

## Capital Market Operations and Economic Growth in Nigeria (1985 -2011)

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### Abstract

*Interaction between capital market operations and economic growth has become a major focus of scholars in recent times due to the nature of funds obtained from the market. This is because economic growth is a long-term phenomenon and the capital market is also a long-term fund market. It therefore becomes necessary to study the nexus between the two as it affects the Nigerian economy. In this study, the Gross domestic Product is regressed on the Capital market variables (Market capitalization, Number of Dealings and All share indexes) to check the long run effect of capital market activities on the growth of the economy. The study records a positive relationship between capital market operations and economic performance in the short-run with all the variables showing positive relationships with the Gross domestic product. The long run relationship tested by Johansen co-integration test also reveals a long term relationship between the explained and explanatory variables. However, market capitalization and number of dealing show a negative impact on the economic growth while the all share index shows a positive impact on the economic growth.. The study concludes the deviation in the long –run is due to sharp practices in the Nigerian capital market and recommends a total overhauling coupled with strict regulation as the possible solutions.*

**Key Words:** Economic growth, Market Capitalization, Capital market, All share index, Number of Dealings.

### 1.0. Introduction

Economic growth in a modern economy hinges on an efficient financial sector that pools domestic savings and mobilizes foreign capital for productive investments. The capital market of any nation is believed to be efficiency if it has the capability and capacity to pool and channels the required resources for economic growth and industrials development. The importance of capital market as an efficient channel of financial intermediation has been well noted by researchers, academicians, and policy makers as a primary determinant of the economic growth of a country, both developed and developing. Underdeveloped or poorly functioning capital markets typically are illiquid and expensive which deters foreign investors. Furthermore, illiquid and high transactions costs also hinder the capital raising efforts of larger domestic enterprises and may push them to foreign markets.

Recent theoretical literature on financial development and growth identifies three fundamental channels through which capital markets and economic growth may be linked. First, capital market development increases the proportion of savings that is funneled to investments; second, capital market development may change the savings rate and hence, affect investments; third, capital market development increases the efficiency of capital allocation. In compliance to these channels, introducing an efficient capital market to link between the net savers (households) and net investors (entrepreneurs) results in reduction of transactions costs associated with funneling savings, making the household savings highly liquid, enabling selection of efficient investments by gathering information on investment returns efficiently, and providing markets for diversification of risks by households and corporate.

If the capital markets are not efficient, the public offering largely disappears as a result of high transaction costs or the uncertainty of getting a fair price in the stock market. Thus, inefficient capital markets may reduce the incentive to enter new ventures, reducing overall long-term productivity of the economy. On the other hand, an efficient capital market reduces the transaction costs of trading the ownership of the physical assets and thereby paves the way for the emergence of an optimal ownership structure.

Thus, efficient and liquid capital markets provide avenues for the effective utilization of funds for long-term investment purposes by mobilizing them from the surplus spending economic units to the deficit spending economic units (Ekineh, 1996). In short, an efficient capital market is essential for long-term growth in capital formation (Osaze, 2000). Osaze argues that a nation requires a lot of local and foreign investments to attain sustainable economic growth and development. The capital market provides a means through which this is made possible. In addition, capital markets provide the opportunities for the purchase and sale of existing securities among investors thereby encouraging the populace to invest in securities and fostering economic growth (Ewah, *et al* 2009). Therefore, efficiently functioning capital market affects liquidity, acquisition of information about firms, risk diversification, savings mobilization and corporate control. The successful operations of industrial sectors of any nation hinges on the efficiency of capital market, the potential and the possibility of translating into economic growth.

## **2.0. Literature Review**

There exist a numerous number of literatures concerning the role of capital market in the process of economic growth of a country. The most important and systematic early contribution on financial and economic development came from Joseph Schumpeter. Schumpeter (1912) contended that financial development causes economic development that financial markets promote economic growth by funding entrepreneurs and in particular by channeling capital to the entrepreneurs with high return projects. However, a systematic approach to the issue has been addressed with the empirical study by Goldsmith (1969). He demonstrated a positive correlation between financial development (measured by the value of financial intermediary assets relative to GNP) and economic growth. But the seminal work of McKinnon (1973) and Shaw (1973) brought to the forefront the role of financial development in promoting economic growth. Their argument was that the financial liberalization and deepening in countries that suffer from 'shallow finance' or 'financial repression' are critically important to the economic growth of these countries. Ever since this pioneering contribution, the relationship between economic growth and financial development remained an important issue of debate among academicians and policy makers (De Gregorio and Guidotti, 1995). There is now a growing theoretical and empirical body of literature on how financial intermediation mobilizes savings, allocates resources, diversifies risks, and contributes to economic growth (Greenwood and Jovanovic, 1990).

Oke and Adeusi (2012) stated that the Nigeria capital market provides the necessary lubricant that keeps turning the wheel of the economy. It is not only providing the funds to projects of best returns to fund owners, but rather propelling of the economy through increased stock of capital of the country. This allocation function is critical in determining the overall growth of the economy. Nyong (1997) developed an aggregate index of capital market development and used it to determine its relationship with long-run economic growth in Nigeria and found that the capital market development is negatively and significantly correlated with the long-run growth in Nigeria. Osaze (2009) sees the capital market as a driver of any economy to growth and development because it is essential for long-term growth capital formation. It is crucial in the mobilization of savings and channeling of such funds i.e. savings to profitable self-liquidating investment. Therefore, the Nigeria stock market provides the necessary lubricant that keeps turning the wheel of the economy

Abu (2009) examines whether stock market development raises economic growth in Nigeria, by employing the error correction approach. The econometric results therein indicate that stock market development (market capitalization GDP ratio) increases economic growth. He however, recommended the removal of impediment to stock market development which include tax, legal and regulatory barriers, development of the nation's infrastructure to create enabling environment where business can thrive, employment policies that will increase the productivity and efficiency of firms as well as encouraging of the Nigerian Securities and Exchange Commission to facilitate the growth of the market, restore the confidence of stock market participants and safeguard the interest of shareholders by checking sharp practices of market operators. Akpeti *et al* (2012) they examined the impact of the capital market in the development of the Nigerian economy with the objective of identifying the importance of the capital market using time series data span from 1992 to 2007 and the Ordinary Least Square and Cochrane-Orcus iterative methods were used to analyze the data. It was discovered that the capital market has not contributed positively to the development of the Nigerian economy. However, there is a positive correlation between the rate of transactions in the capital market and the development of Nigerian economy.

It is recommended that stringent requirement for entry into the capital market should be relaxed and adequate publicity should be given to the activity at the capital market, it is believed that when these recommendations are implemented, the impact of capital market on the economy will be positive. Mushra et al (2010) in their study examined the impact of capital market efficiency on economic growth in India using the time series data on market capitalization, total market turnover and stock price index over the period spanning from the first quarter of 1991 to the first quarter of 2010. The application of multiple regression model shows that the capital market in India has the potential of contributing to the economic growth of the country. This is as a result of high market capitalization and relatively high market liquidity. Thus, the market organizations and regulations should be such that large number of domestic as well as foreign investors enters the market with huge listings, investments, and trading so that the very objective of optimal allocation of economic resources for the sustainable growth of the country can be ensured.

Nyong (2003) empirically examined the effect of capital market operations on Nigeria economy. In line with the objectives of this study, secondary data were obtained from central bank of Nigeria statistical bulletin covering the period of 1990 to 2010. In concluding the analysis, multiple regressions were employed. Following the outcome of this study, it is therefore concluded that the Nigerian capital market has tremendous influence on the growth rate of the economy and the performance in terms of capital mobilization accessibility to savers and users of funds with the aim of mobilization and allocation of productive resources to aid national economic development. It is recommended that the government should supervise the capital market to ensure orderly, fair and equitable dealings in shares and stocks and to forestall illegal deals by privilege insiders at the expense of innocent and often uninformed investors.

Kolapo and Adaramola (2012) in their study examining the impact of capital market on economic growth from the period of 1999 to 2010. They aligned their finding with Ariyo and Adelegan (2005) and Ewah et al. (2009) who found that the capital market in Nigeria has the potentials to induce growth but has not contributed significantly to economic growth of Nigeria due to low market capitalization, small market size, few listed companies, low volume of transactions, illiquidity among others. Also Demirguc-Kunt and Asli (1996) found no hard evidence but strong positive relationship between stock market and economic growth which is contrary to the literatures that there is positive relationship between stock market and economic growth. Afees and Kazeem (2010) critically and empirically examined the casual linkage between stock market and economic growth in Nigeria between 1970 and 2004. The indicator of the stock market development used are market capitalization ratio, total value traded ratio and turnover ratio while the growth rate of gross domestic product is used as proxy for economic growth, using the granger-causality (GC) test, the empirical evidence obtained from the estimation process suggests a bidirectional causality between turnover ratio and economic growth, a unidirectional relationship from market capitalization to economic growth and no causal linkage between total value traded. The result of the causality test is sensitive to the choice of the variables used as proxy for stock (capital) market. Overall, the result of the capital G.C test suggested that capital market drive economic growth.

### 3.0. Methodology

This study employed secondary data obtainable from the Nigerian stock exchange (NSE) fact book, security and exchange commission (SEC) market bulletin and Central Bank of Nigeria (CBN) statistical bulletin, handbook journal from library, published and unpublished manual, previous studies carried out related to this study, and also some relevant text books were also consulted. Furthermore, this research work employs Johansen co-integration method/model as econometric technique in estimating the relationship between capital market operation and manufacturing and agricultural sectors growth in Nigeria. The time series of data cover the period of 1985 to 2011.

For the purpose of this study, certain modification will be made to Sule and Momoh (2009) based their model on Demirguc-kunt and Maksimovic (1998) theory which was modified to measure the impact of stock market on economic growth;

$$GDP = F(MCAP, NOD, ASI, U) \dots \dots \dots i$$

Where; GDP is Gross Domestic product, MCAP is Market Capitalization, NOD is Number of Dealing, ASI is All Shares Index and  $\mu$  measures the stochastic variable (Error term)

$$GDP = \beta + \alpha MCAP + \lambda NOD + \theta ASI + \mu \dots\dots\dots ii$$

Where  $\beta, \lambda, \alpha,$  and  $\theta$  are coefficient of estimates

The above equation can be stated in it natural log as in below

$$\text{Log}(GDP) = \beta + \alpha \log MCAP + \lambda \log NOD + \theta \log ASI + \mu \dots\dots\dots iii$$

It can also be stated in t form as in time series form as in below

$$\text{Log}GDP_t = \beta + \alpha \log(MCAP)_t + \lambda \log(NOD)_t + \theta \log(ASI)_t + \mu \dots\dots\dots iv$$

It can also be stated in co-integration form as in below

$$\begin{aligned} \delta \log(GDP)_t = & \beta + \sum_{i=0}^n \alpha \log(MCAP)_{t-i} + \beta + \sum_{i=0}^n \lambda \log(NOD)_{t-i} + \beta + \sum_{i=0}^n \theta \log(ASI)_{t-i} \\ & + \beta + \sum_{i=0}^n (ECM)_{t-i} + \sum t \dots\dots\dots v \end{aligned}$$

**4.0. Data Analysis, Results and Findings**

The analytical data adopted in the analysis of this study spans between 1985 through 2011 and are presented in Table A in the appendix. In the respect of the objective of the study to establish the short-run and long-run relationship between variables, the ordinary least square result showing the short-run relationship is presented in the table below:

**Table 1.1: Ordinary Least Square (OLS) Result**

Dependent Variable	Coefficient of Estimates	T- Statistics	Probability Value
MCAP	0.214768	3.022082	0.0061
NOD	0.103557	1.835993	0.0793
ASI	0.659838	9.363042	0.0000
C	6.167373	13.60014	0.0000

$$R^2 = 0.991774 \quad \text{Adjusted } R^2 = 0.990701 \quad F\text{-STAT} = 924.3038 \quad DW\text{-STAT} = 1.770057$$

**Sources:** - OLS result computed (See appendix)

It is evident from above that each of the regressor’s shows significance on the regresand with their respective P-value giving values less than ten percent. The implication of this is that each of the variables is satisfactory able to explain the statistical behavior of the regressand, hence, meaning that the behavior of the Nigerian economy can satisfactorily be explained by the behavior of the capital market player proxied by the variables. From the foregoing, the constant coefficient shows a value of 6.167373, implying that the hold constant of all regressors will result into 6.167373units increase in the gross domestic product of the Nigerian economy. Meanwhile it is important to note here that all regressors, show positivity on the explained variable. All Share Index (ASI) gave a value of 0.659838. This implies 0.659838units increase in the value of Nigeria’s Gross Domestic Product (GDP) if there is an increase in the value of All Share Index (ASI). Number of Deals (NOD) gave a coefficient of 0.103557, implying that an increase in the value of while Market capitalization (MCAP) gave a value of 0.214768. The implication of this is that an increase in the Number of Deals will bring about 0.103557units increase in the value of GDP of Nigeria.

Perhaps, in the test of stationarity of the variables that adopt the ADF unit root in it test observe all variables including the regressand to show stationarity at first differencing. The implication of this is that each of the variables will adjust to equilibrium only after integrating at the first order. The summary of the Augmented Dickey Fuller (ADF) test of the unit root is presented in the Table below.

**Table 1.2: Summary of Order of Intergration**

Variables	Order of Integration
<b>GDP</b>	<b>I(1)</b>
<b>MCAP</b>	<b>I(1)</b>
<b>NOD</b>	<b>I(1)</b>
<b>ASI</b>	<b>I(1)</b>

The study further presents the summary of the result of the ADF test equation carried out on each of the variables is presented in Table 1.3 alongside their respective level of stationarity and lagged period and the corresponding co-efficient of multiple determination ( $R^2$ ).

**Table 1.3: ADF Test Equation**

Variables	Coefficients	Standard Error	T-Statistics	Probability	$R^2$
D(GDP(-1))	-0.953998	0.286180	-3.333554	0.0032	0.455351
D(GDP(-1),2)	0.075511	0.205670	0.367147	0.7172	
C	0.232835	0.080308	2.899272	0.0086	
D(MCAP(-1))	-1.504711	0.366973	-4.100338	0.0005	0.449726
D(MCAP(-1),2)	0.868799	0.284628	3.052407	0.0061	
C	0.528370	0.139414	3.789932	0.0011	
D(NOD(-1))	-1.038885	0.334882	-3.102244	0.0054	0.630126
D(NOD(-1),2)	-0.148045	0.216326	-0.684361	0.5012	
C	0.253456	0.148600	1.705630	0.1028	
D(ASI(-1))	-0.892716	0.256122	-3.485505	0.0022	0.388653
D(ASI(-1),2)	0.261969	0.213972	1.224315	0.2344	
C	0.183035	0.083610	2.189151	0.0400	

*Source:* - Unit Root Test result Computed

The Johansenco-integration equation test is used in the determination of the long-run relationship that exists between variables. It is in line with the proposition of the Johansen in 1991. The table below shows the result of the Johansen co-integration test obtained from the co-integration result as duly presented in the appendix.

Eigen Value	Likelihood Ratio	5% Critical Value	1% Critical Value	Hypothesized No of ( $C_e$ )
0.785160	84.31383	47.21	54.46	None **
0.686444	45.86725	29.68	35.65	At most 1 **
0.390355	16.87284	15.41	20.04	At most 2 *
0.164759	4.500885	3.76	6.65	At most 3 *

\*(\*\*) denotes rejection of hypothesis @ 5%(1%) Significant level

L.R. test indicates 4(2) co-integrating equation @ 5% (1%) significant level

*Source:* - Co-integration result Computed (See table E in the Appendix)

The table above shows that four long-run relationship (co-integration) exist among Gross domestic product and the capital market variables; Market capitalization (MCAP), number of deals (NOD) and All share index (ASI). The equation with the lowest log-likelihood ratio as posited by Johansen is the first equation with the corresponding value of 80.20625. It is therefore presented below:

$$\text{GDP} = -0.689095_{\text{MCAP}} - 1.093515_{\text{NOD}} + 0.238787_{\text{ASI}} - 11.82652$$

(0.48462)      (0.77189)      (0.77208)

*Note:* Standard error statistics are given in parenthesis

In the long-run analysis, four co-integrating nexus was established between the variables implying the rejection of the “no co-integration” among variables.

The constant parameter gave a coefficient of -11.82652. This means that the holding constant of all regressors will result into 11.82652 units decrease in the value of Gross Domestic Products (GDP) in the long-run. All explanatory variables also moved in the same direction with the regressand, except for All Share Index (ASI) which showed otherwise. Market Capitalization (MCAP) shows a negative coefficient of -0.689095, implying that an increase in the market capitalization in the Nigerian stock exchange will result into 0.689095 units reduction in the level of economic performance (GDP). Also in the same vein, Number of deals also shows a negative coefficient of -1.09315 with the implication of 1.09315 unit decrease in the value of GDP if there occur a unit increase in the Number of deals (NOD) in the exchange. Meanwhile, the All share Index which shows a contrary opinion gave a coefficient of 0.238787, implying that a unit increase in the net value of ASI is expected to bring about 0.238787 units increase in the value of Gross domestic product of the country.

The long-run adjustment that is shown by the error correction mechanism shows that gross domestic product will adjust to past short-run errors at a very sharp rate of 1.461072 in the over-parametrized model and an adjusted value of 1.259498 in the parsimonious model. This therefore implies that the rate of adjustment of gross domestic product to past changes is at a very high rate above a 100% and thereby suggests same for future occurrence. Meanwhile, the model was significant enough to account of about 59% of the behavior of gross domestic product of Nigeria while other variables outside the model (white noise) may be held responsible for the rest of the behavior not accounted for the combination of the regressors.

### ***5.0. Summary of Findings, Implication and Conclusion***

From the findings, it is very evident that the significance of the capital market in the growth of a nation cannot be overemphasized. Capital market information is essential to the growth of any nation as it exposed and brings the notice of the public the possible investment opportunity that potential investors can invest in. Although, in the immediate circumstance, increase in the level of economic growth may presume, but nevertheless, there is need to pay attention to stock market behavior in the long-run as long-run adjustment may make the stock market behavior very detrimental to Nigerian economy if not properly managed. The capital market unarguably provided the cheapest source of funds when compared to any other source, but then it does mean that it's essentially perfect and free of negative reactions. The capital market variables increases the level of productivity of the country in the short-run, increasing the level of funds provision and investment level, but may be tend to adversely affect the economy over the long-run if not properly regulated. Over-valuation of stocks coupled with the abuse of the stock market by companies may result into the ineffective use of raised funds by companies and corporations. This will have a negative effect on the economy as funds raised may not be used up efficiently.

Also those who tend to use capital market funds for political activities can hide under the influence of their quoted companies to raise funds that may be diverted into unproductive uses. This may serves as a reason for the negative effect of long-run behaviours of market capitalization and number of dealings. It in other words does not mean that promoting the stock market will have a negative effect but rather pronounce the need for serious attention to be paid on the regulation of the market. It is therefore to this reasons that the study intends to provide some possible panacea to the observed scenario.

Government should through the Security and Exchange commission should enactment and implementation of strict policies that will regulate the manner of fund raising behaviours and provide possible ways of tracking the usage of all funds raised from the stock market. The regulatory authority should ensure that those who intend to raise money for non-investment or political activities should be directly or indirectly disallow to have access to capital market funds. In addition, there should be a general overhauling of the market and all the institutions that are involved (Brokers, Investors and the regulators) as well as effective and up to date periodic check of the performance level of registered brokers in the exchange.

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