Capital market dynamics and economic growth trend in Nigeria

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ABSTRACT

This study investigates the dynamics of capital market growth and its impact on economic growth in Nigeria from 1990 to 2024, focusing on the contribution of the capital market to GDP, as well as the short-term and long-term effects on economic trends. Secondary data from reputable sources were analyzed using multiple linear regression approach, to quantify the influence of various capital market indicators, including total market capitalization, gross capital formation, and trading volumes, on GDP growth. Additionally, the study explores the role of counter-cyclical factors within the capital market across different business cycles, providing insights into how these dynamics can enhance economic resilience during downturns. The Short-Run Estimates found that (SMC) and (TMC) have a significant positive impact on Real Gross Domestic Product (RGDP); while the Long-Run Analysis suggests that a stronger stock market, measured by the All Share Index (ASI), is associated with a more robust economy, indicating it is a foundational component of sustained economic growth. The study demonstrates the significant influence of Nigeria's capital market dynamics on its economic growth The findings are expected to inform policymakers and market participants about the significance of capital market activities in fostering sustainable economic growth in Nigeria.

Keywords: *ARDL, Capital market dynamics, Cointegration bound test, Economic growth, Error correction mechanism.*

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Highlights of this paper

- Investigation of capital market growth dynamics and its impact on economic growth (GDP) in Nigeria was done using secondary time series data to conduct multiple linear regression (ARDL Error Correction Regression) analysis, the study interacted key variables such as Total Market Capitalization, Gross Capital Formation, Trading Volumes (as a percentage of GDP), Inflation Rate, and Interest Rate to quantify the influence of capital market indicators on GDP growth.
- The study establishes the significant influence of capital market dynamics on Nigeria's economic growth. In the short term and long term, Total Market Capitalization, have a significant positive impact on GDP growth; The All Share Index (ASI) and Stock Market Capitalization (SMC) show a strong, positive connection with economic growth (RGDP), suggesting that a healthy stock market is a foundational component of sustained economic growth.
- The analysis also underscores the importance of the capital market in enhancing economic resilience during downturns. Expenditure (CEXP) (a proxy for consumer spending) shows a negative relationship with both the All Share Index and Real Gross Domestic Product (RGDP), indicating a potential inefficiency or time lag in how consumer spending contributes to the broader economy.

1. INTRODUCTION

1.1. Background to the Study

The Nigerian Financial system as in many other countries of the world is broadly divided into two distinct market segments, the Money market and the Capital market. While the former facilitates money flows in the short term, the latter provides the avenue for money creation and exchange in the medium to long term. The Capital market can be differentiated into the primary market where funds are raised to finance businesses and project, and the secondary markets for exchange of pre-existing funds among investors. Central Bank of Nigeria regulates the money market, while the Securities and Exchange Commission oversees activities in the capital market. Other players in the capital market include; Nigerian Stock Exchange, Stock Brokers, Registrars, Reporting Accountants, Solicitors to an issue, Auditors, Receiving Agents, Under-writers, and the Investing Public. The capital market facilitates capital formation by mobilizing funds from the surplus segment of the economy to the deficit segment through financial intermediaries which include Deposit Money Banks, Insurance companies, pension funds, unit trust, issuing houses and merchant banks. Funds so mobilized are invested in several sectors of the economy thereby facilitating economic growth.

The Nigerian Capital market Daily trading volume, market index changes and number of shares exchanged are usually measured in the short term, although they alongside other market factors have a long run effect on economic growth trends. The study of the Nigerian economy over the past decades have centered more on the public-sector contribution to growth particularly through proceed of crude oil sales, taxes and other non-oil sources of revenue of government. The private sector role in economic growth can nonetheless be of lesser importance owing to the input to GDP and economic growth of the country. Many of these firms also operate in the non-formal segment, which may suffice that the GDP contribution in the economy could be understated. In addition, the capital market plays a fundamental, long-term role in an economy by serving as the essential channel for mobilizing surplus funds from savers to deficit sectors, thereby facilitating capital formation and project financing. Globally, its efficiency is paramount, as demonstrated by studies showing that developed financial markets, including bond and stock markets, are demonstrable drivers of economic growth in the long run (Pradhan, Arvin, Norman, & Bahmani, 2020). In the context of the Nigerian financial system, the market is broadly segmented, with the capital market overseen by the Securities and Exchange Commission (SEC) and featuring institutions like the Nigerian Stock Exchange and various intermediaries providing the necessary avenue for medium to long-term funding. This process of resource allocation, which involves players like Deposit Money Banks, pension funds, and issuing houses, is critical for investing in various sectors and ultimately facilitating economic growth. Given Nigeria's historical

reliance on the public sector (particularly crude oil sales) for growth, a deeper understanding of the capital market's specific contributions to GDP is vital, especially since the financial system's role may often be understated due to the prevalence of the financially excluded informal sector. Therefore, investigating the precise dynamics of capital market growth and its short-term and long-term effects on Nigeria's economic trends is essential for evidence-based policy formulation.

1.2. Statement of the Problem

The private sector as a fulcrum of growth provided appropriate platform for economic development through several formal and informal businesses spread across the country. The Nigerian financial system has developed over time and has achieved tremendous progress in seeing that adequate data for determining appropriate metrics for measuring economic variables are produced. However, the prevalence of the financially excluded informal sector has made the capital market a veritable source in determining economic indices for growth and development in the country. Also, while growth rate is cyclical to business cycle, the capital market by its composition have certain segments which provide proportionate level of resilience to economic dip, such include monopolies, oligopolies, producers of certain goods which are inelastic or sticky to price changes such as petroleum marketers, pharmaceuticals, foods and Confectioneries, as well as services such as telecommunications.

Several works have been carried out on the impact of the capital market to economic growth in Nigeria and an agreed consensus on the contribution of the capital market to economic growth in the long term were established at varying levels. However, less focus was paid on the short-term effects of the capital market dynamics as it affects the economy in within and across the business cycle.

1.3. Research Questions

In determining the impact of capital market dynamics on economic growth trends in Nigeria, the study will seek to estimate.

i. To what level the Capital market affect growth in the Nigerian economy using the GDP as a measure of growth.
ii. How has the short-term movements in capital market growth affect the GDP over the period under consideration
iii. What influence does the counter-cyclical sector of the capital market have on economic growth trend?

1.4. Research Objective

The main objective of the study is the assessment of capital market growth dynamics on economic growth trend in Nigeria. To achieve this, the following steps were taken.

i. Determine the contribution of the Capital Market to GDP in Nigeria between 1990 and 2024
ii. Ascertain and measure the short term and long term effect of the capital market on the GDP growth trend in Nigeria
iii. Establish the existence of counter-cyclical factors in the capital market across different business cycles and their effect on Economic growth in Nigeria

1.5. Justification of the Study

This study attempted to establish the effects of capital market growth dynamics across different economic cycles. The result of this study therefore, will enable players in the capital market to determine how business down-

turns can be influenced through appropriate segmentation of the capital market. A time series analysis of the trend will enable policy makers and economic watchers to appreciate the short-term resilience that can be maintain through the capital market in the event of economic recession.

2. LITERATURE REVIEW

The relationship between the capital market and economic growth in Nigeria remains a subject of intense academic debate, particularly concerning the short-run dynamics and the varying influence of different market proxies (Nwokorobia & Okonkwo, 2023). Recent literature, largely employing time-series models like ARDL and VECM, reveals inconsistencies that validate the need for the present study's updated analysis. Several recent reviews highlight the fragility of capital market-growth models in developing nations, noting that using different variables and estimation techniques leads to inconsistent results (Imade, 2021). This lack of consensus often means that a significant portion of empirical results does not conform to theoretical expectations, underscoring the importance of rigorous, context-specific studies like the one uploaded.

The study by Obadina, Abiodun, and Chukwudi (2025) used a Vector Error Correction Model (VECM) and found that short-term effects of stock market variables on GDP growth were limited, with only a slow speed of adjustment toward long-run equilibrium (approximately 26.4%). This contrasts with some earlier ARDL findings but supports the notion that capital market dynamics are primarily a long-term economic catalyst. In a critical counterpoint to traditional finance theory, Obadina et al. (2025) also found that market capitalization (MCA) had a negative and significant long-term impact on GDP growth. This paradoxical result, which suggests an increase in market size does not translate to genuine economic value, necessitates a re-evaluation of the specific market quality captured by the simple size metric.

In contrast to the MCA paradox, recent studies consistently confirm that the All-Share Index (ASI) a measure of overall market performance and investor confidence maintains a positive and significant long-term relationship with economic growth (RGDP) (Abu, 2024; Okoye, Nwaiwu, & Egbemgbo, 2023). This reinforces the uploaded study's finding that ASI is a foundational component of sustained growth. Research on industrial growth confirms the role of trading volume and market liquidity as a key positive driver of industrial and economic expansion, despite facing constraints related to market inefficiencies and investor sentiment in Nigeria (Ojeaburu, Odum, & Uniamikogbo, 2024). This validates the inclusion of liquidity proxies in the current study's model. Ojeaburu et al. (2024) argued that technological development and digitalization, particularly the rise of fintech and telecommunications, are vital for enhancing industrial and economic growth by attracting investment and driving market capitalization. This points to technology as a necessary variable to consider for future market expansion. The vulnerability of the Nigerian market is highlighted by the finding that external factors, such as exchange rate risk and oil price risk, are major determinants of stock returns, consequently influencing investment decisions and market performance in both the short and long run (Salami, 2023).

While capital markets are seen as essential for long-term financing, a recent ARDL study by Samson (2025) revealed that the instruments designed to channel these funds, specifically government stocks and corporate bonds, had a significant adverse impact on infrastructure development. This introduces a critical nuance concerning the efficiency of capital allocation. Across a comparative study of emerging African economies, the hypothesis that financial development causes economic growth (Finance-Led Growth Hypothesis) holds true for Nigeria, primarily driven by the positive influence of stock market development over other financial segments (Adamu & Sanni, 2023). Regulatory Confidence and Transparency: Across policy-focused literature, a consistent recommendation emphasizes that regulatory authorities must prioritize efforts to restore investor confidence by ensuring

transparency and fair trading to eliminate market volatility and fully harness the market's growth potential (Adekunle, 2024; Fagbemi, Ayodele, & Godswill, 2022).

Oladosu and Akeerebari (2022) observed that capital market is the major component of a modern market-based economic system as it serves as the channel for the flow of long-term financial resources from the savers of capital to the borrowers of capital. Hence, the study was carried out to examine the macroeconomic factors' effects on the performance of the Nigerian capital market. Money supply (M2), exchange rate (EXR), consumer price index (CPI) and prime lending rate (PLR) were used as proxies for macroeconomic factors (explanatory variables), while market capitalization equities (MCE) was used as a proxy for the performance of Nigerian capital market (explained variable). The study made use of monthly time-series data which were sourced from the Nigerian Stock Exchange, Central Bank of Nigeria and Financial Market Dealers Association ranging from 2000M01 to 2019M12. Quantile Regression Technique was utilized to analyze the Quantile process estimates; Quantile slope equality test and Quantile symmetric test. The finding from Quantile process estimates revealed that there was significant variability in market capitalization equities across all quantiles caused by money supply and exchange rate. Also, market capitalization equities (MCE) bore insignificant and significant brunt of consumer price index and prime lending rate across all quantiles. The finding of Quantile slope equality test further confirmed that the connection between explanatory variables and explained variable understudy varies across quantile values, whereas the inter-quantile range proved that the slope equality test does not vary across quantile. More so, the finding of Quantile symmetry test demonstrated evidence of significant asymmetry between quantiles. However, the individual coefficient restriction test values exhibited evidence of symmetry across quantiles for all the variables understudy, except prime lending rate which showed evidence of asymmetry. In line with the findings, the study recommended that the regulatory authorities should intensify efforts towards creating a conducive and enabling environment that will deepen the capital market and enable the market to thrive.

Ogbuji, Mesagan, and Alimi (2020) conducted a comparative analysis of the effects of money and capital markets on the Ghanaian economy covering the period from 1991 to 2017 using the dynamic Auto Regressive Distributed Lag (ARDL) framework. Empirical results confirmed the existence of a unique and stable long-run relationship between the money market, capital market and economic growth. In respect of money market indicators, findings confirmed that monetary policy and treasury bills rate have had negative but significant impact on growth in the short and long-run respectively. More so, total liquidity negatively and significantly influenced the Ghanaian economy both in the short- and in the long run. Both market capitalization and total value of stock traded, as proxies of capital market, had positive and significant effects on short-run growth, while both indicators as well as stock market turnover negatively and insignificantly affected long-run growth. This means that capital market exerts a short-run impact on the country's economy, while money market exerts both short- and long-run impacts. The lesson relearned is that the money market propels the Ghanaian economy better than the capital market.

Pradhan et al. (2020) investigates whether Granger causal relationships exist between bond market development, stock market development, economic growth and two other macroeconomic variables, namely, inflation rate and real interest rate. The study aims to expand the domain of economic growth by including a more in-depth analysis of the possible impact that bond market and stock market development has on economic growth than is normally found in the literature. The study uses a panel data set of the G-20 countries for the period 1991-2016. It uses a panel vector auto-regression model to reveal the nature of any Granger causality among the five variables. The findings provide empirical insights that both bond market development and stock market development are cointegrated with economic growth, inflation rate and real interest rate. The most robust result

from the panel Granger causality test is that bond market development, stock market development, inflation rate and real interest rate are demonstrable drivers of economic growth in the long run. However, due to the chosen research approach, the study results may lack theoretical foundations. Therefore, perhaps the more fully grounded interactive findings of this study can inspire theorists to fill the missing gap. The study includes lessons for policymakers in the G-20 countries seeking to stimulate economic growth in the long run and how they need to ensure greater stability of the interest rate and inflation rate as well as fully developing their financial markets, as both bond markets and stock markets are obvious drivers of economic growth.

Coşkun, Seven, Ertuğrul, and Ulussever (2017) explore the relations between the development level of capital market sub-components, involving mutual/pension funds, corporate bond, stock and government bond markets, and economic growth over the period of 2006:M1 and 2016:M6 in Turkey. We find that there is a long-run cointegrating relationship between capital market development and economic growth and also a unidirectional causality running from capital market development to economic growth. Using ARDL, Markov Switching Regression and Kalman Filter models, we also find that capital market development has asymmetric effects on economic growth where government bond market development is negatively but the aggregated index of other sub-components is positively associated with economic growth.

Odo, Anoke, Onyeisi, and Chukwu (2017) identified several factors for measuring growth in the capital market to include, total market capitalization, gross capital formation, total new issue, value of shares traded, number of listed companies, number of listed equities and the All Share Index. The efficiency level established for the country's market is also a key consideration when the market maturity is measured. The market can be assessed in three different levels as established in the Efficient Market Hypothesis. Thus, the Nigerian market can be assessed to be in a strong market efficiency form, semi-strong market efficiency and weak form market efficiency. Market efficiency establish that prices fully and correctly reflect all available and relevant information and security prices adjust instantaneously to new information. Efficiency is measured in terms of liquidity,

3. METHODOLOGY

3.1. Data Source

Secondary data used in this study would be obtained from Central bank of Nigeria, Security and Exchange Commission, National Bureau of statistics and the World Bank. The study adopted a time series analysis of data obtained from year 1990 – 2021.

GDP growth rate will be adopted as the measure of economic growth and the endogenous variable = GDPG.

Exogenous variables considered from the various capital market growth indicators include.

i. Total Market Capitalization measured as a percentage of GDP = TMC.
ii. Capital Expenditure estimated as a percentage of GDP = CEXP.
iii. Stock Market Capitalization as percentage of GDP = SMC .
iv. All Share Index = ASI.

Control Variables that are considered are.

i. Inflation rate = INFRT.
ii. Interest rate= INTRT.

3.2. Model Specification

As used by many writers, multiple linear regression method will be adopted for this study. This allows many variables that affect growth to be specified and estimated. Ordinary Least Square Method will be used to test and validate hypothesis.

Functional specification of these variables is as stated.

$$GDPG = f(ASI, CEXP, SMC, TMC, INFR, INTR) \quad (1)$$

Equation i above stated in linearly expressed as.

$$RGDPG_t = a + \beta_1 ASI_{t-1} + \beta_2 CEXP_{t-1} + \beta_3 INFR_{t-1} + \beta_4 INTR_{t-1} + \beta_5 SMC_{t-1} + \beta_6 TMC_{t-1} + \varepsilon \quad (2)$$

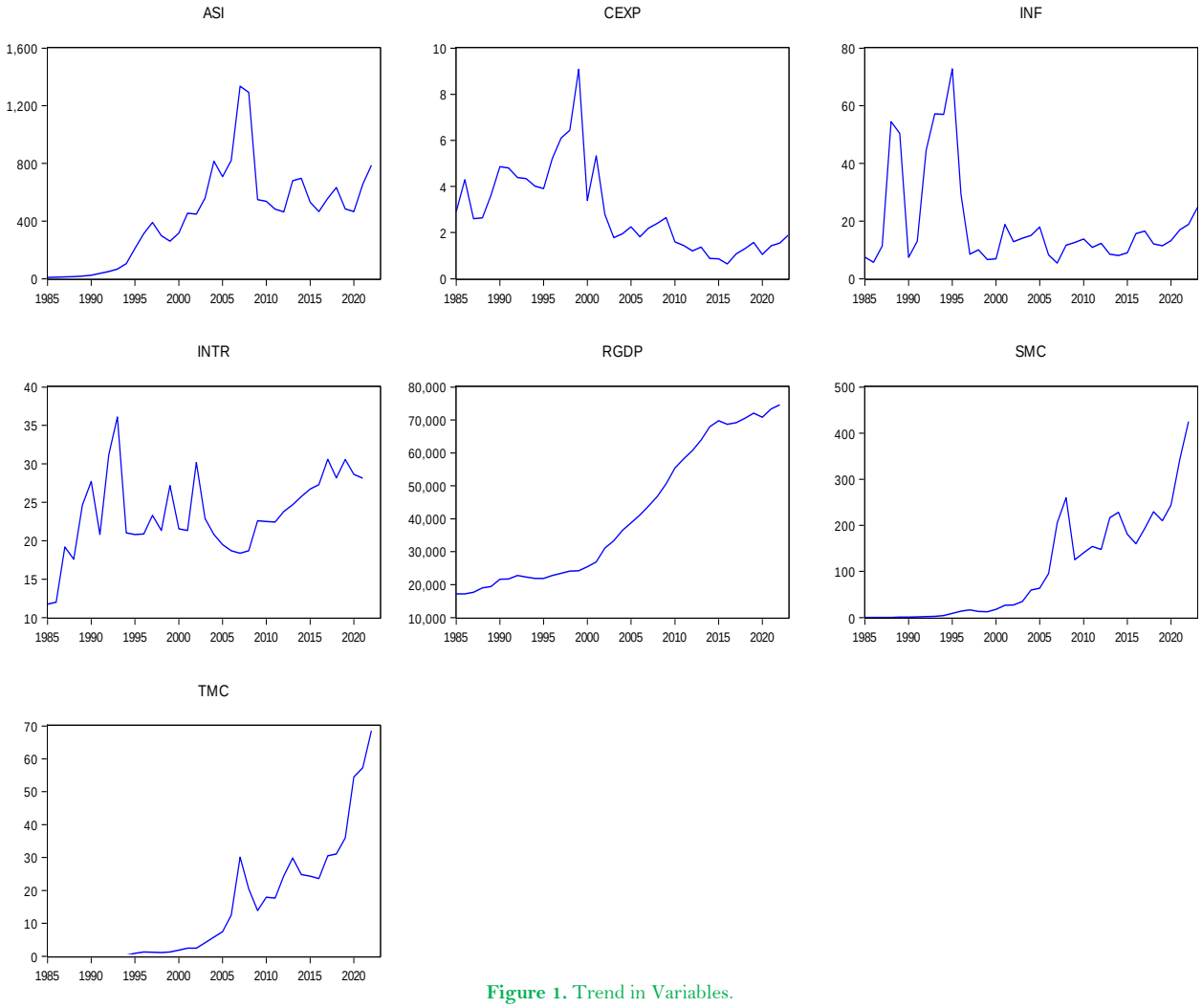

Figure 1. Trend in Variables.

4. RESULTS AND DISCUSSION

Figure 1 indicates a complex interplay between the various economic indicators over the specified period. The All Share Index (ASI) shows significant fluctuations, reflecting the volatility of the capital market, while the Capital Expenditure (CEXP) appears to have a negative correlation with ASI, suggesting that as market performance declines, consumer spending may also decrease. Inflation (INF) exhibits a positive skewness, indicating that periods of high inflation could be associated with increased market activity, although this relationship is not straightforward. Overall, the trends indicate that the performance of the Nigerian capital market is closely linked to broader economic growth, as represented by Real Gross Domestic Product (RGDP). RGDP shows a positive

correlation with the All Share Index (ASI), suggesting that economic growth enhances market performance. Similarly, Stock Market Capitalization (SMC) and Total Market Capitalization (TMC) have a positive relationship with RGDP, highlighting that a growing economy supports the expansion of the capital market. Surprisingly, the Interest Rate (INTR) remains fairly stable, which may suggest that it may not have a direct impact on capital market dynamics. However, the trends could also be pointing to consumer behavior and inflation as significant factors shaping market dynamics.

Table 1. Descriptive statistics.

Descriptive indices	ASI	CEXP	INF	INTR	RGDP	SMC	TMC
Mean	425.933	2.977	19.118	23.495	40334.09	93.135	12.960
Median	463.477	2.600	12.538	22.620	33346.62	35.232	4.076
Maximum	1335.115	9.080	72.836	36.090	73382.77	343.733	57.308
Minimum	8.197	0.640	5.388	11.750	17170.08	0.355	0.038
Std. dev.	330.955	1.894	17.441	5.164	20439.00	100.012	15.730
Skewness	0.762	1.109	1.776	0.0133	0.435	0.696	1.188
Kurtosis	3.721	4.136	4.846	3.156	1.560	2.200	3.724
Jarque-Bera	4.382	9.576	24.693	0.0387	4.363	3.973	9.513
Probability	0.112	0.008	0.000	0.980	0.113	0.137	0.009
Sum	15759.52	110.140	707.368	869.330	1492361.	3445.976	479.526
Sum Sq. dev.	3943114.	129.077	10950.82	959.778	1.500	360088.9	8907.513
Observations	37	37	37	37	37	37	37

Table 1 provides an overview of key variables adopted for the study. The average values show that the All Share Index (ASI) is 425.93, while the Real Gross Domestic Product (RGDP) is substantial at 40,334.09. Inflation and interest rates are high, averaging 19.12 and 23.50, respectively, which reflects a high cost of borrowing and significant price level increases. The standard deviations reveal high level of dispersions in these variables, especially for ASI and Inflation, suggesting significant fluctuations over the study period. Some variables are positively skewed, and their distributions are relatively peaked, which may indicate the existence of outliers. However, in all, these statistics highlight the interplay between market performance, consumer behavior, and macroeconomic stability in the Nigerian economic landscape.

Table 2. Correlation analysis.

Correlation t-statistic probability	ASI	CEXP	INF	INTR	RGDP	SMC	TMC
ASI	1.000						
CEXP	-0.465 -3.110 0.003	1.000					
INF	-0.424 -2.766 0.009	0.169 1.016 0.317	1.000				
INTR	-0.020 -0.118 0.906	-0.090 -0.535 0.596	0.139 0.832 0.411	1.000			
RGDP	0.581 4.218 0.000	-0.739 -6.497 0.000	-0.372 -2.371 0.023	0.413 2.679 0.011	1.000		
SMC	0.7070 5.915 0.000	-0.682 -5.514 0.000	-0.370 -2.353 0.024	0.282 1.739 0.091	0.925 14.421 0.000	1.000	
TMC	0.560 3.995 0.000	-0.654 -5.113 0.000	-0.323 -2.021 0.051	0.350 2.213 0.034	0.907 12.756 0.000	0.948 17.698 0.000	1.000

The findings in Table 2 reveal that there's a strong, positive connection between the stock market's performance (ASI), economic growth (RGDP), and market size (SMC). This is a reassuring sign, it means when the stock market is doing well, the economy and its overall market capitalization are generally growing with it. However, there exist a mismatch between market activity and everyday spending. Also, capital expenditure (CEXP) shows a negative relationship with both ASI and RGDP. This simply indicates that consumer spending, (which is something policymakers might want to look into) seems to be an unwelcome guest at the economic development party. Rising inflation is negatively correlated with both the stock market and economic growth, indicating the possibility of harming both of them. Though, interest rate (INTR) seems to be a minor player in this context, it also shows a weak correlation with other variables, suggesting it doesn't significantly influence the capital market's dynamics.

Table 3. Unit root test using ADF.

Variables	ADF statistics	Critical value @ 5 percent	Order of integration	Remarks
D(ASI)	-6.237	-2.948	I(1)	Stationary
D(CEXP)	-9.705	-2.943	I(1)	Stationary
D(INF)	-3.168	-2.968	I(1)	Stationary
INTR	-3.595	-2.946	I(0)	Stationary
D(RGDP)	-3.389	-2.946	I(1)	Stationary
D(SMC)	-5.173	-2.948	I(1)	Stationary
TMC	-5.311	-2.946	I(1)	Stationary

The unit root test is a key part of time series analysis, it helps us to determine if a variable is "stationary" or not. A stationary variable is predictable, always fluctuating around a constant mean. Conversely, a non-stationary variable tends to wander over time, with no constant mean to return to.

For this study, the findings in Table 3 from the Augmented Dickey-Fuller (ADF) test indicate that most of your variables, the All Share Index (ASI), Consumer Expenditure (CEXP), Inflation (INF), Stock Market

Capitalization (SMC), and Total Market Capitalization (TMC) were non-stationary at their level. However, they all became stationary after taking the first difference. This means that while the values themselves were drifting, the changes from one period to the next were consistent and predictable. In contrast, the Interest Rate (INTR) is stationary at level (I(0)), indicating that it does not require differencing to achieve stationarity. These results suggest that while most of the economic indicators exhibit non-stationarity in their levels, they become stationary after first differencing, which is crucial for further time series analysis and modeling in the context of capital market dynamics and economic growth in Nigeria. Given this significant and positive finding, the study then proceeds with other time-series analysis like the ARDL estimation model, which are specifically designed to handle this type of data behavior.

Table 4. Optimal Lag Selection Criteria.

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1202.699	NA	2.489	69.126	69.437	69.233
1	-1006.312	302.998	5.780	60.704	63.192*	61.563
2	-941.627	73.925*	3.367*	59.807*	64.473	61.418*

Note: (*) indicates compliance with selection criterion.

Building the right statistical model also involves choosing the right lag length. It is a bit like setting the right look-back period for a stock trader. You need to decide how many previous periods' data, how far back in time, is relevant for predicting the current period. If it is too short you miss important long-term trends; however, if it's too long, you will end up to include irrelevant noise that can confuse your model. Table 4 presents the Optimal Lag Selection Criteria for the Vector Autoregression (VAR) model applied to the economic indicators in Nigeria, including the All Share Index (ASI), Consumer Expenditure (CEXP), Inflation (INF), Interest Rate (INTR), Real Gross Domestic Product (RGDP), Stock Market Capitalization (SMC), and Total Market Capitalization (TMC). As for this study analysis, several statistical criteria like AIC and SC were used to find this perfect "look-back" period. These criteria help to balance the model's complexity with its accuracy. The results indicated an optimal lag length of two. This means that the most effective way to understand the dynamic relationships between your variables like capital market performance and economic growth is to consider the data from the two previous periods. This choice is good because it gives the model the right amount of historical context to be both efficient and accurate, thereby avoiding the problem of overfitting (where a model becomes too specific to the past data and fails to predict new data).

Table 5. Cointegration Bound Test.

		H_0: No level relationship		
Test statistic	**Value**	**Signif.**	**I(0)**	**I(1)**
F-statistic	3.019215	10%	2.12	3.23
k	6	5%	2.45	3.61
		2.5%	2.75	3.99
		1%	3.15	4.43

Cointegration Bound Test was conducted to check for long-term bond between the economic variables used in the study. The results in Table 5, is a bit inconclusive, the F-statistic of 3.019215 was high enough to suggest a relationship exists at the 10% significance level. While this is a good hint that a long-term connection does exist, however, the statistic wasn't quite strong enough to pass the more stringent 5% significance level. This means that the evidence for a long-term relationship isn't strong enough.

Table 6. Short run estimate.

ARDL error correction regression				
Dependent variable: D(RGDP)				
Selected model: ARDL(2, 0, 0, 0, 0, 1, 2)				
Case 3: Unrestricted constant and no trend				
Date: 01/22/25 Time: 17:33				
Sample: 1985 2023				
Included observations: 35				
ECM regression				
Case 3: Unrestricted constant and no trend				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3925.737	651.113	6.029	0.000
D(RGDP(-1))	0.304	0.118	2.578	0.017
D(SMC)	36.746	9.435	3.895	0.001
D(TMC)	-152.218	44.167	-3.446	0.002
D(TMC(-1))	-310.906	76.701	-4.054	0.001
CointEq(-1)*	-0.130	0.025	-5.162	0.000
R-squared	0.674	Mean dependent var		1605.778
Adjusted R-squared	0.618	S.D. dependent var		1523.996
S.E. of regression	942.617	Akaike info criterion		16.690
Sum squared resid	25767285	Schwarz criterion		16.957
Log likelihood	-286.075	Hannan-Quinn criter.		16.782
F-statistic	11.975	Durbin-Watson stat		1.802
Prob(F-statistic)	0.000			

Note: * p-value incompatible with t-Bounds distribution.

Table 6 presents the short-run estimates, captured the immediate impact that different economic factors have on Nigeria's economic growth (RGDP). The result found that Stock Market Capitalization (SMC) and Total Market Capitalization (TMC) have a significant positive impact on RGDP in the short term. This is good enough to suggest that when the market's value grows, it quickly and positively influences the economy. However, a negative relationship with Capital Expenditure (CEXP) suggests that an increase in consumer spending doesn't immediately translate into economic growth. This might be pointing to inefficiencies or a time lag between spending and its full economic impact.

Table 7. Long run analysis.

Conditional error correction regression				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
C	3925.737	1706.174	2.301	0.031
RGDP(-1)*	-0.130	0.041	-3.136	0.005
ASI**	1.358	1.434	0.947	0.353
CEXP**	-332.216	163.394	-2.033	0.054
INF**	-25.087	13.686	-1.833	0.079
INTR**	62.028	54.102	1.147	0.263
SMC(-1)	8.744	19.305	0.453	0.654
TMC(-1)	114.498	129.594	0.884	0.386
D(RGDP(-1))	0.304	0.182	1.673	0.108
D(SMC)	36.746	16.200	2.268	0.033
D(TMC)	-152.218	56.864	-2.677	0.013
D(TMC(-1))	-310.906	118.750	-2.618	0.015
* p-value incompatible with t-Bounds distribution.				
** Variable interpreted as Z = Z(-1) + D(Z).				
Levels equation				
Case 3: Unrestricted constant and no trend				
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
ASI	10.450	11.662	0.896	0.379
CEXP	-2556.943	1238.617	-2.064	0.050
INF	-193.081	111.804	-1.727	0.097
INTR	477.404	388.376	1.229	0.231
SMC	67.292	146.841	0.458	0.651
TMC	881.244	963.471	0.915	0.369
EC = RGDP - (10.4501*ASI -2556.9430*CEXP -193.0814*INF + 477.4040 *INTR + 67.2923*SMC + 881.2442*TMC)				

Table 7 presents the Long Run Estimates for the relationship between capital market dynamics and economic growth in Nigeria, focusing on the coefficients of various economic indicators affecting Real Gross Domestic Product (RGDP). The findings suggest that over the long period of time, a stronger stock market, as measured by the All Share Index (ASI), is associated with a more robust economy. This implies that a healthy stock market isn't just a fleeting trend but a foundational component of sustained economic growth. Conversely, consumer expenditure (CEXP) seems to have a negative long-term relationship with economic growth. This could be a signal of a deeper issue, like inefficiencies in how consumer spending contributes to the broader economy. The coefficients for inflation (INF) and interest rates (INTR) provide crucial insights for policymakers, by showing how these key macroeconomic variables influence economic performance over time. It also emphasizes that the health and strategic management of Nigeria's capital market are vital for shaping the country's economic future.

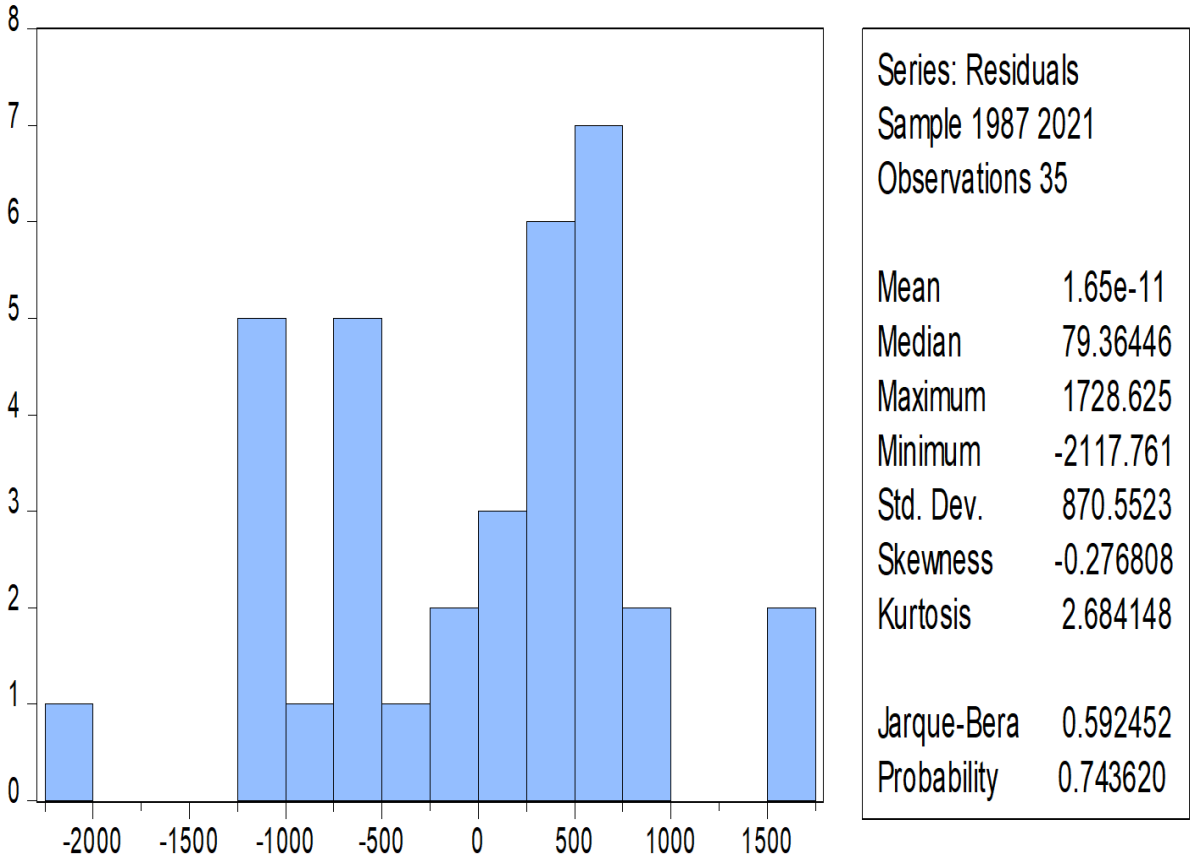

Figure 2. Normality test.

The Normality Test shown in Figure 2 assesses the distribution of the residuals from the regression analysis in the context of capital market dynamics and economic growth in Nigeria. The rule of thumb impresses it on the statistical insignificance of Jarque Bera probability. The results of the test, which typically include visual representations such as histograms or Q-Q plots, would help determine if any deviations from normality exist, this could be viewed from the value of the probability. As for this study, the JB probability of 0.743620 is substantially greater than 0.05, this leaves us with no other option but to reject the null hypothesis, (H0: the residuals are not normally distributed). This study therefore confirm normality in the residuals, thereby ascertaining the robustness of the findings related to the impact of capital market variables on economic growth.

Table 8. Breusch-Godfrey Serial Correlation LM Test.

F-statistic	0.196	Prob. F(2,21)	0.823
Obs*R-squared	0.642	Prob. Chi-Square(2)	0.726

The Breusch-Godfrey Serial Correlation LM Test shown in Table 8 indicates the absence of serial correlation in the residuals of the regression model used to analyze capital market dynamics and economic growth in Nigeria. The F-statistic value (0.196080), and its corresponding probability value of (0.8234), shows that there is no significant evidence of serial correlation at the 5% level. Similarly, the Obs*R-squared statistic (0.641619), with a probability value of (0.7256), further supports the conclusion. The study therefore fails to reject the null hypothesis of no serial correlation; these indicate that the residuals from the model are independent. This is a desirable property for affirming the validity of the regression analysis and the reliability of the estimated coefficients.

Table 9. Heteroskedasticity Test: Breusch-Pagan-Godfrey.

F-statistic	0.805	Prob. F(11,23)	0.635
Obs*R-squared	9.726	Prob. Chi-Square(11)	0.555
Scaled explained SS	3.537	Prob. Chi-Square(11)	0.982

The Breusch-Pagan-Godfrey test shown in Table 9 evaluates whether or not the residuals from the regression model exhibit constant variance, the assumption that could be used for the validity of regression analysis. The null hypothesis (H0: Residuals are homoscedastic) can only be rejected if the probability value of F-Statistics is statistically significant at 5%. From Table 9, the F-statistic value (0.804596), with a corresponding probability value (0.6353), indicates that there is no significant evidence of heteroskedasticity at the 5% significance level, given that the p-value is much higher than the typical threshold of 0.05. Additionally, the Obs*R-squared statistic (9.725713), with the probability value of (0.5552), this further supports the conclusion that the null hypothesis of homoscedasticity (constant variance of residuals) cannot be rejected. Moreover, the Scaled explained SS statistic of 3.536643, with a probability of 0.9816, reinforces this finding, suggesting that the residuals are evenly distributed across the range of predicted values.

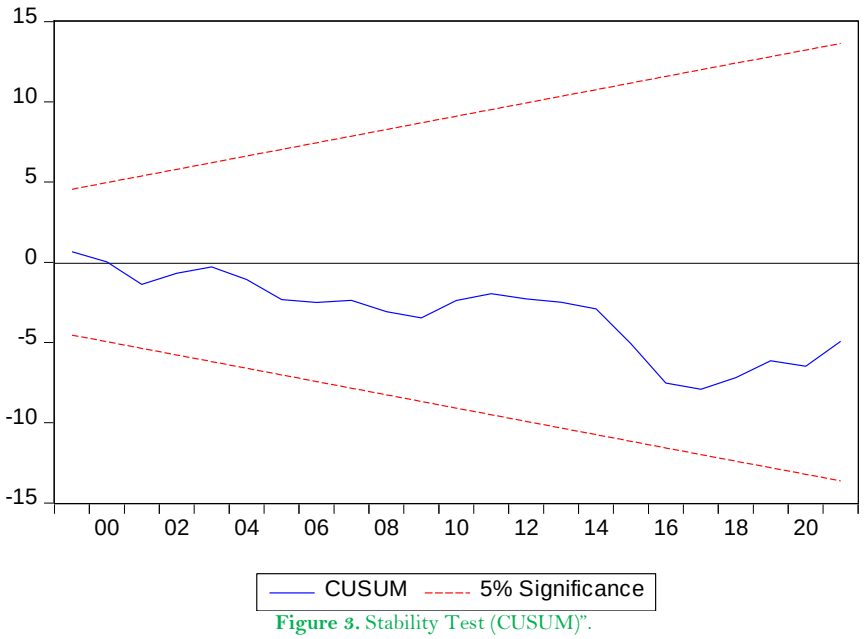

Figure 3. Stability Test (CUSUM)".

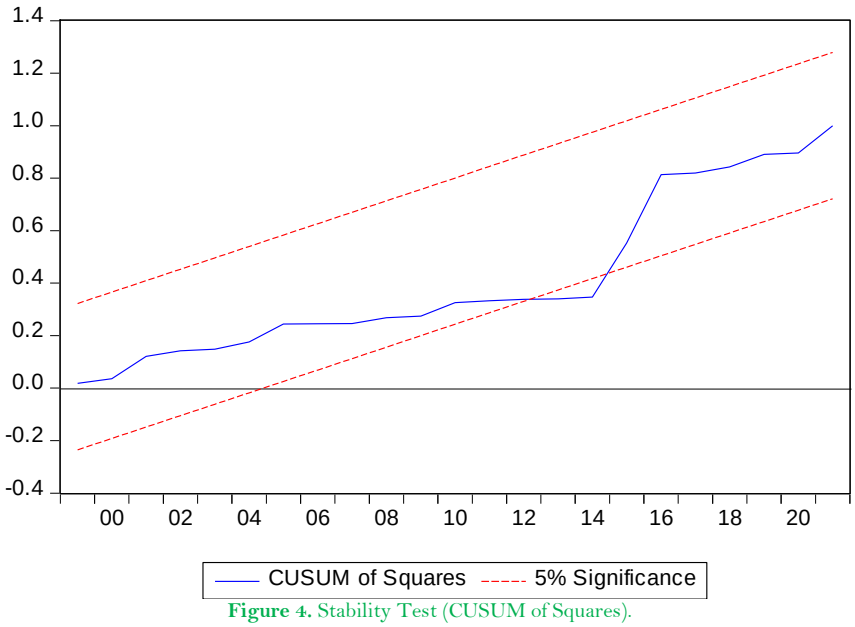

Figure 4. Stability Test (CUSUM of Squares).

The CUSUM and CUSUM of Squares tests are good ways to examine model stability. Figures 3 and 4 assess whether the relationships found between the variables could hold up over time. The CUSUM (Cumulative Sum) test looks at the cumulative sum of the model's residuals over the sample period. The CUSUM line stays within two critical boundary lines, this is a good sign that the model's coefficients are stable. This suspects that the stock price stays within a trading channel, it's quite predictable. On the other hand, the CUSUM of Squares test is even a more sensitive version of the first test. It looks at the cumulative sum of the *squared* residuals, which is more effective at detecting sudden shifts or changes in the variance of the errors. This is like detecting a sudden increase in the volatility of a stock, indicating a potential structural change. The two tests confirm that the relationships identified between the capital market and Nigeria's economic growth are not just a one-off finding but are robust and reliable over the entire study period.

5. CONCLUSION AND RECOMMENDATIONS

5.1. Conclusion

The study effectively demonstrates the significant influence of Nigeria's capital market dynamics on its economic growth from 1990 to 2024. Using rigorous econometric methods, the findings reveal that key capital market indicators, such as total market capitalization, have both a short-term and long-term impact on GDP growth. The analysis also underscores the importance of the capital market in enhancing economic resilience during downturns. The study's results offer valuable insights for policymakers and investors, highlighting the need for strategic interventions to improve market efficiency and its contribution to sustainable economic development in Nigeria. “

5.2. Recommendations

To bolster the impact of the capital market on economic growth, it is recommended that policymakers implement strategies to increase participation in the capital market, particularly among small and medium-sized enterprises (SMEs). This could involve providing incentives for SMEs to list on the stock exchange and improving access to financial education for potential investors. Also, the findings suggest the need for a robust regulatory framework to ensure market efficiency and stability. Regulatory bodies, such as the Securities and Exchange

Commission, should enhance oversight mechanisms to protect investors and maintain market integrity, thereby fostering greater confidence in the capital market. In addition, given the significant role of the informal sector in Nigeria's economy, initiatives aimed at promoting financial inclusion should be prioritized. This could involve developing tailored financial products and services that cater to the needs of informal businesses, thereby integrating them into the formal capital market and enhancing their contribution to economic growth.

5.3. Contributions to Knowledge

This study makes a significant contribution to the existing body of knowledge by providing a comprehensive and up-to-date analysis of the relationship between Nigeria's capital market and its economic growth from 1990 to 2024. It offers empirical evidence, using robust statistical methods, that key capital market indicators like total market capitalization and trading volumes are not just passive reflections of the economy but are active drivers of GDP growth. Specifically, the study fills the gap in the literature by focusing on both the short-term and long-term effects of the capital market on growth, as well as considering the roles of both the public and private sectors in this dynamic. Ultimately, the study gives policymakers and investors a clearer understanding of how to leverage the capital market's potential for sustainable economic development in Nigeria.

5.4. Suggestions for Further Studies

Future studies could explore how the relationship between capital market dynamics and economic growth differs across various regions within Nigeria. This would provide valuable insights into how local economic conditions and unique market structures influence this relationship. Researchers could also investigate the impact of technological advancements and digital finance on capital market efficiency and economic growth. Understanding how fintech innovations affect market participation and investment patterns could lead to valuable findings. Additionally, given the size of Nigeria's informal sector, it is important to conduct further studies on its contributions to capital market dynamics and economic growth. Analyzing how informal businesses engage with formal capital markets could provide a more comprehensive view of the overall economic landscape.

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