI and other indicators, leading them to recommend stronger policy frameworks to encourage sustained FDI inflows.

Further corroborating these results, Olufemi, Okoro, and Pedro-Itota (2023) examined the dynamic relationship between capital market development and FDI in Nigeria using ARDL techniques across 1986–2021. Their study found that FDI had a significant and positive long-run impact on capital market development, proxied by market capitalisation, turnover ratio, and all-share index. Unlike Emmanuel and Torutein (2023), they did not find a negative effect from the index, instead suggesting that FDI supports capital formation and reinforces stock market growth when macroeconomic fundamentals such as gross capital formation are strong. This reflects the idea that while short-term volatility may deter some investors, structural factors like domestic savings and long-term reforms amplify the positive linkage between FDI and financial markets. In contrast, Shehab (2024), in the context of Oman, excluded FDI due to data limitations but emphasized that other macroeconomic variables such as oil prices, liquidity, and banking development were long-term determinants of stock market growth. This omission reveals gaps in Gulf-region literature,

where FDI's role in financial market development remains underexplored despite its recognized importance in emerging economies.

Collectively, these studies highlight the complex and context-dependent nexus between FDI and stock market development. While Nigerian-based evidence (Emmanuel & Torutein, 2023; Oke et al., 2023; Olufemi et al., 2023) largely supports a positive relationship, differences in significance levels and variable sensitivity suggest that FDI's impact is mediated by market capitalisation depth, macroeconomic stability, and institutional quality. Shehab (2024) illustrates that excluding FDI from financial market analysis overlooks a critical determinant, especially in economies reliant on foreign capital. Thus, while empirical findings affirm the beneficial role of FDI, they equally point to the need for stronger domestic policies and structural reforms to ensure that its inflows translate into sustainable stock market development in emerging economies.

Financial Development and Stock Market Development

Financial development has been strongly associated with stock market development, though the strength and direction of this relationship often vary across countries and methodologies. Shehab (2024) evaluated the determinants of Muscat Stock Exchange development and found that the banking sector, oil prices, and liquidity were the long-term factors of stock market development, while in the short run, economic growth and banking sector expansion were more influential. These findings highlight the interdependence of financial development indicators and stock market performance, underscoring the need for structural reforms to enhance liquidity and institutional efficiency. By contrast, Michael et al. (2021) examined eight African countries and revealed a more nuanced picture, finding bi-directional causality between economic growth and stock market development in some countries, but only unidirectional causality in others. Essentially, they established a positive relationship between stock market development and financial deepening (M2/GDP), but their panel regression results suggested insignificant effect of these financial indicators on growth, thereby questioning the consistency of financial development as a driver of stock market progress across Africa.

Similarly, Ayadi and Williams (2023) focused on four leading African stock markets (Egypt, Kenya, Nigeria, and South Africa) to determine whether stock markets contribute to capital accumulation through financial development. They found that stock market capitalization positively influenced gross fixed capital formation, but liquidity measures such as turnover ratio and market value traded were not significant. This suggests that while financial depth captured by capitalization may support capital accumulation, liquidity-related measures of financial development may not directly translate into productive investment. This result stands in partial contrast to Shehab (2024), who emphasized liquidity as a critical determinant in Oman, indicating that institutional and regional contexts matter for how financial development influences stock markets.

Evidence from Nigeria also reinforces the complex linkage between financial development and stock markets. Manasseh et al. (2018) demonstrated bidirectional causality between economic growth, financial sector reform, and stock market development, suggesting strong mutual reinforcement. However, they also found unidirectional causality to stock market development based financial sector reform, highlighting the importance of reforms such as improved legal frameworks and favourable business environments in stimulating investor confidence. In contrast, Nwannebuike and Igwebuike (2019) observed that while stock market capitalization to GDP had a positive but insignificant effect on economic growth,

pension fund assets to GDP showed a positive and significant impact. Their findings suggest that broader financial development indicators like pension fund assets may exert stronger effects on the economy than stock market capitalization alone, emphasizing the differentiated roles of financial development measures.

Overall, these studies indicate that financial development can promote stock market development through mechanisms such as capitalization, banking sector efficiency, and liquidity. However, the impact is highly context-specific: while liquidity drives development in Oman (Shehab, 2024), capitalization is more critical in Africa (Ayadi & Williams, 2023), and institutional reforms are indispensable in Nigeria (Manasseh et al., 2018). Consequently, financial development is an important but uneven driver of stock market development, requiring complementary institutional and macroeconomic reforms to ensure its effectiveness.

Economic Growth and Stock Market Development

Financial markets are vital engines of economic growth, and empirical research continues to show that financial development plays an important role in shaping stock market outcomes across different economies. Shehab (2024) examined the influence of macroeconomic variables on the development, Omani stock market and identifies both short- and long-term determinants. Using an ARDL framework, the study finds that in the long run, liquidity, oil prices, and banking sector development drive the Muscat Stock Exchange, while in the short run, growth, liquidity, and the banking sector are key factors. The findings emphasize the importance of strengthening financial institutions and improving stock market liquidity through reforms in listing and IPO processes. These results align with the broader literature that emphasizes financial deepening as a critical factor for stock market progress but differ from studies in sub-Saharan Africa that present mixed effects of financial development on market performance. For instance, while Shehab (2024) stresses liquidity and banking development, Adegoke et al. (2025) find a more complex relationship in Nigeria, where market capitalisation exerts a negative long-run effect on GDP, while liquidity-related indicators such as traded value and number of deals stimulate growth. The divergence between Oman and Nigeria underscores how structural, institutional, and sectoral dynamics mediate the nexus between financial development and stock market growth.

Similarly, Orji et al. (2025) extend the Nigerian evidence by showing that different forms of market capitalisation, government, corporate, and equity bonds, affect growth differently. Their regression results reveal that government stock capitalisation has a negative impact on growth, while corporate and equity bond capitalisation exert positive effects. This suggests that the quality and composition of financial instruments matter more than the aggregate size of capitalisation. Evan (2023) corroborates the complexity of this relationship in Kenya, where stock market capitalisation negatively influences long-run growth, suggesting that expanding listings without sufficient institutional depth or investor confidence may not yield positive macroeconomic outcomes. By contrast, Ugbaja (2025), using panel data across five West African countries, establishes that market capitalisation and trading volume significantly boost growth, with stronger effects in Nigeria and Ghana compared to Mali. Importantly, Ugbaja (2025) highlights the role of governance quality in strengthening the finance-growth nexus, showing that institutional capacity amplifies the positive effects of financial development on stock market outcomes. This resonates with Kaiboi et al. (2021), who revealed that stock market performance has a positive long-run effect on

growth in the East African Community, with bi-directional causality between economic development and market capitalisation, reinforcing the idea that market growth and financial development mutually reinforce each other under conditions of stability and sound regulation.

Beyond Africa and the Middle East, Prats and Sandoval (2020) provide evidence from Eastern and Central Europe, demonstrating bidirectional causality between economic growth and stock market development in most EU accession countries. Their results, based on VAR methodologies, show that cointegration exists in countries with stronger financial institutions, supporting the argument that financial development spurs stock market performance where governance and regulatory environments are robust. This evidence mirrors the findings of Ugbaja (2025) in West Africa, who stresses that governance quality conditions the finance–growth link, suggesting that institutional quality is a consistent mediator across contexts. However, the variations observed between studies, such as negative effects of capitalisation in Nigeria (Adegoke et al., 2025) and Kenya (Evan, 2023) versus positive effects in West Africa (Ugbaja, 2025) and East Africa (Kaiboi et al., 2021), highlight the heterogeneity in outcomes and point to the need for more country-specific and sectoral analyses.

All-together, the empirical evidence suggests that stock market development and financial development are deeply interconnected, but their relationship is neither uniform nor universally positive. Liquidity and banking sector development, as shown in Oman (Shehab, 2024), can act as catalysts for stock market growth, but in contexts like Nigeria and Kenya, weak institutional structures and low-quality capitalisation can result in negative growth outcomes (Adegoke et al., 2025; Evan, 2023). Conversely, in settings with stronger governance and integration, such as West Africa (Ugbaja, 2025) and Central and Eastern Europe (Prats & Sandoval, 2020), financial development consistently enhances stock market development and contributes to broader economic growth. These findings converge on the conclusion that while financial development is essential for stock market progress, its effectiveness depends heavily on institutional quality, governance frameworks, and the structure of financial instruments. Hence, policies that simultaneously strengthen financial institutions, improve governance, and ensure high-quality listings are critical for aligning financial development with sustainable stock market growth.

Research Gap

Several studies have examined the determinants of stock market development in developing economies with variables such as FDI inflows, trade openness, domestic credit, and GDP per capita (Shehab, 2024; Michael et al., 2021; Ayadi & Williams, 2023; Manasseh et al., 2018; Nwannebuike & Igwebuike, 2019), but the findings remain inconsistent and inconclusive. Some studies reported that FDI inflows and domestic credit to the private sector positively influence stock market capitalisation by boosting liquidity and investor participation (Manasseh et al., 2018; Nwannebuike & Igwebuike, 2019), while others showed weak or insignificant effects, suggesting structural and institutional constraints (Michael et al., 2021; Ayadi & Williams, 2023). Similarly, the role of trade openness is contested, with evidence of positive contributions through integration and capital flows (Shehab, 2024), but also findings of negligible or destabilising effects (Ayadi & Williams, 2023). GDP per capita as a proxy for income growth has also produced divergent results, with some studies linking higher income levels to deeper financial markets (Michael et al., 2021) while others found limited or insignificant effects (Ayadi & Williams, 2023). Moreover, many of these studies are country-specific, rely heavily on ARDL or cointegration models, and often

neglect interactive effects, leaving a gap for comprehensive empirical analysis of these variables in an updated cross-country context.

Methodology

Data

The study employs annual data between 1990 and 2024, sourced from the World Bank's World Development Indicators (WDI) database. The dependent variable is stock market development (stock market capitalisation as a percentage of GDP). The independent variables are selected based on established theoretical and empirical relevance to financial development. These include net inflows of foreign direct investment as a percentage of GDP, which captures the role of external capital flows in fostering stock market growth; trade openness, measured as the current account balance (% of GDP), reflecting the degree of international economic integration; domestic credit to the private sector as a percentage of GDP, which serves as a proxy for financial intermediation and access to credit; and GDP per capita (constant US$), representing the level of economic growth. The choice of the 1990–2024 period ensures sufficient observations to capture both long-term and short-term dynamics while avoiding data distortions arising from missing or incomplete series in earlier years. This dataset provides a robust foundation for analysing the determinants of stock market development in developing economies.

Model Specification

The determinants of stock market development in emerging economies are examined through a multivariate regression framework, where stock market capitalization (% of GDP) is expressed as a function of foreign direct investment inflows, trade openness, domestic credit to the private sector, and GDP per capita. The baseline functional form of the model is specified as:

$$lnSTMCAP_t = \alpha + \beta_1 lnFDI_t + \beta_2 lnTO_t + \beta_3 lnFID_t + \beta_4 lnEG_t + \mu_t \quad \ldots\ldots\ldots\ldots\ldots 1$$

Where:

$STMCAP_t$ = stock market capitalization (% of GDP)

FDI_t = net inflows of foreign direct investment (% of GDP)

TO_t = trade openness (current account balance % of GDP)

FID_t = domestic credit to private sector (% of GDP)

EG_t = GDP per capita (constant US$)

β_i = parameters to be estimated

μ_t = error term

The specification of the model was extended to the Johansen Cointegration and Vector Error Correction Model (VECM) frameworks to capture both long-run relationships and short-run dynamics. Given that these frameworks are designed for variables integrated of order one, preliminary unit root testing was conducted using the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) methods. The results confirmed that none of the variables followed an I(2) process, thereby satisfying the preconditions for applying Johansen cointegration and VECM estimators.

Results and Analysis

Table 1: Descriptive Statistics for FDI, TO, FID, and EG

	STMCAP	FDI	TO	FID	EG
Mean	9.078721	2.90E+09	3.520248	9.760785	1562.219
Median	9.416533	1.96E+09	2.020199	8.909485	1720.275
Maximum	30.50899	8.84E+09	20.79404	19.62560	3088.721
Minimum	0.000000	-1.87E+08	-3.698743	0.000000	480.6694
Std. Dev.	7.110869	2.58E+09	5.485044	4.189763	772.1265
Skewness	1.104134	0.960379	1.254418	-0.047673	0.028285
Kurtosis	4.939724	2.775485	4.402484	3.630173	1.848211
Jarque-Bera	12.59851	5.453756	12.04762	0.592388	1.939317
Probability	0.001838	0.065423	0.002420	0.743643	0.379213
Sum	317.7552	1.01E+11	123.2087	341.6275	54677.65
Sum Sq. Dev.	1719.192	2.26E+20	1022.914	596.8400	20270098
Observations	35	35	35	35	35

Source: Author's computation (2025)

In Table 1 above, the descriptive statistics provide useful insights into the characteristics of the variables over the study period. Stock market capitalisation (STMCAP) averages 9.08, with values ranging from 0.00 to 30.51, suggesting notable fluctuations in market depth. The standard deviation of 7.11 reflects moderate volatility. Its positive skewness (1.10) indicates that most values are below the mean, though a few extreme observations push the average upward. The high kurtosis (4.94) further suggests a leptokurtic distribution, consistent with heavy tails and the presence of outliers, while the Jarque-Bera probability (0.0018) confirms significant deviation from normality.

Foreign direct investment (FDI) records an average of ₦2.90 billion, with inflows ranging widely from a divestment value of ₦-187 million to a maximum of ₦8.84 billion. The high standard deviation of ₦2.58 billion underscores substantial variability. Its moderate positive skewness (0.96) implies occasional years of unusually large inflows, while kurtosis (2.78) suggests a distribution not far from normal. However, the Jarque-Bera statistic (p = 0.065) indicates mild non-normality, most likely driven by episodes of sharp spikes in FDI. Similarly, trade openness (TO) shows an average of 3.52, but with wide swings from -3.70 to 20.79. The large standard deviation of 5.49 reflects high volatility, while its strong positive skewness (1.25) and kurtosis (4.40) reveal a distribution influenced by extreme openness levels. The Jarque-Bera probability (0.0024) confirms rejection of normality, highlighting the irregular behaviour of trade patterns.

In contrast, the financial development index (FID) appears relatively more stable, with an average of 9.76 and values ranging between 0.00 and 19.63. The standard deviation of 4.19 denotes moderate variability. Its skewness (-0.05) indicates near-symmetry, while kurtosis (3.63) reflects a relatively peaked distribution compared to normal. Importantly, the Jarque-Bera statistic (p = 0.74) suggests that FID does not significantly deviate from normality, implying a more balanced pattern in financial sector performance over time. Economic

growth (EG) also displays relative stability compared to other variables, averaging 1,562.22 units, with a minimum of 480.67 and a maximum of 3,088.72. The standard deviation of 772.13 points to considerable but less extreme fluctuations. Its near-zero skewness (0.03) indicates a symmetric distribution, while kurtosis (1.85) shows a platykurtic pattern, reflecting lighter tails than normal. The Jarque-Bera test (p = 0.38) confirms approximate normality, suggesting that the distribution of economic growth is relatively well-behaved.

Overall, the descriptive statistics reveal substantial variability across the series, with STMCAP, FDI, and TO exhibiting high volatility, skewness, and non-normality, while FID and EG appear more stable and closer to normal distributions. These results highlight the dynamic and often unstable nature of external and market-related indicators in Nigeria, contrasted with the relatively steadier patterns of financial development and long-run economic growth.

Table 2: Stationarity Test Result using ADF and PP Framework for the Variables (FDI, TO, FID, and EG)

Variables	Augmented Dickey-Fuller (ADF)	5% Critical level	Philip-Perron (PP)	5% critical level	Order of integration	
					ADF	PP
STMCAP	-6.884064	-2.954021	-6.931406	-2.954021	I(1)	I(1)
FDI	-7.512038	-2.954021	-7.277905	-2.954021	I(1)	I(1)
TO	-4.458827	-2.957110	-7.090726	-2.954021	I(1)	I(1)
FID	-4.916951	-2.954021	-4.903845	-2.954021	I(1)	I(1)
EG	-4.042376	-2.954021	-4.004498	-2.954021	I(1)	I(1)

Source: Author's computation (2025)

Time series data exhibit non-stationarity, which poses serious challenges for econometric modelling and inference. For this study, both the ADF and PP frameworks were utilised, and the findings are reported in Table 2. Based on the findings, it reveals that stock market capitalisation (STMCAP), foreign direct investment (FDI), trade openness (TO), financial development (FID), and economic growth (EG) are all non-stationary at levels but become stationary after first differencing. This implies that each of the variables is integrated of order one, I(1), under both the ADF and PP tests. For instance, the ADF statistic for STMCAP is –6.88 compared to the 5% critical value of –2.95, while the PP statistic is –6.93 against the same critical threshold, confirming stationarity after differencing. Similarly, FDI exhibits strong evidence of I(1) behaviour with test statistics of –7.51 (ADF) and –7.28 (PP). Trade openness and financial development also become stationary after first differencing, while economic growth follows the same pattern, with both ADF (–4.04) and PP (–4.00) values exceeding the critical level at first difference. These consistent outcomes across the two

frameworks indicated that all the variables are I(1) processes.

Given these results, none of the variables is integrated of order two, I(2), which is an important precondition for the valid application of cointegration techniques. This outcome justifies employing Johansen's Cointegration framework to explore the existence of long-run relationships among the variables. Moreover, since the variables are uniformly I(1), the VECM becomes the appropriate estimation strategy to capture both the long-run equilibrium and the short-run adjustment dynamics. By relying on these unit root tests, the study ensures that subsequent econometric analysis is grounded on statistically sound data properties, thereby avoiding spurious inference and improving the robustness of the results.

Table 3: Johansen Cointegration Test Result for the Variables (FDI, TO, FID, and EG)

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.905391	120.5123	69.81889	0.0000
At most 1	0.619671	45.05631	47.85613	0.0895
At most 2	0.261928	14.12128	29.79707	0.8338
At most 3	0.128524	4.402452	15.49471	0.8685
At most 4	9.11E-06	0.000292	3.841466	0.9885

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.905391	75.45601	33.87687	0.0000
At most 1 *	0.619671	30.93503	27.58434	0.0179
At most 2	0.261928	9.718824	21.13162	0.7706
At most 3	0.128524	4.402161	14.26460	0.8146
At most 4	9.11E-06	0.000292	3.841466	0.9885

Source: Author's computation (2025)

The study utilised the Johansen Cointegration Test to examine whether stock market capitalisation, trade openness, economic growth, foreign direct investment, and financial development share a common long-run equilibrium relationship. Results from the trace test indicate rejection of the null hypothesis of no cointegration at the 5%

significance level, since the calculated trace statistic (120.51) is greater than the corresponding critical value (69.82) and the associated p-value is 0.0000. However, the subsequent hypotheses ("At most 1" and beyond) are not significant, indicating that only one cointegrating equation exists among the variables according to the trace test.

The maximum eigenvalue test further supports this conclusion but suggests a slightly stronger result. The statistic for "None" (75.46) is well above the 5% critical value (33.88) with a p-value of 0.0000, while "At most 1" (30.94) also exceeds its critical value (27.58) with a p-value of 0.0179, implying the presence of two cointegrating vectors. Although the two tests differ slightly in the number of cointegrating relationships, both confirm that the variables share a long-run equilibrium relationship. This outcome justifies the adoption of a VECM framework to show both the short-run dynamics and the long-run adjustments. In the context of Nigeria, this reveals that stock market development, FDI, trade openness, financial development, and economic growth are interdependent in the long run, and policies targeting one of these sectors are likely to have lasting effects on the others.

Long-Run VECM Regression Results for the Variables (FDI, TO, FID, and EG)

Table 4: Long Run VECM Regression Results

Variable	Coefficient	Standard Error	t-statistic	R-squared	F-statistic
STMCAP(-1)	1.000000	-	-	0.354391	2.378676
FDI(-1)	-3.96E-07	1.5E-07	-2.6559	-	-
TO(-1)	247.8890	51.2255	4.8392	-	-
FID(-1)	204.5918	99.2185	2.0620	-	-
EG(-1)	-0.339449	0.37737	-0.8995	-	-
Constant	-1135.706	-	-	-	-

Source: Author's computation (2025)

Table 4 estimated long-run regression highlights the interactions among stock market development, FDI, economic growth, trade openness and financial development in Nigeria. The findings indicate that FDI exerts a negative and significant influence, with a coefficient of –3.96E-07 and a corresponding t-statistic of –2.66 at the 5% level. This reveals that higher inflows of FDI are associated with a decline in stock market capitalisation in the long run, possibly reflecting the dominance of foreign investment in non-capital market sectors or capital flight tendencies. Conversely, trade openness exhibits a positive and highly significant effect, with a coefficient of 247.89 and a t-statistic of 4.84. This implies that greater integration into international trade contributes strongly to stock market expansion and long-run capital market performance.

Similarly, the financial development index exerts a significant positive long-run effect on stock market capitalisation, as indicated by its coefficient (204.59) and t-statistic (2.06). This demonstrates that improvements in the depth and efficiency of the financial system support

stock market growth. In contrast, economic growth shows a negative but insignificant relationship (–0.34, t = –0.90), suggesting that variations in output growth do not translate directly into stock market development over the long horizon. The constant term (–1135.71) indicates structural factors outside the model that also shape long-run outcomes. Overall, the model achieves an (R^2) value of 0.35 and an F-statistic of 2.38, suggesting moderate explanatory power. These results highlight that while trade openness and financial development are crucial drivers of stock market growth in Nigeria, the long-run impact of FDI is paradoxically negative, and economic growth does not exert a statistically significant influence on capital market performance.

Table 5: Short Run VECM Regression Results

Variable	Coefficient	Standard Error	t-statistic	R-squared	F-statistic
CointEq1 (ECT)	0.000779	0.00083	0.9331	0.354391	2.378676
D(STMCAP(-1))	-0.362318	0.18400	-1.9691	-	-
D(FDI(-1))	5.06E-10	6.6E-10	0.7703	-	-
D(TO(-1))	-0.106138	0.25168	-0.4217	-	-
D(FID(-1))	-1.048021	0.33009	-3.1750	-	-
D(EG(-1))	0.001077	0.00263	0.4095	-	-
Constant	0.783066	0.91927	0.8518	-	-

Source: Author's computation (2025)

As shown in Table 5, the short-run regression results reveal that the error correction term (ECT) is positive (0.000779) and statistically insignificant, with a t-statistic of 0.9331. This outcome implies that the model exhibits a very weak adjustment mechanism, such that short-run shocks are not effectively corrected, and the system shows limited convergence toward its long-run path. The insignificance of the ECT highlights that the model exhibits weak error correction dynamics in the short-run horizon.

Furthermore, the short-run coefficients of the explanatory variables show mixed effects but are largely insignificant at the 5% level. The lagged change in stock market capitalisation (D(STMCAP(-1))) is negative (-0.3623) with a t-statistic of -1.9691, which is close to significance but still marginally below the conventional threshold, implying a weak contractionary short-run effect on stock market development. Foreign direct investment (D(FDI(-1))) and economic growth (D(EG(-1))) both show very small positive but insignificant coefficients, indicating a negligible short-run influence. Trade openness (D(TO(-1))) exerts a negative and insignificant short-run effect, while financial development (D(FID(-1))) is negative and significant (-1.0480; t = -3.1750), suggesting that financial sector fluctuations have an adverse and significant effect on stock market development in the short run. Overall, the results suggest that

short-term variations in the explanatory variables do not significantly influence stock market development in Nigeria, except for financial development, which exhibits a significant contractionary impact.

Table 6: Breusch-Godfrey Serial Correlation Test

F-statistic	0.646562	Prob. F(2,28)	0.5315
Obs*R-squared	1.545050	Prob. Chi-Square(2)	0.4618

Source: Author's computation (2025)

Table 6 indicated the findings of the Serial Correlation, which produced an F-statistic of 0.6466 (p = 0.5315) and an Obs R-squared value of 1.5451 (p = 0.4618). As both probability values exceed the 5% significance threshold, the null hypothesis of no serial correlation cannot be rejected. This indicates that the model's residuals reveals that there is no autocorrelation is absence, the regression estimates are both efficient and unbiased. When serial correlation enhances confidence in the validity of the model, as it confirms that one of the foundational assumptions of the classical linear regression model is satisfied. Consequently, the identified short- and long-run relationships can be considered reliable and robust.

Table 7: Breusch-Pagan-Godfrey Heteroskedasticity Test

F-statistic	1.214771	Prob. F(4,30)	0.3252
Obs*R-squared	4.878726	Prob. Chi-Square(4)	0.3000
Scaled explained SS	11.05611	Prob. Chi-Square(4)	0.0259

Source: Author's computation (2025)

From Table 7, the Breusch-Pagan-Godfrey test results revealed that the F-statistic of 1.2148 (Prob. = 0.3252) and Obs R-squared of 4.8787 (Prob. = 0.3000) are not significant at the 5% level. This means that the null hypothesis of homoskedasticity is failed to be rejected, confirming that the variance of the error terms is constant across observations. Although the scaled explained sum of squares statistic (Prob. = 0.0259) is significant at the 5% level, the other test statistics—which are considered more reliable in small samples, indicate no evidence of heteroskedasticity. Therefore, the model can be adjudged homoskedastic overall, meaning the regression residuals are stable and consistent, thereby validating the efficiency of the estimated coefficients and the robustness of the statistical inferences drawn from the model.

5. Discussion of Findings

The empirical findings reveal a nuanced and, at times, paradoxical connection FDI, trade openness, financial development, economic growth and between stock market development in Nigeria. In the long run, FDI exerts a negative and significant effect on stock market capitalisation, which contrasts with much of the Nigerian literature that often supports a positive linkage. For instance, Olufemi, Okoro, and

Pedro-Itota (2023) and Oke, Adegoke, and Akosile (2023) found that FDI positively contributes to market depth and performance, suggesting that foreign capital can enhance liquidity and efficiency. However, the present result aligns more closely with Emmanuel and Torutein (2023), who noted that volatility in broader market indicators may deter foreign inflows, and with Owoade and Ogunlowo (2020), who documented the negative effect of FDI on stock market capitalisation. This negative effect may be attributed to the dominance of FDI in Nigeria's non-capital market sectors, such as extractive industries, or capital flight tendencies where profits are repatriated rather than reinvested domestically. Thus, the long-run evidence implies that without institutional reforms to channel foreign capital into stock market-related activities, the potential of FDI to promote capital market growth remains constrained.

Trade openness, by contrast, demonstrates a strong and significant positive influence on stock market development, reinforcing the argument that integration into global trade enhances capital market performance through expanded investment opportunities and increased investor confidence. This finding is aligned with Owoade and Ogunlowo (2020), who reported that openness boosts stock market capitalisation in Nigeria, but it diverges from Alajekwu et al. (2013), who found no significant effect, and Nguyen et al. (2023), who highlighted that openness may destabilise growth while benefiting exchange rate stability. The divergence across studies underscores the context-specific nature of openness, with the Nigerian case suggesting that openness provides positive externalities for stock market growth, though these may be contingent on exchange rate management and broader macroeconomic stability.

Financial development similarly shows a positive and significant long-run effect, supporting studies such as Manasseh et al. (2018) and Ayadi and Williams (2023), who highlight that financial deepening, reforms, and institutional efficiency reinforce stock market growth. This finding validates the idea that the depth of the financial system underpins long-run capital market expansion. However, the short-run evidence complicates this relationship, as financial development emerges with a negative and significant effect, implying that volatility and short-term fluctuations in the financial sector undermine stock market stability. Such a result mirrors Shehab's (2024) findings for Oman, where different financial indicators exert varying impacts depending on the horizon, suggesting that short-term financial disruptions can be contractionary even where long-term effects are supportive.

Finally, economic growth appears negative but insignificant in the long run and negligible in the short run, contradicting finance-growth theories that assume a mutually reinforcing relationship. This aligns with Adegoke et al. (2025) and Evan (2023), who also found negative or weak effects of stock market capitalisation on growth in Nigeria and Kenya, but diverges from Ugbaja (2025) and Kaiboi et al. (2021), who documented strong finance–growth linkages in West and East Africa. These contradictions suggest that structural weaknesses, institutional deficits, and low-quality listings in Nigeria's stock market hinder its ability to reflect or transmit economic growth into market development. Overall, the evidence highlights the centrality of trade openness and financial development in driving stock market growth in Nigeria, while also exposing the paradoxical role of FDI and the limited influence of growth, shaped by institutional and structural dynamics.

Conclusion and Recommendations

This study examined the determinants of stock market development in Nigeria with a focus on financial development, economic growth, FDI, and trade openness using the VECM framework. The long-run results

indicate that FDI negatively affects stock market capitalisation, suggesting that foreign capital inflows are often concentrated in non-market sectors such as oil and gas, with limited spillovers to the capital market. Financial development and Trade openness on the other hand, exert significant positive effects, implying that integration into the global economy and deepening of domestic financial institutions remain critical drivers of stock market growth. Conversely, economic growth does not significantly influence stock market development, reflecting structural weaknesses, shallow market depth, and limited alignment between growth dynamics and capital market activities. The short-run dynamics reveal volatility, with financial development negatively impacting the stock market, further pointing to systemic instability and institutional fragility.

Based on these findings, several policy recommendations emerge. First, government and regulatory authorities should implement reforms that channel FDI into productive and stock market–linked sectors to enhance capitalisation and reduce capital flight. Second, trade policies should continue to encourage openness but be accompanied by stable exchange rate management to mitigate external vulnerabilities. Third, deepening financial development through institutional efficiency, innovation, and expanded access to credit can sustain long-term stock market growth, though regulatory frameworks must be strengthened to cushion against short-term instability. Finally, policies that improve market transparency, corporate governance, and investor confidence are essential to align economic growth with stock market development, enabling the market to serve as a stronger engine of capital mobilisation and national growth.

References

Adegoke, A. B., Eggon, H. A., & Ajidani, M. S. (2025). The impact of stock market on economic growth in Nigeria. *Deleted Journal*, *19*(1), 386–404. https://doi.org/10.62154/ajmbr.2025.019.01029

Akinlo, A. E., & Akinlo, O. O. (2009). Stock market development and economic growth: Evidence from seven sub-Sahara African countries. *Journal of Economics and Business*, 61(2), 162–171.

Alajekwu, U. B., Ezeabasili, V. N., & Nzotta, S. M. (2013). Trade openness, stock market development and economic growth of Nigeria: Empirical evidence. *Research Journal of Finance and Accounting, 4*(3), 120–127.

Arestis, P., Demetriades, P. O., & Luintel, K. B. (2001). Financial development and economic growth: The role of stock markets. *Journal of Money, Credit and Banking*, 33(1), 16–41.

Ayadi, O. F., & Williams, J. (2023). Stock market development and capital formation in selected African economies. *Journal of Money and Business*, *3*(2), 125–136. https://doi.org/10.1108/jmb-05-2022-0023

Bagehot, W. (1873). *Lombard Street: A description of the money market*. London: Henry S. King & Co.

Demirgüç-Kunt, A., & Levine, R. (1993). *Stock market development and financial intermediary growth: A research agenda* (Policy Research Working Paper No. 1159). World Bank.

Demirgüç-Kunt, A., & Levine, R. (1996). *Stock markets, corporate finance, and economic growth: An overview*. The World Bank Review, 10(2), 223–239.

Emmanuel, B., & Torutein, O. I. (2023). Effect of stock market valuations on foreign direct investment in Nigeria. *International Journal of Social Sciences and Management Research*, *9*(7), 97–112. https://doi.org/10.56201/ijssmr.v9.no7.2023.pg97.112

Evan, O. (2023). Effect of stock market capitalisation on economic growth in Kenya. *International Journal of Finance*

Research, *3*(4), 357–371. https://doi.org/10.47747/ijfr.v3i4.989

Ikhide, S. I., & Alawode, A. A. (2001). Financial sector reforms, macroeconomic instability and the order of economic liberalization: The evidence from Nigeria. *African Economic Research Consortium (AERC) Research Paper 112*.

Kaiboi, R., Kiprop, S., & Kalio, A. (2021). Effect of market capitalization on economic growth of East African community. *Deleted Journal*. https://doi.org/10.7176/jesd/12-10-05

Manasseh, C. O., Ogbuabor, J. E., Anumudu, C. N., Abada, F. C., Okolie, M. A., & Okoro, O. E. (2018). The causal effect of stock market development, financial sector reforms and economic growth: The application of vector autoregressive and error correction model. *International Journal of Economics and Financial Issues, 8*(2), 357–369.

McKinnon, R. I. (1973). *Money and capital in economic development*. Washington, DC: Brookings Institution Press.

Michael, A., Effah, N. a. A., Joel, T. N., & Nkwantabisa, A. O. (2021). Stock market development, financial deepening and economic growth in Africa. *Journal of Financial Risk Management*, *10*(01), 1–24. https://doi.org/10.4236/jfrm.2021.101001

Nguyen, V. M. H., Ho, T. H., Nguyen, L. H., & Pham, A. T. H. (2023). The impact of trade openness on economic stability in Asian countries. *Sustainability*, *15*(15), 11736. https://doi.org/10.3390/su151511736

Nwannebuike, U. S., & Igwebuike, E. C. (2019). Stock market capitalization and pension fund assets' perspectives of financial deepening in Nigeria (1981–2016). *International Journal of Business Systems and Economics, 12*(3), 1–15.

Oke, M. O., Adegoke, T. D., & Akosile, M. O. (2023). Impact of foreign direct investment on capital market capitalization in Nigeria. *Nigerian Journal of Banking and Financial Issues, 9*(1), 21–31.

Olufemi, G. O., Okoro, O., & Pedro-Itota, O. O. (2023). Foreign direct investments and capital market development in Nigeria. *American Research Journal of Contemporary Issues, 1*(2), 94–112.

Orji, O. I., Nnabu, B. E., Kanwanye, H. T., Ogbaga, K. C., & Nweze, P. N. (2025). Capital market variables and economic growth in Nigeria: A disaggregated approach. *Innovations, 81,* 391–406.

Owoade, N. L., & Ogunlowo, D. T. (2020). The effects of trade openness and exchange rate on stock market capitalization growth in Nigeria. *International Journal of Social Science and Humanities Research, 3*(12), 18–32.

Prats, M. A., & Sandoval, B. (2020). Does stock market capitalization cause GDP? A causality study for Central and Eastern European countries. *Economics*, *14*(1). https://doi.org/10.5018/economics-ejournal.ja.2020-17

Salik, A. M., & Aras, O. N. (2022). The effects of trade openness, FDI and exchange rate fluctuations on non-oil GDP growth in Nigeria. *Journal of Management, Economics, and Industrial Organization, 6*(1), 98–117. https://doi.org/10.31039/jomeino.2022.6.1.6

Schumpeter, J. A. (1912). *The theory of economic development*. Leipzig: Duncker & Humblot. (Translated 1934, Harvard University Press).

Shaw, E. S. (1973). *Financial deepening in economic development*. New York, NY: Oxford University Press.

Shehab, A. A. (2024). Macroeconomic determinants of stock market development in the Sultanate of Oman. *Asian Economic and Financial Review*, *14*(11), 868–881. https://doi.org/10.55493/5002.v14i11.5230

Stiglitz, J. E. (2000). Capital market liberalization, economic growth, and instability. *World Development*, 28(6), 1075–1086.

Ugbaja, O. C. (2025). Stock market development and Economic Growth in West Africa: an econometric study. *South Asian Journal of Social Studies and Economics*, *22*(7), 341–356. https://doi.org/10.9734/sajsse/2025/v22i71084

Yartey, C. A., & Adjasi, C. K. (2007). *Stock market development in Sub-Saharan Africa: Critical issues and challenges* (IMF Working Paper No. WP/07/209). International Monetary Fund.