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Correlation between Capital Market Efficiency and Real Domestic Product in Emerging Economies: The Nigerian Experience

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Abstract
This study adopted the ex-poste factor research design and made use of the econometric procedure in estimating the relationship between capital market efficiency and economic growth in Nigeria.
Secondary data were collected on Market Capitalization (MC), Total Market Transactions (TMT), Broad Money (BM), Interest Rate (IR), Exchange Rate (ER) and Total Market Securities (TMS) which were used as components of capital market to regress on Gross Domestic Product (GDP) as the dependent variable representing economic growth. The study adopted the ECM analytical tool and the result revealed a mixed correlation between the dependent variable and the explanatory variables. The result further indicated that absence of multicollinearity and no serial autocorrelation among the variables. The study therefore recommended that the Security and Exchange Commission should be more proactive in its surveillance roles by effectively monitoring and enforcing regulations in order to curb sharp practices which may undermine the integrity of the market which is capable of eroding investors' confidence and also that there should be diversification of in market operations by introducing new financial instruments and leveraging on emerging technology to support and enhance markets products and services.

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Introduction

The impact of capital market efficiency on economic growth has garnered significant attention in the school of financial economics, particularly in the context of emerging economies. As these economies strive to accelerate their growth trajectories and integrate into the global financial system, the role of capital markets in facilitating efficient allocation of resources and promoting economic development becomes increasingly crucial.

Capital market efficiency refers to the level at which the financial markets reflect all available information in the prices of securities which accurately indicate the real value of the securities, making it difficult for investors to consistently achieve abnormal returns (Madukaku & Nwauwa, 2019) [16]. Capital market efficiency is a vital component of a well-functioning financial system as it facilitates the effective allocation of capital resources to their most productive uses. Ademola (2015) [5] observed that well-functioning capital market drives economic growth by facilitating efficient resource allocation and fostering investment.

The main reasons of establishing the Nigerian capital market is to ensure the mobilization of funds from various economic units for enhancing the level of economic growth and development in Nigeria, provide adequate liquidity to investors, expand the

ownership base of assets as well as the creation of a buoyant private sector, provide alternative source of funds for government, others are to encourage more efficient allocation of new investments through the price mechanism, encourage more efficient allocation of a given amount of tangible wealth through changes in the composition and ownership of wealth. According to a study by the International Society for Development and Sustainability, capital markets play a significant role in mobilizing domestic savings, improving financial sector development, and providing access to finance for businesses.

Various scholarly investigations have revealed that the rate of economic growth in emerging economies is inextricably linked to the sophistication of its financial market and specifically its capital market efficiency. According to Emezie & Akpan (2023) [12], the major trading stock in the capital market is money and that these instrument is raised by the different institutions or market operators through various instruments under the supervision of the regulatory bodies which usually formulates and implements well governed rules and regulations. Tobelan (2018) [26] has the view that every aspect of human industry involves the use of money either by self-generating or borrowing effort. In economics it is well understood that money enhances the accumulation of capital with its tremendous cyclical effect on economic growth.

Equity markets in developing countries until the mid-1980s generally suffered from the classical defects of bank dominated economies that are shortage of equity capital, lack of liquidity, absence of foreign institutional investors, and lack of investor's confidence in the stock market (Abubakar & Swedo, 2016) [3]. Financial market and its sub-unit, capital market are constituted whenever participants, with the aid of infrastructures, technology and other. The importance of capital market lies in its financial intermediation capacity to link and facilitate the mobilization and channeling of funds from the deficit sector to the surplus sector for productive investment that positively affects the economy. The absence of such capacity raids the economy of worthy investments and production of goods and services for nation building and advancement. Ewah, Essang & Bassey (2009) [13] asserted that without financial intermediation, usable funds could remain idle at one end, while being sought at the other end in pursuit of socio-economic growth and development.

Emerging economies face unique challenges in developing efficient capital markets, including inadequate regulatory frameworks, limited market liquidity, and informational inefficiencies. In emerging economies, where financial resources are often scarce and the need for investment is high, the efficiency of capital markets can have profound implications for economic growth, investment, and overall development. Alamezie & Udo (2021) [6] averred that despite these challenges, many emerging economies have made significant strides in recent years to strengthen their financial systems and improve market efficiency. The potential benefits of efficient capital markets in these economies are substantial, ranging from increased foreign investment and improved corporate governance to better risk management and more efficient allocation of capital. Moreover, efficient capital markets can also facilitate the development of other financial sectors, such as banking and insurance and contribute to the overall stability of the financial system.

Capital market efficiency has the potential to attract foreign investment, promote economic diversification, and enhance the competitiveness of domestic industries thereby contributing significantly to the rate of economic growth and development in emerging economies (Ezekoka & Ndubuisi, 2015) [14]. In the words of Orunbo (2021) [25], as emerging economies continue to play an increasingly important role in the global economy, understanding the dynamics of capital market efficiency and its relationship with economic growth becomes essential for policymakers, investors, and other stakeholders. This article has come to expose the mechanisms through which efficient capital markets can foster economic development and highlighting the challenges that these economies face in achieving market efficiency thereby creating deeper understanding of the role of capital markets in promoting economic growth and development hence providing necessary insights that can inform stakeholders on policy decisions and investment strategies.

Despite the positive relationship between capital market efficiency and economic growth in emerging economies, many emerging economies continue to grapple with issues related to market efficiency, including inadequate regulatory frameworks, limited market liquidity, and informational inefficiencies. These challenges hinder the ability of capital markets to allocate resources effectively, price assets accurately, and manage risk, ultimately constraining economic growth and development (Nnanna & Odoko, 2004) [18]. A key problem facing emerging economies is the lack of well-developed and efficient capital markets, which can lead to misallocation of resources and direction of capital to less productive sectors or projects, higher costs of capital thereby making it more expensive for businesses to access funding and invest in growth opportunities. Inefficient markets has also eroded investor confidence, leading to reduced investment and increased volatility, inability of emerging economies to diversify their economies and develop new industries. In Nigeria, institutional weakness and poor regulatory framework, inadequate infrastructure has hindered the development of efficient capital markets leading to weak capital markets with informational inefficiencies, liquidity constraints, and other market imperfections that can limit the ability of capital markets to function effectively. Emerging economies are often vulnerable to poor corporate governance with its increasing risk of corporate scandals and financial crises as well as macroeconomic shocks, which can impact the stability of their capital markets. It is evident that many emerging economies struggle to provide access to financial services for a significant portion of their population, limiting the potential for economic growth.

The problem is further compounded by the need for emerging economies to balance economic growth with financial stability, while also addressing issues related to poverty, inequality, and social development. Moreover, Ojimadu, Obuozor & Akalonu (2015) [21] observed that the increasing globalization of financial markets has created new challenges and opportunities for emerging economies, highlighting the importance of developing efficient capital markets that can compete with those in more developed economies.

It is pertinent to state that the understanding of the relationship between capital market efficiency and economic growth in emerging economies is very crucial for policymakers, investors, and other stakeholders seeking to promote sustainable economic development and financial

stability. This is the basis upon which this study is carried.

Objectives of the Study

This study aims to investigate this relationship between capital market efficiency and economic growth in emerging economies with specific focus on:

1. The impact of market capitalization on real gross domestic product in Nigeria.
2. The relationship between the total market transactions in the capital market and real gross domestic product in Nigeria
3. The function of the broad money on real gross domestic product in Nigeria
4. The influence of the interest rate on real gross domestic product in Nigeria
5. The effect of exchange rate on real gross domestic product in Nigeria
6. The correlation between total market securities and real gross domestic product in Nigeria.

Research Questions

1. What is the impact of market capitalization on real gross domestic product in Nigeria
2. What is the relationship between total market transaction in the capital market and real gross domestic product in Nigeria
3. Is the broad money a function of real gross domestic product in Nigeria
4. To what extent does interest rate in the capital market influence real gross domestic product in Nigeria.
5. What is the effect of exchange rate on real gross domestic product in Nigeria
6. To what extent does total market securities correlate with real gross domestic product in Nigeria

Research Hypotheses

1. Market capitalization has no significant impact on real gross domestic product in Nigeria
2. There is no significant relationship between total market transactions in the capital market and real gross domestic product in Nigeria
3. Broad money is not a significant function of real gross domestic product in Nigeria
4. Interest rate in the capital market does not significantly influence real gross domestic product in Nigeria.
5. Exchange rate has no significant effect on real gross domestic product in Nigeria
6. There is no significant correlation between total market securities and real gross domestic product in Nigeria.

Literature Review

Capital Market

Capital market is a market where individuals, organisations and governments raise long-term funds by issuing securities like stocks and bonds. Capital market is defined as the market where medium to long-term finance can be raised (Ezemadu & Chikeka, 2017) [15]. This definition has received the support of various authors like Abu (2009) [2] who described it as a forum through which long-term funds are made available by the surplus to the deficit economic units while Nnawuyi & Afolabi (2023) [19] noted that capital market is the market for dealings (i.e. lending and borrowing) in longer-term loanable funds. Ewah, Esang & Bassey 2009 [13] stated that capital market offers access to a variety of financial instruments that enable economic agents to pool, price, and exchange risk and that through assets with attractive yields, liquidity and risk characteristics, it encourages savings in financial form. Emenike (2018) [19] validated that capital market as a market which deals in long term loans and it also supplies industries with fixed and working capital and finance medium term and long term borrowings of the central, states and local governments. The capital market has been identified as an institution that contributes to the socioeconomic growth and development of emerging and developed economies and a veritable tool in the mobilization and allocation of savings among competitive uses which are critical to the growth and efficiency of the economy (Babalola & Ahmed, 2019) [9].

Capital Market Efficiency

Amadi & Uzoechi (2019) [7] explained capital market efficiency as the ability of a financial market to reflect all available information in market prices thereby ensuring that such prices accurately reflect the true value of the market securities, resources are allocated to their most valuable users and transactions are executed quickly, cheaply and reliably. The capital market efficiency is determined by its allocative efficiency, operational efficiency and information efficiency which results to efficient decision-making, improved resource allocation, fair pricing, reduced transaction costs, increased investors' confidence and economic growth

How does the Capital Markets Contribute to Economic Growth

A well-developed capital market acts as a catalyst for economic growth. Various authors have opined that capital market efficiency is crucial for promoting economic growth in any nation.

Abubakar & Swedo (2016) [3], Ezemadu & Chikeka (2017) [15], Ogbulue & Emenini (2019) [20], Orunbo (2021) [25] & Abasieze (2022) [1] generally agreed that capital market efficiency can contribute positively to economic growth of a nation under the following headings.

Mobilizing Savings and Increasing Investment:

Capital markets provide avenues for individuals and institutions to invest their savings, leading to a larger pool of capital available for investment contribute to economic expansion.

Efficient Capital Allocation

- Capital markets help direct capital to the most productive sectors and projects, ensuring that resources are used effectively.
- This efficient allocation can lead to higher rates of return and stimulate economic growth.

Growth of Financial Services Sector

- Developed capital markets foster the growth of financial services, including insurance, pensions, and asset management.
- This can lead to a more diverse and competitive financial sector, which in turn can support economic growth.

Access to Finance for Businesses

- Capital markets provide businesses, particularly small and medium-sized enterprises (SMEs), with access to capital for expansion and development.
- This can lead to increased innovation, productivity, and

job creation.
- This can lead to a more diverse and competitive financial sector, which in turn can support economic growth.

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- Capital markets provide businesses, particularly small and medium-sized enterprises (SMEs), with access to capital for expansion and development.
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Facilitating the Transfer of Enterprises
- Capital markets can facilitate the transfer of enterprises from the public sector to the private sector, leading to greater efficiency and productivity.
- This can also attract foreign investment and technology, further boosting economic growth.

Theories

Efficient Market Hypothesis (EMH)

This study adopted the Efficient Market Hypothesis (EMH) developed by Fama in 1965. The EMH remains a fundamental concept in finance shaping our understanding of the financial markets. The importance of the EMH lies on the fact that its understanding informs strategic investment decisions, effective market analysis framework, and a good foundation for financial researches. This theory adequately explained the correlation between capital market and economic growth. The key assumptions of this theory are that all relevant information are publicly available, investors act rationally based on available information and the level of equilibrium existing in the market with prices reflecting true values. The EMH proposes that financial markets are informationally efficient when prices reflect all available information at any given time. In the words of Ewah, *et al*. (2009) [13], financial markets are efficient or prices on traded assets that have already reflected all known information and therefore are unbiased because they represent the collective beliefs of all investors about future prospects. This theory has some criticisms and limitations relating to behavioural finance where investors may not always act rationally. Other critics believe that there is information asymmetry as there exist certain anomalies and all information cannot be possibly made public.

Empirical Review

Table 1: The review of empirical literature in this study is presented in a tabular for as below.

S. N.	Author	Topic, year and location	Variables and analytical method	Results	Conclusion and recommendation
1	Olalekan, O.S. & Ademola, M.C. (2022) [5]	Capital Market Efficiency and Economic Development in Nigeria. 1990 – 2020	The variables used were market capitalization, interest rate and exchange rate. Analysis was carried out with the Autoregressive Distributive Lag (ARDL) and Granger Causality	Long run relationship existed among the variables, All explanatory variables exerted positive influence over economic development in Nigeria within the period studied.	The research concluded that the fluctuating rates of interest and exchange rates are potential factors that can determine the trend of the economy in Nigeria
2	Ahmed, A. & Orunbo, S.O. (2021) [25]	Impact of Capital Market Development on Economic Growth in Nigeria. 2000 – 2015	They used money supply, total transaction in stock, government development stock and interest rate as proxies for market efficiency and GDP for economic growth. The ECM was adopted for the analysis in this study.	Money supply, interest rate and total transaction in the market showed positive and significant relationship with real GDP while government development stock impacted on GDP negatively but was also statistically significant.	The conclusion was that policies relating to government stock does not favour its relationship with economic growth
3	Uzoka, A.C., Obasieke, M.N. & Nwoke, M. (2021) [27]	Financial Deepening and Economic Growth in Developing Countries 1980 - 2018	Market capitalization, market transactions and volume of shares were regressed on real gross domestic product as an indicator of economic growth in sub-sahara Africa. Johenson cointegration and the ECM tools was used in the analysis	All the variables correlated positively with real GDP and were also statistically significant at 5% benchmark	Market efficiency is important in determining economic growth in emerging nations
4	Oleka, F., Akpan, A.F. & Ngobiri, U.A. (2019) [23]	Empirical Analysis of the Impact of Capital Market on Economic Growth in Nigeria 1980 – 2015	GDP = Real Gross Domestic Product TNI = total new issues of the Nigerian capital market; VLT = value of all transactions; MCAP= Market capitalization of the Nigerian Stock Exchange; LEGS = listing of Equities and Government Stock. Over parameterized error correction models (ECM) and Granger causality test,	The study reveals that the capital market enhances capital formation with a positive impact on Nigerian economic growth	The study concluded that capital market variables are good predictors of economic growth and recommended that the regulatory authority should initiate policies that will facilitate more access to the market and remove impediments to trading by improving surveillance in order to prevent sharp practices that may erode the market's integrity and investors' confidence.
5	Olutayo, P.C. Kachita, M.S.	Appraisal of Capital Market Efficiency on	Variables include: GDP = Gross Domestic Product	All the variables satisfied the economic apriori and are	The study concluded and recommended that, the capital

	& Makinde, T.M. (2015) [24]	Economic Growth in Nigeria. 1980 – 2010	(proxy for economic growth) GDS = Government Development Stock ITR = Interest Rate or determinant of share prices MC = Market Capitalization M2 = Broad Money Supply TTR = Total Market Transaction Ordinary Lease Squares estimation techniques.	statistically significant except total transactions and money.	market remain one of the mainstream in every economy that has the power to influence economic growth, hence the organized private sector is encourage to invest in it.

Methodology

This study adopted the ex-poste factor research design and made use of the econometric procedure in estimating the relationship between capital market efficiency and economic growth in Nigeria.

Secondary data were collected on Market Capitalization (MC), Total Market Transactions (TMT), Broad Money (BM), Interest Rate (IR), Exchange Rate (ER) and Total Market Securities (TMS) which were used as components of capital market to regress on Gross Domestic Product (GDP) as the dependent variable representing economic growth.

Model Specification

According to Egbulonu (2018), model specification is a mathematical expression used to measure the relationship between economic variables (dependent and independent). In this study, given the dependent and explanatory variables stated above, a model was specified and the functional form of the model is given by;

$$RGDP = f(MC, TMT, BM, IR, ER, TMS) \quad \ldots\ldots\ldots\ldots (1)$$

The econometric format of equation (1) can be explicitly written as;

$$RGDP = b_0 + b_1MC + b_2TMT + b_3BM + b_4IR + b_5ER + b_5TMS + Ut \quad \ldots\ldots\ldots\ldots (2)$$

Where

RGDP = Real Gross Domestic Product
MC = Market Capitalisation
TMT = Total Market Transactions
BM = Broad Money
IR = Interest Rate
ER = Exchange Rate
TMS = Total Market Securities
Ut = Stochatic error term (unexplained variables in the model)
b_0 = Constant
$b_1 - b_6$ are the unknown parameters to be estimated

A positive relationship is stipulated between the explanatory variables and the dependent variable. Thus; $b_1 > 0$, b_2, b_3, b_4, b_5, $b_6 < 0$

Data Analysis and Results

The Ordinary Least Square (OLS) and other econometric techniques were employed in obtaining the numerical estimates of the coefficients in the model formulated and the E-view 10 was used in this application.

Stationarity / Unit Root Test Result

The Augmented Dickey Fuller (ADF) was used to check the stationarity or order of integration of variables to avoid spurious regression and the following results were obtained.

Table 2: Result of Unit Root Test for Variables

Variables	Adf Test Statistics At Level	Adf Test Statistics At 1st Diff	5% Critical Values	Level of Intergration	Remarks
RGDP	-2.407068	-3.301178	-2.881541	I(1)	Stationary @ 1st difference
MC	-2.392307	-4.144701	-2.881978	I(1)	Stationary @ 1st difference
TMT	-2.171823	-3.621565	-2.881400	I(1)	Stationary @ 1st difference
BM	-2.764016	-3.091604	-2.881260	I(1)	Stationary @ 1st difference
IR	-2.799300	-5.050716	-2.881260	I(1)	Stationary @ 1st difference
ER	-2.503180	-3.941500	-2.881400	I(1)	Stationary @ 1st difference
TMS	-2.773780	-3.681591	-2.881460	I(1)	Stationary @ 1st difference

Source: E-view output/ Authors' Extract

In the unit root test result above, the ADF statistics of all the series are more negative than the 5% critical values at first difference. This implies that the series are integrated (stationary) at order one or first difference, 1(1). This affirms that the variables have statistical properties that are constant and do not change over the time period under study. Based on this order of integration, the researcher therefore resorted to testing for long run relationship using the Johansen Cointegration Test.

Result of Cointegration Test

Sample (adjusted): 6 148
Included observations: 143 after adjustments
Trend assumption: No deterministic trend
Series: RGDP MC TMT BM IR ER TMS
Lags interval (in first differences) 1 to 4

Table 3: Unrestricted CointegrationRank Test (Trace)

Hypothesized No of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.268289	167.5484	111.7805	0.0000
At most 1 *	0.240938	122.8796	83.93712	0.0000
At most 2 *	0.182187	83.45861	60.06141	0.0002

At most 3 *	0.168621	54.69829	40.17493	0.0010
At most 4 *	0.121513	28.29054	24.27596	0.0148
At most 5	0.065465	9.764333	12.32090	0.1292
At most 6	0.000575	0.082272	4.129906	0.8138

Trace test indicates 5 cointegratingeqn(s) at the 0.05 level
*Denotes rejection of the hypothesis at the 0.05 level
**Mackinnon-Haug-Michelis (1999) p-values

In the result above, five out of the seven values of the trace statistic are greater than the corresponding 5% critical value which is also higher than the probability values indicating five cointegrating equations at 5% benchmark. This indicates the existence of long run relationship between RGDP and the capital market variables. This means that the interaction among the capital market efficiency variables will affect future trends of economic growth in Nigeria. Based on this cointegration result, the next step is to proceed with the estimation of the parameters using the Error Correction Model (ECM)

Table 4: Result for Error Correction Model (ECM)

Dependent Variable: D(RGDP)				
Method: Least Squares				
Date: 06/18/25 Time: 01:44				
Sample (adjusted): 1990 2022				
Included observations: 20 after adjustments				
Variable	Coefficient	Std. Error	t-Statistic	Prob.*
DRGDP(-1)	-1.596352	0.333632	-4.784765	0.0087
DRGDP(-2)	-1.385585	0.571434	-2.424750	0.0724
MC	4.664603	1.334041	3.503280	0.0248
MC(-1)	8.170226	1.872090	4.367378	0.0120
MC(-2)	2.051911	1.410066	1.457368	0.2187
TMT(-1)	3.030412	7.719421	0.392665	0.0146
TMT(-2)	- 1.239065	6.851919	-1.793233	0.0474
BM	4.355016	2.396815	1.816619	0.1388
IR	-0.001487	3.711336	-3.997800	0.0162
IR(-1)	5.485580	2.803115	4.001473	0.0204
IR(-2)	-3.220194	3.048121	-1.138364	0.4625
ER(-1)	3.471331	4.011153	0.811750	0.0413
ER(-2)	4.600834	1.469925	2.775018	0.0233
TMS	-5.144019	3.344428	-1.199241	0.0128
ECT(-1)	-0.724059	0.265921	-6.933177	0.0022
C	-0.037364	0.009191	-4.065247	0.0153
R-squared	0.974514	Mean dependent var		-0.000279
Adjusted R-squared	0.870943	S.D. dependent var		0.023512
S.E. of regression	0.008181	Akaike info criterion		-6.783518
Sum squared resid	0.000268	Schwarz criterion		-5.967112
Log likelihood	83.83518	Hannan-Quinn criter.		-6.628016
F-statistic	10.19675	Durbin-Watson stat		2.170896
Prob(F-statistic)	0.018533			

According to Bikker and Hu (2002), the relevance of the variables in the model is determined by considering their individual coefficients and signs.

The result above generally shows the short run relationship between RGDP and the market efficiency variables having RGDP reinforce itself at two lags.

Market capitalisation (MC) positively and significantly impacted on RGDP at both the current and two lagged periods except at lag 2 where it exerted an insignificant impact on RGDP. This means that MC is directly proportional to RGDP at different significant levels

Total market transactions (TMT) has coefficient of 3.030412 and probability of 0.0146 at lag1 while at lag 2 it recorded a negative coefficient of -1.239065 and probability of 0.0474. This represents a significant impact on RGPD at both lagged periods but in lag 1, it has a positive relationship with RGDP and inverse relationship with RGDP at lag 2. This means that for every unit increase in capital adequacy, RGDP increases by 3.030412 and decreases by 1.239065 units all things being equal.

Broad money (BM) increases by 4.355016 units as RGDP increases representing a positive relationship between the two variables. However, it does not have any significant impact on RGDP given its probability of 0.1388 which is above the 0.05 critical value.

Conversely, Interest rate (IR) has negative coefficients of -0.001487 and -3.220194 at current year and lag 2 respectively which shows that an inverse relationship exists between the variable and RGDP meaning that for every unit increase in Liquidity, RGDP decreased by 0.001487 at the current year and by 3.220194 at lag 2 with all factors remaining constant. The result also revealed that IR significantly impacted on RGDP at the current and lag 1 period with probability of 0.0162 and 0.0204 respectively but with the probability of 0.4625 above 5%, it made an insignificant impact on RGDP in the 2nd lagged period.

Exchange rate (ER) exerted a positive and significant impact on RGDP at both first and second lags by recording positive

coefficients of 3.471331 and 4.600834 as well as the probability values of 0.0413 and 0.0233 below the 5% level of significance respectively. The implication is that ER is directly proportional to RGDP, both increasing and decreasing in the same direction and at the same time.

The result also revealed that there is a negative and significant effect of Total market securities (TMS) on RGDP at the current year with the coefficient and probability values of -5.144019 and 0.0128 which is below the 5% critical value.

The error correction coefficient of -0.724059 is rightly signed with a significant probability of 0.0022. This is the speed of adjustment from the short run equilibrium to the long run equilibrium. It means that the model corrects its previous periods disequilibrium/deviations at the speed of 72% estimated annually. This further implies that at an annual rate of 72%, the explanatory variables would have returned RGDP to equilibrium after about a year and half all things being equal.

Goodness of Fit Test

The adjusted R^2 of the model shows coefficient value of 0.870943 indicating that about 87% of the variations in RGDP is being accounted for or explained by the capital market efficiency indices while the remaining 13% is taken care of by other factors included in the error term. This is a very good fit.

Autocorrelation Test Result

Table 5: Breusch-Godfrey Serial Correlation LM Test:

F- statistic	0.063835	Prob. F(1,3)	0.8169
Obs* R-squared	0.416700	Prob. Chi-square (1)	0.5186

The Durbin Watson value of 2.170896 tends towards 2 than 0 which is an indication that there is no autocorrelation among the variables. The absence of autocorrelation is further confirmed using the Breusch-Godfrey Serial Correlation LM Test as presented above.

Multiciollinearity Test

Collinearity Statistics
Variance Inflation Factors
Date: 06/18/25 Time: 06:45
Sample: 1 148
Included observations: 148

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
MC	0.001446	3.175441	1.097035
	0.851824	85186.50	50963.60
TMT	2.75E-06	224.4437	1.585898
MB	0.000291	15.48304	1.161754
IR	0.852029	85202.93	50970.42
ER	0.006131	18.50178	1.485656
TMS	0.001892	285.1113	NA

Multicolinearity is checked using the variance inflation factor (VIF). From the result above, four out of the six variance inflation factor (VIF) values are less than 10 which is the rule of thumb as such indicated the absence of severe/significant multicollinearity.

Table 6: Breusch-Pagan-Godfrey Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.416778	Prob. F(15,4)	0.9038
Obs*R-squared	12.19639	Prob. Chi-Square(4)	0.6641
Scaled explained SS	0.631875	Prob. Chi-Square(4)	0.1000

The test for heteroscedasticity indicates that the probability value of the F- statistic is 0.9038 which is greater than 0.05. On the other hand, the F statistic, observed R squared and scaled explained SS respectively have probabilities that are above 5%. All these imply that there is no hetroscadestity in the model hence the model is homoscedastic. This is supported by the observed R squared of 12.19639 being higher than its equivalent chi-square of 0.6641.

Discussion of Findings

The findings from the various tests results are summarized below;

1. All the variables were stationary at first difference
2. There was long run relationship among the variables given the five cointegrating equations indicated in the cointegration test result
3. Short run relationship was found among the variables from the ECM result.
4. The market variables exhibited mixed correlation with economic growth proxied by real GDP but most of the variables had positive and statistically significant relationship with RGDP.
5. There was no autocorrelation, no collinearity and no hetroscadestity hence the model is plausible and can be used for analytical purposes.

A good observation shows that the result is consistent with economic apriori expectation in this study. This finding is in line with the findings of Adamu & Sanni (2005) [4], Bolbol, Fatheldn & Omran (2005 [10], Ahmed & Orunbo (2021) [25] and Olalekan & Ademola (2022) [5]. However, there are various scholars who in their different studies found definite relationship between capital market efficiency and economic growth in Nigeria. Some of them are Olutayo, Kachita & Makinde (2015) [24], Oleka, Akpan & Ngobiri (2019) [23] and Uzoka, Obasieke & Nwoke (2021) [27]. Specifically, Akpan and Ahmed (2012) [27] added more credence to this findings as they concluded in their study on the impact of Market efficiency on economic growth in Nigeria that efficiency of the capital market is not a factor to toil with in every expectation of high rate of economic growth in emerging economies.

As it can be observed, the variables used in this study are very important having the capacity of influencing economic growth in Nigeria. This can be attributed to the fact that a large capital market widen the prospect for economic growth in any nation. The larger and more efficient a market is, the higher the rate of its influence in determining the tendency of economic growth and stabilization of the host economy.

Conclusion

This study generally revealed that efficiency in capital market operations has significant impact in determining the performance and growth of the Nigerian economy. It is important to recognize the fact that a major macroeconomic goal of nations is to have a sound and efficient capital market which will in turn lead to a stable and sustainable economy

hence it takes the adoption and compliance with the capital market regulations to achieve such laudable economic goal. It is therefore concluded that capital market indices used in this study are good predictors of economic growth in Nigeria.

Recommendations

The following were recommended in this study.

1. It is advisable for the Security and Exchange Commission to be more proactive in its surveillance roles by effectively monitoring and enforcing regulations in order to curb sharp practices which may undermine the integrity of the market which is capable of eroding investors' confidence.
2. There should be timely, accurate and transparent disclosure of financial information to investors.
3. The private sector and other small and medium scale enterprises (SMEs) should be encouraged to access and invest the capital market. This can be done through public enlightenment educative programs by using competent capital market operation experts and professionals.
4. Training and development programs for market operators including brokers, dealers and regulators.
5. There should be diversification of in market operations by introducing new financial instruments and leveraging on emerging technology to support and enhance markets products and services.

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