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Capital Market Development and Economic Growth in Nigeria

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Abstract

In this study, capital market development and economic growth in Nigeria from 2003 to 2022 was investigated. The market capitalization rate was used as a proxy for stock market development, along with interest rates, and the RGDP as a measure of economic growth. In order to determine whether there is a substantial and positive association between Nigeria's stock market development and economic growth, the study used the multiple regression analysis test. The empirical finding indicates that while the stock market has a negligible impact on economic growth in Nigeria, it is positively correlated with it. It is advised that market regulators for the capital markets, such as the Securities and Exchange Commission (SEC), should be more adaptable and receptive to new ideas without endangering investor interests, protection, or the effectiveness of the market. The regulatory agencies should sensitize Nigerian investors to engage in dynamic and speculative stock marketing activities rather than perpetually holding onto their investments. The network for communication and information should be improved. Finally, the government should increase its investment in infrastructure development and by extension improvements to the nation's growth pattern.

Subject Areas

Economics

Keywords

Capital Market, Economic Growth, Interest Rate, Market Capitalization. Productivity, Business Environment

1. Introduction

In order to facilitate the meeting of suppliers and users of medium- to long-term

capital for use in economic development projects, the capital market is a system of specialised financial institutions as well as a number of mechanisms, procedures, and supporting infrastructure (Rodrigue, 2020) [1]. It is essentially a framework or process for obtaining the institutional capital required to support real sector activities over the medium to long term via the sale and acquisition of financial instruments with a comparable length of maturity. According to Laeven (2014) [2], the capital market promotes monetary savings by providing assets with attractive yields, liquidity, and risk characteristics that are required for governments and other financial institutions seeking long-term finance. Realised savings and actual investments have a direct and proportionate link, in accordance with basic economic theory. Greater investment rates will eventually lead to greater rates of real growth, if all else is equal (Gale and Samwick, 2014) [3].

Researchers, academics, and policymakers have long recognised the importance of the capital market as a successful avenue for financial intermediation and a crucial component in the economic development of both developed and developing countries (Edame and Okoro, 2013) [4]. Economic success in a modern nation depends on a strong financial sector that pools local resources and attracts foreign capital for productive projects (Ayadi, 2021) [5]. Illiquid, costly, undeveloped, or poorly functioning capital markets, which are common, deter foreign investment. Illiquidity and high transaction costs also make it difficult for bigger local companies to obtain financing, which may compel them to go outside for markets (Clessens, 2019) [6].

There are three key ways that capital markets and economic growth are connected, according to theoretical research on financial development and growth (Bist, 2018) [7]. First, as the capital markets grow, more savings are going into investments. Second, adjustments to the capital market might have an impact on investments by changing the savings rate. Third, as the capital markets develop, capital allocation becomes more efficient.

The heightened degree of private and public investor activity on the floor of the stock exchange and in multiple public offerings of the mentioned companies serves as evidence of the evident shift in the Nigerian capital market over time. The rising economy has attracted the interest and attention of international investors, which has increased capital inflow. For instance, the total market capitalization increased over time, going from N1,698,100,000 in 1980 to N7,030,800,000 in 2009. Similar to this, the value of transactions on the NSE floor climbed from a prior value of sixteen million six hundred thousand naira (N16,600,000) to six hundred and eighty-seven billion seven hundred and sixteen million two hundred thousand naira (N687,716,200,000) from 1970 to 2009, respectively. However, from 1970 to 2009, the total number of transactions done by all market participants on the floor ranged from only 634 naira (N634) to 1,739,365,000,000 naira (N1,739,365,000,000). Additionally, the total number of listed companies increased from 91 in 1980 to 213 in 2008 (CBN, 2009) [8].

As a consequence, a healthy capital market has an effect on liquidity, information about businesses, risk diversification, the mobilization of funds, and corpo-

rate control (Angaye and Frank, 2020) [9]. Therefore, by altering the quality of these services, the way stock markets function may be able to alter the pace of economic development. The research study that examines the impact of Nigeria's capital market on economic development is built upon this setting.

There is compelling evidence that the stock market is essential to the economic health of the majority of industrialised nations, whereas emerging economies significantly depend on the activities of the money market to drive their economic activity (Grant, 2017) [10]. This research tries to look into how the capital market has affected the growth and development of the Nigerian economy. It focuses primarily on how key stock market performance indicators, including the capitalization ratio, value traded ratio, and turnover ratio, affect the growth of Nigeria's production. The majority of earlier studies have either employed regression analysis or causality analysis to tackle this issue. Both methods were used to increase the validity of this inquiry.

The primary objective of the study is to examine the Capital Market Development and Economic Growth in Nigeria. While the specific objectives are:

1) To evaluate the relationship between the capital market development and the economic growth in Nigeria.

2) To investigate the impact of capital market development on the economic growth in Nigeria.

3) To evaluate the causal relationship between the capital market development and the economic growth in Nigeria.

The hypotheses that will be used to achieve the stated hypotheses above include:

1) H_0: There is no significant relationship between the capital market development and the economic growth in Nigeria.

2) H_0: The impact of capital market development on the economic growth in Nigeria is not significant.

3) H_0: There no significant causal relationship between the capital market development and the economic growth in Nigeria.

2. Literature Review

2.1. Conceptual Review

2.1.1. Concept of Capital Market

A capital market is any medium of bringing buyers and sellers together to exchange financial instruments like bonds, equities, etc. Participants, such as individuals and institutions, carry out the purchasing and selling. Capital markets assist in directing people's excess cash towards institutions so they can use it for investments in profitable ventures (Viral, 2019) [11]. Typically, long-term securities make up the majority of this market's trades. There are primary markets and secondary markets in the capital market. Primary markets deal with the trading of newly issued stocks and other securities, whereas secondary markets deal with the trading of already-existing or previously-issued securities. The stock market and bond market are two examples of significant divisions based

on the type of security traded in the capital market (Bennett Coleman, 2017) [12].

2.1.2. Concept of Economic Growth

An increase in the output of products and services over a given time period is referred to as economic growth. The measurement must account for inflationary impacts in order to be precise (Michael and Rufaro, 2020) [13]. A second definition of economic growth is a rise in an economy's ability to create products and services over time. It can be measured in real terms, which are inflated and adjusted, or in nominal terms. Although alternative metrics are occasionally employed, Gross National Product (GNP) or Gross Domestic Product (GDP) are traditionally used to measure overall economic growth (Abdullah, *et al.* 2022) [14]. Economic growth is just an increase in overall productivity. Gains in overall productivity frequently but not always correlate with higher average marginal productivity. This implies that the typical worker in a particular economy becomes, on average, more productive. It is also possible to achieve total economic growth without an increase in average marginal productivity by increasing immigration or birth rates (Michael and Rufaro, 2020) [13].

Businesses profit more as a result of economic expansion. Stock prices consequently increase. That provides businesses with the funds they need to expand and hire more workers. Income increases when more jobs are created. The purchasing power of consumers has increased. Higher economic growth is a result of purchases. Therefore, all nations desire favourable economic growth. As a result, economic growth is the economic indicator that receives the greatest attention (Arindrajit, 2019) [15].

The most accurate indicator of economic growth is gross domestic product. This is due to the fact that it accounts for the entire nation's economic production. It comprises all products and services that companies in the nation manufacture for export. It makes no difference whether they are sold domestically or abroad. GDP is a measurement of output. It excludes the components created to create a product. Because they are made domestically, exports are included. Economic growth is adjusted for imports. Most nations assess economic expansion every three months. Real GDP is the most reliable indicator of growth. It eliminates the consequences of inflation. Real GDP is used to calculate the GDP growth rate (Karen and Louise, 2018) [16].

There are only a few methods for creating economic growth. The first is the finding of fresh or improved economic resources. For instance, before gasoline's ability to produce energy was discovered, the economic worth of petroleum was relatively low. After this discovery, gasoline was transformed into a better and more useful commercial resource (Abdullah, *et al.* 2022) [14].

Confidence in economic growth eventually wanes. The economy shrinks when people sell more than they buy. When that stage of the business cycle persists, it turns into a recession. A recession that lasts ten years is considered an economic depression. The only time this occurred was in 1929, during the Great Depres-

sion (Kimberly Amadeo, 2018) [17].

2.2. Theoretical Review

2.2.1. Investment Theories

In the literature, a variety of theories have been proposed to explain how governments and business organizations make investments. Marginal efficiency of capital is one of them, along with the Accelerator theory of investments, the Tobin Q theory of investments, and the Theory of Investments by Accelerator. This study explains these theories separately.

The Marginal Efficiency of the Capital Hypothesis: A Keynesian concept known as the marginal efficiency of capital hypothesis establishes the rate of discount that compares the present value of netting expected revenue from a capital investment to the cost of the investment. The Keynesian theory of investments, which is heavily based on this idea, says that the level of investment is determined by the marginal efficiency of capital in relation to the rate of interest. Investment will be encouraged if the marginal efficiency rate exceeds the interest rate; if not, it will be discouraged. This idea is based on the common mathematical procedure of calculating the present value of a given series of returns discounted at a predetermined discount rate (Encyclopedia of Banking and Finance, 2016) [18].

Investments According to the Accelerator Theory: According to the investment accelerator theory, firms' investment levels rise along with rising demand or income in an economy. A further prediction of the accelerator theory is that firms have two options for satisfying demand when demand levels lead to an excess of supply. Either demand or investors will need to increase investment to keep up with prices in order to reduce prices. According to the theory, the majority of businesses decide to boost production, which boosts their profits. The theory also explains how this growth draws in more investors, which in turn accelerates growth.

The Tobin Q Theory of Investment: The neo-classical theory of investing as well as the accelerator theory both has two fundamental flaws. According to both theories, the adjustment of the capital stock to the desired level is, by implication, instantaneous and complete in each period. To address this, the optimization problem should be given an adjustment cost function (Treadway, 1969) [19]. The Neoclassical and Accelerator theories don't take expectations into account, which is the second issue. Brainard and Tobin (1968) [20] proposed solutions to these problems. The Tobin Q-Theory of Investment was proposed by Tobin in 1969, and it states that investments are made until the market value of assets equals the cost of replacing those assets.

2.2.2. Theoretical Framework

According to the investment accelerator hypothesis, firms' investment levels rise along with rising demand or revenue in an economy. A further prediction of the accelerator theory is that enterprises have two options for satisfying demand

when demand levels lead to an excess of demand. Either demand or investors will need to boost investment to keep up with pricing in order to reduce prices. According to this notion, the majority of businesses decide to boost production, which boosts their profitability. The idea also explains how this growth draws in more investors, which in turn increases growth.

2.3. Empirical Review

Osakure and Ananwud (2017) [21] used time series data from 1981 to 2015, market capitalisation ratio and turnover ratio as stock market indicators, and GDP to measure economic growth in order to analyze the relationship between stock market development and growth. The data was analyzed using the Granger Casualty Analysis model and Autoregressive Distributive Lag (ARDL). The findings demonstrated a long-term and short-term positive but negligible relationship between stock market development and economic growth.

The supply-led theory of finance is the foundation for the link between capital market expansion and economic growth (Levine, 2021) [22]. The supply-led hypothesis holds that the financial sector's advancements dictate the degree of economic development since they meet the funding requirements of technological advancement, which are necessary for actual sector development. However, Bamidele (2019) [23] identifies insufficient levels and mixes of funding as the main impediment to the rapid development of Nigeria's real estate sector and that in order for the sector's working capital and capital investment performance to improve, the financial system must understand, meet, and act quickly on the sector's financing needs.

The choice of funding source is made easier when the funding demands of the actual sector are accurately identified. The capital market, for instance, is better suited for demands related to capital investment, whereas money market operators are best equipped to meet operating capital needs. Unfortunately, it appears that Nigeria's public and private investment financing is biased in favour of deposit money institutions, which has clear effects on the efficiency of monetary policy, the health of the real economy, and the expansion of the capital market (Estrin and Pelletier, 2018) [24].

In his 2010 study, Tachiwou looked at the impact of capital market expansion on regional economic expansion in West Africa. In both the long and short terms, he finds that stock market growth has a favourable impact on economic growth. The relationship between Mauritius' stock market expansion and economic expansion was examined by Nowbutsing (2009) [25]. According to the study, the rise of the stock market has a beneficial long- and short-term influence on economic activity. Using data from the years 1974 to 2002, Bolbol *et al.* (2005) [26] investigated how financial development affected Egypt's economic growth. They discover that the expansion of Egypt's capital market has a considerable impact on economic expansion. The growth-promoting effects of the stock market are likewise supported by a similar study by Beckaert *et al.* (2005) [27]. The capital market was examined by Tharawanji (2007) [28] in terms of the severity of busi-

ness cycles and the likelihood of an economic slump. According to the study, nations with more developed capital markets have less severe business cycle output contractions and are less likely to go through a downturn.

Kolapo and Adaramola (2012) [29] used data from the years 1990 to 2010 to evaluate how the Nigerian capital market affected economic growth. They find that the capital market in Nigeria has a favourable effect on the country's economy. Ogunmuyiwa (2010) [30] used data from the years 1984 to 2005 to analyze the relationship between the Nigerian stock market and economic growth. He discovered that changes in investor confidence and stock market liquidity affect economic growth in Nigeria.

In 2008, Riman *et al.* [31] looked into the relationship between Nigeria's stock market expansion and the country's economic expansion. They discover proof of one-way causality connecting stock market growth and economic expansion. Vazakidis and Adamopoulos (2009) [32] used the VECM method to investigate the relationship between economic growth and stock market development in France. Economic growth, according to the report, is what drives stock market development.

Udegbunam (2002) [33] investigated how Nigeria's stock market and trade openness affected economic growth. He discovers proof that trade openness and the development of the Nigerian stock market have a significant favourable impact on economic growth. Adjasi and Biekpe (2005) [34] used data from several African nations to examine the relationship between stock market development and economic growth. They discover a sizable favourable influence of stock market expansion on economic growth in the chosen nations.

Ex-post facto, design-based quantitative research methodology was used for the investigation. The analysis used time series data for the years 1981 through 2014 for the following variables: GDP (a proxy for economic growth), capital market development, stock value traded, stock market turnover (a proxy for stock market performance), and inflation (a control variable). Using the vector error correction (VECM) analytical tool, research parameters were evaluated using econometric methodology at a 5% level of significance. The direction of causation, if any, between the dependent and independent variables was examined using the Granger causality test.

2.4. Gap in Literature

One of the primary determinants of capital market development, interest rate, is not adequately covered by the earlier research evaluated, which is the gap found in the literature review's inclusion of variable(s). Since it is impossible to ignore the effect of capital market development on economic growth, the reason for going in this study was sparked by the fact that earlier research had overlooked the impact of interest rates on economic growth in Nigeria. In order to fully account for interest rates' impact on the influx of foreign direct investment, the researcher incorporated them into their analysis.

3. Methodology

3.1. Method

This study used the multiple regression analysis technique, specifically the multivariate co-integration and error correction models. This approach will provide a comprehensive investigation into the attributes of the time-series economic data. There are four analytical techniques that are used in the process of co-integration and error correction modelling. Initially, the unit root test was conducted for each variable in order to determine the time series characteristics of the dataset and establish its stationary status. It is important to ascertain the stationarity of variables and acknowledge the transient nature of stocks, which ultimately converge towards their long-term average. Subsequently, the co-integration test is conducted to ascertain the enduring rational characteristics of the data. The third stage involves acquiring the error correction representation for the model, which facilitates the analysis of the dynamic short-run and long-run behaviour of the model. The data used in this study covers the period of 2003 to 2022 and were sourced from the World Development Index (WDI) and Nigerian Exchange Group (NGX).

3.2. Model Specification

To estimate the link between the economic variables, this study will construct a multivariate regression model and employ econometrics. The following describes the fundamental connections between the dependent and independent variables:

$$\text{RGDP} = f\left(\text{MCN}, \text{IR}\right) \tag{i}$$

The mathematical form of the model is specified as:

$$\text{RGDP}_t = \alpha_0 + \alpha_1 \text{MCN}_t + \beta_2 \text{IR}_t \tag{ii}$$

This econometric form of the model is specified as:

$$\text{RGDP}_t = \alpha_0 + \alpha_1 \text{MCN}_t + \beta_2 \text{IR}_t + \mu_t \tag{iii}$$

$$\beta_1 > 0,\ \beta_2 < 0$$

where:

RGDP = Real Gross Domestic Product

MCN = Market Capitalization in Nigeria

IR = Interest Rate

α_0 = Constant

α_1, α_2 = are the relative slope coefficients and partial elasticity of the parameter.

μ_t = stochastic error term

4. Presentation and Analyses of Data

4.1. Empirical Results

4.1.1. Unit Root Result

A unit root test was performed on the data as a preliminary step in examining

the effect of Nigeria's capital market on economic growth. For this, a unit root test based on Augmented Dickey Fuller (ADF) test was used. The test results are summarized in Table 1.

Real gross domestic product (RGDP) and Capital Market Development (MCN) are stationary at first difference, according to the unit root result reported in the table above, whereas interest rate is stationary at level. There is no short-term correlation between time series data if a time series data set lacks stationarity.

4.1.2. Cointegration Test

If two variables have an equilibrium or long-run relationship, they are said to be cointegrated in the context of economics (Gujarati, 2004: p. 822). A unit root test was run on the residuals after applying the Augmented Dickey Fuller (ADF) test for this. Table 2 contains a presentation of the test results.

Table 1. Unit root test analyses result.

VARIABLES	ADF test Statistics	5% critical Value	Order of Integration
RGDP	−5.68792	−0.03941	I (1)
MCN	−6.22458	−0.00629	I (1)
IR	−2.37248	−0.04213	I (0)

Source: Researcher's computation 2023.

Table 2. Cointegration analyses result.

Null Hypothesis: ECT has a unit root				
			t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic			−3.584723	0.0199
Test critical values:	1% level		−2.956845	
	5% level		−2.548216	
	10% level		−1.852146	
*MacKinnon (1996) one-sided p-values.				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECT (−1)	−0.308099	0.130802	−3.633400	0.024934
R-squared	0.147277	Mean dependent var		−18.681999
Adjusted R-squared	0.147277	S. D. dependent var		1242.134300
S. E. of regression	1116.773	Akaike info criterion		17.775208
Sum squared resid	40165536	Schwarz criterion		17.822561
Log likelihood	−292.574	Hannan-Quinn criter.		17.791354
Durbin-Watson stat	1.701624			

Source: Researcher's computation 2023.

The value of the ADF statistics (−3.584723) exceeds the 5% level of significance (−2.548216) in absolute terms, according to the cointegration result shown above. Based on the decision rule, this shows that the null hypotheses were rejected at the 5% level of significance. As a result, it can be assumed that the variables of interest are part of a cointegrating equation or vector. It follows that the variables have a long-term relationship. Hence, the stochastic tendency in the series is cancelled out by the linear combination of these variables. By doing so, erroneous (*i.e.*, meaningless) regression findings will not be produced.

4.1.3. Error Correction Mechanism Test (ECM)

The short run disparity's magnitude is −0.7589, or 75.88, according to Table 3, which also indicates how strong the short run dynamics are. This illustrates an after-shock adjustment to equilibrium that occurs at a comparatively rapid rate.

4.2. Regression Result

Real gross domestic product (the dependent variable in the regression), Capital Market Development (MCN), and interest rate (IR) are the variables taken into account. Based on the regression's findings (Table 4 and Table 5), the estimated coefficient values for α_0, α_1, α_2, and α_3 are 10.12818, 0.18863, and −0.00093, respectively.

4.3. Evaluation of Regression Results

4.3.1. Evaluation Based on Economic Criterion

A priori expectations are used in this subsection to evaluate the regression findings. Each variable coefficient's sign and size are assessed in comparison to what is predicted theoretically. The coefficients of all the variables' signs do not quite match what was anticipated in advance. Real gross domestic product (RGDP) is positively correlated with capital stock market and interest rates.

Table 3. ECM analyses result.

Dependent Variable: D (RGDP)			Method: Least Squares	
Variable	**Coefficient**	**Std. Error**	**t-Statistic**	**Prob.**
D (MCN)	0.163926	0.136558	1.316109	0.262146
IR	71.86556	16.03789	4.912891	0.000112
ECT (−1)	−0.75887	0.191581	4.342862	0.000439
R-squared	0.162443	**Mean dependent var**		1595.68047
Adjusted R-squared	0.106815	**S. D. dependent var**		1570.50088
S. E. of regression	1486.393	**Akaike info criterion**		17.9129489
Sum squared resid	66840270	**Schwarz criterion**		18.0509534
Log likelihood	−301.446	**Hannan-Quinn criter.**		17.9600126
Durbin-Watson stat	1.380327			

Source: Researcher's Computation 2023.

Table 4. The regression analyses result.

Dependent Variable: LOG (RGDP)			Method: Least Squares	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.12818	0.056745	162.7938	0.0000
LOG (MCN)	0.18863	0.008236	22.070046	0.0000
IR	−0.00093	0.002224	−0.403964	0.7046
R-squared	0.931028	Mean dependent var		10.22032
Adjusted R-squared	0.926847	S. D. dependent var		0.535484
S. E. of regression	0.144831	Akaike info criterion		−0.946843
Sum squared resid	0.692209	Schwarz criterion		−0.814883
Log likelihood	20.04318	Hannan-Quinn criter.		−0.900786
F-statistic	244.0480	Durbin-Watson stat		0.180399
Prob (F-statistic)	0.000000			

Source: Researcher's Computation 2023.

Table 5. Result of a-priori test.

VARIABLES	EXPECTED SIGNS	OBSERVED SIGNS	RESULTS
MCN	+VE = 10.12818	+VE = 0.18863	CWES
IR	−VE = 10.12818	−VE = −0.00093	CCWES

CWES—Conform with Expected Sign.

The constant term is predicted to be 10.12818, meaning that the model goes through 10.12818. The real gross domestic product would be 10.12818, according to mathematics, if the independent variables were all zero.

The estimated coefficient for the Capital Market Development (MCN) is 0.18863, which means that, if other variables affecting real gross domestic product are held constant, an increase in the Capital Market Development will typically result in an increase in real gross domestic product of 0.18863 on average. Likewise, the projected coefficient of interest rate (IR) is −0.00093, which means that, when all other factors that affect real gross domestic product are held constant, an increase in the interest rate will result in a −0.00093 decline in real GDP.

4.3.2. Evaluation Based on Statistical Criterion

This section applies the R^2, t-test, and f-test to assess the estimated parameters' statistical reliability. The following tests are run:

1) R^2—Result and Interpretation

The regression result's R^2 is given as 0.931028, the coefficient of determination R^2, infers those changes in interest rates and Capital Market Development account for 93.10% of the variation in real gross domestic product.

2) t-Test Result and Interpretation

According to the distribution table, $t_{0.025,\ 18} = 2.157$

Table 6 displays the outcome of the t-test for significance:

The t-outcome test is shown below, and it is evaluated using both the critical value of 2.157 and the derived t-statistics for each variable.

H_1 is accepted instead of H_0, which is noteworthy (accept H_0).

According to the t-test outcome above, the alternative hypothesis holds true for MCN: t* > ta/2. So, the overall capital market development is statistically significant, and the capital market development has a considerable impact on real GDP.

Because $t^* < t_{a/2}$ for IR allows the null hypothesis to be accepted, the interest rate is not statistically significant, so it has no real economic importance.

3) Result and Interpretation of F-Test of Significance

$V_1 = 3 - 1 = 2$, $V_2 = 18 - 3 = 15$, d.f. = (2, 16) at the 5% level of significance, f0.05 = 3.64, and $f^* = 244.0480$ are the results (Table 7).

Since f* = 244.0480 > f = 0.05, we accept the null hypothesis and come to the conclusion that MCN and IR have a joint effect on real gross domestic product.

4.3.3. Evaluation Based on Econometric Criterion

The autocorrelation, normality, and Granger causality tests are three econometric tests that are utilized in this subsection to assess the outcome of the research model.

1) Result and Interpretation of Autocorrelation Test

The zone with no autocorrelation (positive or negative), according to Durbin-Watson statistics, is shown as follows:

du = 1.73, d* = 0.197669 (4-du) = 4 − 1.73 = 2.27, du = d^* = (4-du) = 4 − 1.73 = 2.27, du = d* = (4-du) = 4 − 1.73 = 2.73

The area is transformed into: 1.73 > 0.197669 < 2.27.

The model has an autocorrelation problem because the calculated Durbin-Watson statistics do not fall within the zero autocorrelation zones (Table 8).

2) Granger Causality Test: Result and Interpretation

The results of the Granger Causality Test (Table 9) indicate that there is a

Table 6. t-Test of significance analyses result.

VARIABLES	t-computed (t*)	t-tabulated ($t_{a/2}$)	Conclusion
MCN	22.070046	2.157	Insignificant
IR	−0.403964	2.157	significant

Source: Researcher's Computation 2023.

Table 7. f-Test of significance analyses result.

Computed f-ratio value	Critical f-ratio value	Result
244.0480	3.64	Statistically significant

Source: Researcher's Computation 2023.

Table 8. Autocorrelation test result.

Du	d*	4-du	Result
1.97	0.197669	2.03	Autocorrelation present

Source: Researcher's Computation 2023.

Table 9. Causality test analyses result.

Pairwise Granger Causality Tests			
Null Hypothesis:	Obs	F-Statistic	Prob.
MCN does not Granger Cause RGDP	18	0.33690	0.8083
RGDP does not Granger Cause MCN		12.1666	0.0004
IR does not Granger Cause RGDP	18	0.85586	0.5120
RGDP does not Granger Cause IR		0.31524	0.8241
IR does not Granger Cause MCN	18	0.43726	0.7392
MCN does not Granger Cause IR		2.55934	0.1257

Source: Researcher's computation 2023.

unidirectional causal relationship between Capital Market Development and real gross domestic product, as well as no causal relationship between the real gross domestic product interest rate in Nigeria and Capital Market Development and interest rate.

4.4. Evaluation of Research Hypotheses

4.4.1. Hypothesis One

Table 3 long-run error correction estimates show that there is a long-run direct relationship between real GDP and capital market development, with a slope coefficient of 0.163926. The association is also seen as statistically significant, with a t-value of 1.316109 is below the critical t value of 2.05 at 5% significant level. This shows that over the long term, a 1% change in capital market development will cause a 16% change in the real GDP. As a result, the null hypothesis that there is no significant relationship between the capital market development and the economic growth in Nigeria is rejected and the alternative hypothesis that there is significant relationship between the capital market development and the economic growth in Nigeria accepted.

4.4.2. Hypothesis Two

According to the t-test results, the alternative hypothesis that the impact of capital market development on the economic growth in Nigeria is significant is accepted, but the null hypothesis that the impact of capital market development on the economic growth in Nigeria is not significant is rejected.

4.4.3. Hypothesis Three

The results of the Granger causality test show a unidirectional causal relation-

ship between capital market development and real gross domestic product, the null hypothesis of no causal significant relationship between the capital market development and the economic growth in Nigeria is accepted, while the alternative hypothesis of causal significant relationship between the capital market development and the economic growth in Nigeria is rejected.

4.5. Implication of the Results

The study's findings show that while interest rates have a limited impact on economic growth in Nigeria, capital market development has a significant impact on it. This means that while interest rates are not significant factors in determining economic growth in Nigeria, capital market development is an important factor. Also, there is a positive correlation between capital market development and economic growth that is in favour of the latter, suggesting that Nigeria's economic growth will accelerate as capital market development rises.

Given that, it is a well-established macroeconomic theory that an increase in capital market development will foster economic growth in any economy. This is consistent with the researcher prior anticipation. On the other hand, there is no discernible relationship between interest rates and Nigeria's economic growth, and as a result, there is no discernible relationship between interest rates and economic growth, which suggests that interest rates are not important variables for determining economic growth.

The results also reveal that there is no causal relationship between the interest rate on the real gross domestic product in Nigeria and the capital market development, and that there is only one-way causal relationship between these two variables. This suggests that past RGDP and IR values, as well as past economic growth values, cannot be used to predict future capital market development as a whole or future RGDP and IR values for Nigeria.

5. Summary of Findings, Conclusion and Recommendation

5.1. Summary of Findings

A multiple regression model was created in order to analyze this study's data and determine whether the capital market had any effect on economic growth between 2003 and 2022. The interest rate is one of the key factors the model takes into account that affects the value of the Nigerian stock market. The study's conclusions demonstrate a positive correlation between capital market development and Nigeria's economic growth across the study's time span, whereas a negative correlation is shown between interest rates and that country's economic growth. The results also show that while interest rates have little impact on Nigeria's economic growth, capital market development has a significant impact on real gross domestic product and, thus, on economic growth in Nigeria. The results of the Granger causality test show that there is a unidirectional causal relationship between capital market development and real gross domestic product, but no causal relationship exists between real gross domestic product interest rate in

Nigeria or between capital market development and interest rate.

5.2. Conclusion

In light of the foregoing, the researcher can therefore draw the conclusion that capital market development positively affects Nigeria's economic growth, whereas the same cannot be said of interest rates. The study also came to the conclusion that while interest rates had little impact on Nigeria's economic growth, capital market development had a considerable impact.

5.3. Recommendations

Based on the study's findings, the researcher made the following recommendations:

1) The Securities and Exchange Commission (SEC), which is the regulator in charge of the capital markets, should be more flexible and open to new innovative ideas without putting investor interests and investment safety (protections) at risk or making the market less effective and unattractive to discerning investors.

2) In addition, the regulatory agencies should sensitize Nigerian investors to engage in dynamic and speculative stock marketing activities rather than perpetually holding unto their investments.

3) The government should increase its investment in infrastructure development and which by extension will lead to improvements in the nation's growth pattern.

4) The government through its agencies should introduce and put into effect policies that will raise the level and size of market capitalisation in the Nigerian capital market. This will increase the amount of funds available for desired investments, which will further lead to increase in the country's productivity.

5) Besides mere regulatory measures channeled towards encouraging and motivating investors, punitive actions should be meted out for infractions and to stop frauds and other wrongdoings that can encroach on investor confidence.

6) Policies should be formulated to broaden the investment alternatives available to all market participants. Investors should be encouraged by these policy-driven incentives. Productivity will also rise when investors has benefited from these policies.

Conflicts of Interest

The authors declare no conflicts of interest.

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