



Capital Market and Economic Growth in Nigeria

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Abstract

The paper evaluated the effect of capital market on economic growth in Nigeria. Data were collected from CBN statistical bulletin for twenty two (22) years. Expost facto design was employed for the study. The data were subjected to unit root test and ordinary least square multiple regression analysis were used for the analysis. The findings showed that market capitalization (MTC) had positive significant effect on GDP, all share index (ASI) had negative significant effect on GDP and new issue funds (NIF) had no significant effect on GDP at 5 percent level of significance during the period of the study. Johansen co-integration test was also conducted to check their long run relationship. Based on the findings, we recommend that government macroeconomic policy should incorporate means of sustaining the market capitalization, improving all share index and increase new issue securities in order to grow the economy.

Keywords: Economic growth, Gross domestic product, Capital market, Market capitalization, all share index, New issue funds etc.

INTRODUCTION

Capital market is a market for long term fund (Nzotta 2004; Ihenetu 2008). It is segmented into security market, non security market and derivative market (Ihenetu & Isoboye 2021). Non security market consists of institutional and non-institutional market (Ihenetu 2021). Institutional market are development banks, finance company that grant long term funds whereas non institutional market are informal institution that operates in long term basis (Mbat 2000).

Derivative market though not well developed in Nigeria transfer risk to those who can bear it (Akujobi 2004). It consists of swap, options, futures and forward (Akujobi 2004). They are assets which are based upon other asset (Nzotta 2004).

Security market is the most organize part of capital market (Mbat 2000). It is divided into primary and secondary market. Primary market deals with new issued securities that are coming to the market for the first time. In primary market, fresh capitals are raised for expansion, re-invigoration, investment etc. examples of the securities traded in the primary market are equity security, corporate bonds, government/development bonds etc (Ihenetu & Isoboye 2021).

Security market handles already traded securities which the owner resale without the funds going back to the company that originate it. These securities are resold in the Nigeria stock exchange through the help of brokers. Nigeria capital market is measured by market capitalization, all share index, value of deals, new issued funds, volume of deals etc. the funds raised from both primary and secondary market help to develop the economy and thus economic growth and development.

Economic growth is the increase in income, goods and services of any country over a given period of time (Sanusi 2011). Economic growth is measured by many variables but most common among them is the gross domestic products (GDP). Percentage increase in GDP is the indication that the economy is growing where as percentage decrease showed that economy is sliding. Gross domestic product itself is the value of goods and services produce by the citizens and foreigners operating business in the country at a particular period of time (CBN 2020).

Studies have been conducted by both international and national and has dealt extensively on the effect of capital market on economic growth using market capitalization, all share index, value of deals, volume of deals etc but to the best of my knowledge, none has used new issued funds as a variable and also the study extend to 2020 which is the most recent data. This therefore constitutes a gap which the researchers contribute to human knowledge.

Objectives of the Study

The main objective of the study is to examine the effect of capital market on economic growth in Nigeria. Other specific objectives include:

1. To determine the effect of market capitalization on gross domestic product in Nigeria.
2. To examine the effect of all share index on gross domestic product in Nigeria.
3. To ascertain the effect of new issued funds on gross domestic product in Nigeria.

Conceptual Framework

The concept relevant to the study shall be thoroughly examined.

1. **Economic Growth** - The International Monetary Fund (2009) and CBN (2020) stated that economic growth is the increase in the amount of the goods and services produced in an economy over time. It is conventionally measured as the percent rate of increase in real gross domestic product, or real GDP (RGDP). Growth is usually calculated in real term i.e. inflation- adjusted terms, in order to net out the effect of inflation on the price of the goods and services produced. The drivers of economic growth in an economy as posited by Dwivedi (2008) are the quality of the labour force, natural resources, capital formation, technological development and political and social factors while Riley (2012) noted that the determinants are growth in physical capital stock; growth in the size of active labour force available for production; growth in the quality of human capital; technological progress and innovation; institutions including stable democracy, maintaining rule of law and macroeconomic stability; and rising demand for goods and services either led by domestic demand or from external trade.
2. **Goss Domestic Product** - Gross Domestic Product is the naira value of goods and services produced in Nigeria during a time period irrespective of the nationality of the individuals who produced the goods or services. It is calculated without making deductions for depreciations. GDP at current basic prices is simply nominal GDP equals GDP less indirect taxes net of subsidies (CBN Statistical bulletin, 2007). The Gross Domestic Product is a widely acknowledged measure of economic growth and is used in this paper as a proxy for Nigerian economic growth.
3. **Capital Market** - Capital market is a market where long term funds are sourced. It is divided into non security market, security market and derivative market. Capital market provides a vehicle for real economic growth and development (Nzotta 2004; Ihenetu 2021, Mbat 2000).
4. **Security market** – This is a market where securities such as shares, bonds, derivatives etc are traded. It is divided into primary market and secondary market (Ihenetu 2021).
5. **All share indexes** is a compilation depicting the average current market value of common stock as at a particular date relative to their average market value at an earlier base period. It is computed by the stock process and determines the aggregate market capitalization for all securities listed on the exchange. The model is given as current market value divided by base market value (Nzotta 2004).
6. **New issue funds** – Money raised from new issued securities. The initial public offer of any corporate organisation or federal government bonds which are coming to the market for the first time. These are primary market assets. This market helps in raising fresh capital for restoration, expansion, investment etc. The securities traded in this market are equity, federal government bonds, corporate bonds etc.
7. **Market capitalization** - This is the market value of all the publicly traded securities in the market. In Nigeria, it is the total value of government securities, corporate bonds and equities. The total value of the traded securities in a day gives us the daily market capitalization. When it is accumulated annually, then it becomes annual market capitalization. The higher the value of market capitalization, the better for the economy.

Theoretical Framework

1. Capital Market Theory

Capital market theory was all about the theory of diversification developed by Harry Markowitz in 1952. Markowitz came up with the theory of portfolio selection which is concern with the trade-off between risk and return. He said a rational investor should diversify his assets in order to avoid being faced with the same misfortune at the same time. He should build his portfolio in a way that while some will be negative, others will be positive. According to him, it is not enough to have different assets in different industries without knowing

the risk, the return and the coefficient of correlation. The whole essence of Markowitz theory is based on rationality of the investor and efficient operation of capital market. The investors in the market have to be rational in raising capital either for business expansion or infrastructural development as in the case of government.

2. The Classical Theory of Economic Growth

When Adam Smith wrote his famous 1776 treatise called “An Inquiry into Nature and Causes of the Wealth of Nations”. Some academics pointed out that he was involved predominantly with economic growth. Smith hypothesized a supply-side-determined model of growth. According to him, population growth was endogenous—it depends on the accessibility to life sustaining needs and it has the capacity for the increasing workforce. Investment was also endogenous—established by the rate of savings (mostly by capitalists); land growth was reliant on invasion of new lands (e.g. Colonisation) or technological enhancement of fertility of old lands. Technological advancements could also add to overall growth. Smith's renowned thesis that the division of labour (specialisation) enhances growth was an essential argument. Smith also saw developments in machinery and international trade as engine of growth as they aided further specialization.

Research Design

According to Ihenetu (2008), research design is a blue print, framework for collecting and analyzing data. The researcher employed ex post facto design. The fact that the data was original from CBN annual report and adopted for the study necessitated the choice of the design. Purposive sampling method was adopted for the work. The sample size is 22 years (1999-2020). The researchers applied unit root test to stationarize the data and the ordinary least square regression analysis was used to analyze the data.

The mathematical model is given as:

$$GDP = f(MTC, ASI, NIF) \text{ ----- equ (1)}$$

This functional model was trans- modified into the econometric form by the introduction of the constant α , β and error term μ as:

$$GDP = \alpha + \beta_1 MTC + \beta_2 ASI + \beta_3 NIF + \mu \text{ ----- equ (2)}$$

The variables were logged and model was transformed to:

$$\text{Log (GDP)} = \alpha + \beta_1 \text{Log (MTC)} + \beta_2 \text{Log (ASI)} + \beta_3 \text{Log (NIF)} + \mu \text{ ----- equ (3)}$$

Where GDP = Gross Domestic Product

MTC = Market Capitalization

ASI = All Share Index

NIF = New Issued Funds

Log = Logarithm

α = constant variable

$\beta_1, \beta_2, \beta_3$, = Coefficient of independent variables (slope)

μ = error term.

Data Presentation and Analysis

The data used for the work is presented below:

Table-1: Gross Domestic Product (GDP), Market Capitalization (MTC), All Share Index (ASI) and New Issued Funds (NIF) in billions (1999 – 2020).

Years	GDP	MTC	ASI	NIF
1999	5,482.35	300.00	5266.40	11.93
2000	7,062.75	472.30	8111.00	18.26
2001	8,234.49	662.50	10963.10	33.43
2002	11,501.45	764.90	12137.70	61.51
2003	13,556.97	1359.30	20128.94	152.65
2004	18,124.06	2112.50	23844.50	205.72
2005	23,121.88	2900.06	24085.80	591.01
2006	30,375.18	5120.90	33189.30	729.64
2007	34,675.94	13181.69	57990.20	1942.80

2008	39,954.21	9562.97	31450.78	2067.90
2009	43,461.46	7030.84	20827.17	1131.92
2010	55,469.35	9918.21	24770.52	1584.82
2011	63,713.36	10275.34	20730.63	2087.15
2012	72,599.63	14800.94	28078.81	759.96
2013	81,009.96	19077.42	41329.19	1343.59
2014	90,136.98	16875.10	34657.15	1532.13
2015	95,177.74	17003.39	28642.25	1211.02
2016	102,575.42	16185.73	26874.62	1484.51
2017	114,899.25	21128.90	38243.19	2053.78
2018	129,086.91	21904.04	31430.50	1586.43
2019	145,639.14	25890.22	26842.07	2746.24
2020	154,252.32	38589.58	40270.72	2811.34

Source: CBN 2020 and SEC Annual Report and Account 2020

Apriori expectation: A positive significant effect is expected between capital market variables such as MTC, ASI, NIF and economic growth (GDP).

The data were analyzed to achieve the stated objectives. In all, three hypotheses were tested for the study. Unit root and ordinary least square multiple regressions was used for the analysis. The result of the analyses is summarizing below:

Table-2: Stationarity (Unit Root) Test Results

Variables	Level	1 st difference	Order of Integration	Remark
DGDP	-3.099823	-	I(0)	Stationary
DMTC	-2.180881	-3.701757	I(1)	Stationary
DASI	-3.030231	-	I(0)	Stationary
DNIF	-2.775851	-4.462609	I(1)	Stationary

Significant at 5% level, ADF test > Critical Value, then the variable is stationary

Source: Extracts from E-Views 9 Output

The table above presents the unit root stationarity test results with the outcomes for the utilized information of maximum of lags 3 with intercept. The summary of the results are integrated in order I(0) and I(1). The ADF test statistic are higher when compared with all their critical values at 5%. As such, they are deemed fit for utilization and subsequent estimation.

Table-3: Result of ordinary least square analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.958845	1.144361	6.954840	0.0000
MTC	0.937285	0.085495	10.96303	0.0000
ASI	-0.513271	0.138490	-3.706189	0.0016
NIF	-0.054071	0.079685	-0.678561	0.5060
R-squared	0.979703	Mean dependent var		10.60926
Adjusted R-squared	0.976321	S.D. dependent var		1.038736
S.E. of regression	0.159842	Akaike info criterion		-0.666300
Sum squared resid	0.459889	Schwarz criterion		-0.467929
Log likelihood	11.32930	Hannan-Quinn criter.		-0.619570
F-statistic	289.6163	Durbin-Watson stat		0.837994
Prob(F-statistic)	0.000000			

Source: Eview version 9

From table 3, MTC, ASI and NIF are the independent variables whereas the GDP is the dependent variable. The result showed that market capitalization had positive significant effect on gross domestic product in Nigeria under the

period of the study. The probability of the t-statistic 0.0000 is less than 0.05 power of test. The coefficient 0.9373 showed positive signifying that 1% increase in market capitalization increases the gross domestic product by N0.94. This is in line with our apriori expectation.

Secondly, the analysis also showed that all share index had negative significant effect on gross domestic product in Nigeria. The probability of t-statistic 0.0016 is less than 0.05 power of test. The coefficient -0.513271 showed that 1% increase in all share index decreases the gross domestic product by N0.51. This is against our apriori expectation. This could be as a result of the lock down and sit at home that crippled businesses in the whole world including Nigeria.

Thirdly, the analysis showed that new issued fund had no significant effect on gross domestic product in Nigeria. The probability of t-statistic 0.5060 is more than 0.05 power of test. The coefficient -0.054071 showed that 1% increase in new issued fund decreases the gross domestic product by N0.05. This is against our apriori expectation.

The adjusted r^2 0.98 implies that variation in all the explanatory variables account for 98% of the variation in gross domestic product. F – Statistic measures the overall significance of the model. The F-statistic is 289.6163 and the probability of F-statistic 0.0000 is far less than 0.05 power of test. This means that capital market had positive and significant effect on economic growth in Nigeria.

Table-4: Johansen co-integration result

Unrestricted Cointegration Rank Test (Trace)				
Hypothesized		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.822920	72.00102	47.85613	0.0001
At most 1 *	0.539331	37.37795	29.79707	0.0055
At most 2 *	0.462760	21.87644	15.49471	0.0048
At most 3 *	0.376566	9.450238	3.841466	0.0021
Trace test indicates 4 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				
Unrestricted Cointegration Rank Test (Maximum Eigenvalue)				
Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.822920	34.62307	27.58434	0.0053
At most 1	0.539331	15.50150	21.13162	0.2553
At most 2	0.462760	12.42621	14.26460	0.0957
At most 3 *	0.376566	9.450238	3.841466	0.0021
Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level				
* denotes rejection of the hypothesis at the 0.05 level				
**MacKinnon-Haug-Michelis (1999) p-values				

Source: Eview version 9

The Johansen co-integration result showed that there is a long run relationship. The trace statistic values indicated that they all have long run relationship and Max-Eigen Statistic values indicated that two (2) out of the four (4) are higher than their corresponding critical values. Therefore, there is a long run relationship and the error of the short run could be corrected at the long run.

Table-5: Error correction Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	9.912283	0.992989	9.982272	0.0000
MTC	0.940917	0.064614	14.56221	0.0000
ASI	-0.729356	0.117585	-6.202792	0.0000
NIF	-0.021582	0.060779	-0.355081	0.7272
ECM(-1)	-0.689025	0.188015	3.664726	0.0021
R-squared	0.987781	Mean dependent var		10.70450
Adjusted R-squared	0.984726	S.D. dependent var		0.960939
S.E. of regression	0.118762	Akaike info criterion		-1.219134
Sum squared resid	0.225671	Schwarz criterion		-0.970438

Log likelihood	17.80091	Hannan-Quinn criter.	-1.165161
F-statistic	323.3459	Durbin-Watson stat	1.822561
Prob(F-statistic)	0.000000		

Source: Review version 8

From table 5 above, the ECM coefficient is 0.6890 with the expected. It indicates that approximately 68.9% of the disequilibrium in gross domestic product (GDP) in Nigeria is set off within the year as a result of the distortions in the explanatory variables. The Adjusted (R^2) 0.984726 indicates that about 98.47% of the variations in gross domestic product in the long run is captured by variations in the explanatory variables. F – Statistic measures the overall significance of the model. The F-statistic is 323.3459 and the probability of F-statistic 0.0000 is far less than 0.05 power of test. This means that capital market had positive and significant effect on economic growth in Nigeria in the long run. Durbin Watson 1.822561 indicated the absence of autocorrelation.

CONCLUSION AND RECOMMENDATIONS

From the result of the analysis, it is very apparent that capital market had significant effect on economic growth in Nigeria within the period under consideration; therefore, we recommend that government macroeconomic policy should incorporate means of sustaining the market capitalization, improving all share index and increase new issue securities in order to grow the economy.

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