



## **Investigating the Impact of the Capital Market Operations on a Developing Economy: The Nigerian Experience (1983 – 2016)**

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### **Authors' contributions**

*This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.*

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### **ABSTRACT**

This work is undertaken to investigate the impact of the capital market operation on a developing the economy with the Nigeria experience over the period 1983 to 2016. The study employed the parametric test of Pearson regression to describe and analyze the various indices of the study such as market capitalization, all share index, number of listed securities, number of listed companies and gross domestic product (GDP). The study found that the most significant component of the Nigerian Capital Market is the Market Capitalization and demonstrates a significant correlation with the Nigeria economy. The other variables tested show less than 0.05 correlations implying that individually they also have a significant impact on the GDP meaning that these components have no significant effect on Nigeria economy. Reasons for this are the relatively small size of the few companies listed on the market while most big companies are still owned and funded by the government. The study recommends a comprehensive review of capital market regulations and fresh government policies to encourage the listing of companies to enlarge

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the market size. This study is beneficial for exposing the relatively small size of the capital market and this tends to foster their inability to contribute meaningfully to economic development during the period.

*Keywords: Capital market; all share index; economic growth; Nigeria; regression model.*

## 1. INTRODUCTION

The capital market is a common feature of every modern economy reputed, amongst other things, to perform critical capital resource allocation functions aimed at promoting economic development. In many advanced countries where capital markets are highly efficient, it is viewed as the primary gauge for economic performance. Remarkably, a capital market with adequate depth plays an essential role in economic development since they provide the principal platforms for mobilization and to access low-cost funds to finance medium to long term projects on infrastructure and others vital to transform economies. Such markets are characterized by high investors' confidence, market integrity, efficient processes, adequate product offering, sound regulatory framework, strong and transparent disclosures and accountability regime and good corporate governance. Market with these attributes is classified as a world-class capital market (Securities and Exchange Commission, 2012).

Nwazeaku (2006) sees the capital market as a network of specialized institutions which perform long-term financial intermediation functions, culminating in the trading of medium and long-term securities. He further stated that the capital market is a section of the financial system that is responsible for mobilization and allocation of funds from surplus units to deficit units on a long-term basis.

Anyanwaokoro [1] identifies the capital market as a network of institutions that contributes to the economic development of emerging and developed economies. This is made possible through some of the vital roles they play such as channeling resources into efficient sectors of the economy, promoting reforms to modernize the financial sector, financial intermediation capacity to link deficit to the surplus sector of the economy and a veritable tool in the modernization and allocation of savings among competitive uses which are critical to the growth and efficiency of the economy [2].

With the introduction of financial liberalization in the developing countries, the flow of private foreign capital from the developed to the developing countries has increased significantly and as such inflows of foreign capital have been mainly in foreign direct investment and portfolio investment (World Bank 1996, Agarwal).

It helps to channel capital or long term resources to firms with relatively high and increasing productivity thus enhancing economic expansion and growth [2].

Ekundayo (2002) argues that a nation requires a lot of local and foreign investment to attain sustainable economic growth and development. The capital market provides a means through which this is made possible. However, the paucity of long term capital has posed the greatest predicament to economic development in most African countries.

Osaze (2000) sees the capital market as the driver of any economy to growth and development because it is essential for the long term growth and enhanced capital formation. It is crucial in the mobilization of saving and channelling of such savings to profitable and self-liquidating investment.

The Nigerian capital market provides the necessary lubricant that turns the wheel of the economy. It does not just provide the funds required for investment but also efficiently allocates these funds to project with the best returns to fund owners.

This allocation function is critical in determining the overall growth of the economy. The effective functioning of the capital market impacts on liquidity, provision of information about firms, risk diversification, mobilization of savings and corporate governance (Anyanwu 1998). Therefore by altering the quality of these services in the stock market can alter the pace of economic growth.

Okereke-Onyiuke [3] posits that the cheap source of funds from the capital market remains a critical element in the sustainable development

of the economy. She enumerates the advantages of capital market financing to include long term repayment period as funds are held for medium and long term period to perpetuity, providing funds to state and local government without pressures by granting them ample time to repay loans.

Odife [4] stated that as far as innovational development is concerned the Nigerian capital market is a landmark that cannot be forgotten easily because as far back as 1958, the foundation for a capital market had been laid in Nigerian. Other supporting statutes include: the Pioneer Industries Ordinance 1951, the National Provident Fund Act 1961, Income Tax Management Act 1961, and the Insurance, Miscellaneous Provision Act 1964 et cetera were passed thus allowing the corporations to access the capital market for loans.

However, with the attainment of independence, the capital market witnessed the enactment of some draconian laws that impacted negatively on the market. This was precisely the case of the Exchange Control Act of 1962 and the Nigerian Export Promotion Decree of 1989. Strictly speaking, these laws rather than promote the investment climate, retarded its growth. The stock market was restricted largely to local investors apart from the original investors in foreign companies who were already in the market before the Indigenization Decree of 1972. Thus they were repealed in 1993 and replaced with two progressive enactments namely; the Nigerian Investment Promotion Commission Decree No.16 of 1995 and the Foreign Exchange (Monitoring and Miscellaneous Provision) Decree No. 17 of 1995. The repeal of those two repressive laws and their replacement with two progressive ones, things began to look up in the Nigerian capital market. The economy became relatively accessible to the international community and foreign investors freely began to participate once more in the capital market. Another important landmark here was that removal of the barrier placed on foreigners' investment interest in indigenous companies further opened up the economy for foreign participation.

Another affirmative recent development was the introduction of Nigerian Stock Exchange (NSE), e-business portals which enable shares to be listed on-line. This greatly improved the performance of the Nigerian capital market especially in the area of the foreign direct

investment. The capital market in the early 1980s expanded the range of thrift depository service and has led to widespread abuse by savings and loans schemes that applied insured deposits to engage in speculative real estate lending.

The Nigerian capital market is expected to play a significant role as a source of funds for economic recovery, growth and development in a market-based economy is widely accepted and appreciated. The market was virtually comatose between the period of independence and 1972. According to Odife [4], at this time the number of securities in the market was so limited that large firms did not find avenues for profitable investment of their liquid resources. He identified the reasons why innovation was lacking at that time in the capital market as follows:

1. Exchange Control Act 1962: it was a restriction on capital importation and repatriation. This severed the country's relationship with the rest of the world capital market system. Hence the stock market was restricted to local investors apart from the original investors in foreign companies who were already in the market before the indigenization decree of (1972).
2. Securities pricing by the Securities and Exchange Commission (SEC): the pricing of stock on the market is left in the hands of stockbrokers and issuing houses rather than to SEC as the regulatory body.
3. Regulated dealership commission: The numbers of market makers or brokerage firms are too few as a result of criteria set by NSE for firms to be enlisted as dealers.
4. Interest rate regulation: A bid-offer spread of only two per cent are allowed for market makers and all market makers must carry inventories pending the introduction of stock lending and borrowing was difficult to bear.

The effects of the above the retarded development of the Nigerian capital market and as such its ability to contribute meaningfully to economic development has been reduced. Most of these regulations have become counter productive to the growth of the market thereby acting as a clog in the wheel of progress of the market. It is on this basis that reform became a necessary *sine qua non*. The reforms will enable various operators and institutions in the market stand to make a meaningful contribution to the economy of Nigerian by addressing the issues militating against the continued stagnation or

presumed slow growth of the capital market in its entire ramification.

### **1.1 Statement of the Problem**

There is abundant evidence that most business lack long-term capital. The business sector has depended mainly on short-term financing such as overdraft to finance even long-term capital projects. Based on the matching concept, such a financing approach is extremely risky. All firms need to raise an appropriate mix of short-term and long-term capital funds.

Most recent literature on the capital market recognizes the tremendous performance the market has recorded in recent times. However, the vital role of the capital market in economic development has not been empirically investigated thereby creating a research gap in this area. Thus this study is undertaken to examine the impact of the capital market on the Nigerian economy with GDP as a proxy. Despite the operational and institutional framework inhibiting the process of economic development in Nigeria, the bottleneck created by the dearth of finance to the economy constitutes a major setback to its development and evaluation the capital market becomes very necessary.

### **1.2 Objectives of the Study**

Given the role, the capital market played during the privatization of public enterprises, recent recapitalization in the banking sector and as an avenue for long-term funds to various governments and corporations in Nigeria.

The objective is as follows:

1. To analyze the impact of the Nigerian capital market on her economic development from 1983-2016. The economic development was proxy by the gross domestic product (GDP) while the capital market variable considered include market capitalization, total new issues, the volume of transaction and total listed equities and government stock.
2. To investigate the individual contributions of the Nigerian capital market variables on the economic development from 1983 - 2016.
3. To appraise the Nigerian Capital Market since the liberalization policy was introduced.

### **1.3 Research Questions**

The answers to the following questions will be relevant in this study:

1. By how much does the capital market influence the performance in the Nigeria economy?
2. To what extent do all capital market variables impact on the economy?

### **1.4 The Statement of Hypotheses**

For this study, the working hypotheses will be as follows:

#### **Hypothesis 1:**

**Ho:** There is no significant relationship between variations in gross domestic production and capital market operations in Nigeria.

#### **Hypothesis 2:**

**Ho:** All the capital market variables do not make a significant impact on the economic development of Nigeria.

**Decision Rule:** We shall reject the null hypothesis (H<sub>0</sub>) if the p-value is less than the alpha (0.05), otherwise we will not.

## **2. REVIEW OF LITERATURE**

### **2.1 The Capital Market in Nigeria**

According to Nzotta [5], the capital market is a "network of specialized financial institutions, series of mechanisms, the process in infrastructure that in various ways, facilitate the bringing together of supplies and use of the medium to long term capital for investment in social-economic development project". The capital market is divided into the primary and secondary market. The primary market or the new issues market provides the avenue through which the government and corporate bodies raise fresh funds through the issuance of securities which is subscribed to by the general public or a selected group of investor. The secondary market provides an avenue for sale and purchase of existing securities. Sule and Momoh (2000) found that the secondary market activities have impacted more on Nigerian per capita income by tending to grow stock market earnings through wealth than the primary market.

According to Nzotta [5] posits that the capital market is the market for long term funds which provides a mechanism for lenders to provide long term funds in exchange for financial assets issued by borrowers or traded by holders of outstanding negotiable debt instruments.

Okereke-Onyuike [3] argued that the capital market is not a single entity defined by space but rather a network of financial institutions which bring together suppliers and users of capital by facilitating the issuance of primary market securities and secondary trading for a long term financing instrument.

Nwankwo [6] posits that the capital market is established to:

1. Provide structures for borrowing and lending for a long-term purpose.
2. Enable the authorities to mobilize long term capital for the economic development of the country.
3. Provide foreign business with the facility to offer their shares to the public and the Nigerian public an opportunity to invest and participate in the shared ownership of the foreign business
4. Provide facilities for the quotation and readily marketability of share and stock and opportunities and facilities to raise capital in the market
5. Introduce a code of conduct, check abuses and regulate the activities of operators in the market.
6. Enhance, through participation and ownership, a healthy and mutually conducive environment for participation and cooperation of indigenous and expatriate capital in the joint effort to develop the Nigerian economy to the mutual advantage of both parties.

Generally, the capital market acts as a vehicle for broadening the ownership base of companies. It is a measure of confidence in the economy and provides a performance indicator of the whole level of economic activities. Also, it provides corporate management with an idea of the cost of capital in determining the rate of return for new Investments. The two broad categories of instruments traded in the capital market are equities and bonds. Equities allow ownership right in a company whereas bonds, on the other hand, are promissory notes issued by a company or government as long term debt instruments.

The capital market is very vital to the growth, development and strength of any country because it supports the government and corporate initiatives, finances the exploration of new ideas and facilitates the management of financial risk. The rate of economic growth has been linked to the sophistication of the financial market and capital market efficiency. Both markets facilitate the mobilization and channelling funds into productive constituents and ensuring that the funds are used for the pursuit of socio-economic growth and development without being idle (Akinbogunbe 1996, and Adebisi 2005).

From 1961, the Nigerian capital market has grown tremendously, particularly during the period of Indigenization decree of 1972. The securities increased from 8 in 1961 to about 301 in 2008. Over the years, the Nigerian capital market has witness relative stability and recorded impressive growth which has a positive impact on the economy. There is clear evidence that the capital market remained an important source of capital for the national economic development in the government financing infrastructural projects, the recapitalization in Nigerian. Sule and Momoh (2009) conclude that the recent consolidation exercise of major financial institutions and privatization exercise of most public owned enterprises are key indications of government faith in the capital market to drive growth in the Nigerian economy.

According to Sansui (2002), the financial market plays a pivotal role in mobilizing financial resources from the surplus units and channelling them to the deficit units for productive investment, thereby facilitating the growth and development of an economy. The widespread programme of financial liberalization and advance technology investment, particularly in the fields of data processing and telecommunication have broken down barriers of nationalities and facilitate massive international capital flows. These developments aided by the adoption of flexible interest rates and exchange rate regimes are providing market participants with the incentive to develop new financial instrument and techniques to remain competitive. The Nigerian capital market constitutes an integral part of this process.

According to Ogunbanjo (1981), capital is needed in the production process to increase productivity and also the tempo of industrialization in the economy. Thus, this

generates interest in the capital market as an important segment of the financial market that sustains real development in the economy.

Nwazeaku N.C [7] posits that the capital markets are the market for intermediate or long term debt and corporate stocks and securities. The Nigerian stock exchange where the stocks of major Nigerian firms are traded is a primary example of the capital market. He wants further to say that the capital market is a section of the financial system that is a long term basis. These there fund providers, fund users, intermediaries and regulatory agencies.

## **2.2 Structure and Growth of the Nigerian Capital Market**

There are two markets within the Nigerian capital market which can be broadly classified into:

1. The primary market
2. The secondary market

**Primary market:** This is a market where new securities traded in this market includes an offer for subscription, right issues, offer for sales and private placement. The right issues and open offers is a situation where the company invites its existing shareholders to subscribe to further capital required. Secondly, by placing or selective marketing, which results when a company agrees to allot the whole issue of the securities at an agreed price to intermediary merchant banks of a corporate finance subsidiary of a commercial bank. Thirdly by public offers which is an invitation made to the public generally to subscribe for or purchase securities of a company.

Nzotta [5] explained that the primary market or new issue market as it is often called provides structures of the placement of new issues of securities in the market. Participants in the primary market include government, corporate concerns, issuing houses, investment advisers, marketing agents, registrars, underwriters, reporting accountants and the Nigerian Securities and Exchange Commission which is a regulatory body. The government and corporate concerns are in the markets to raise funds for their developmental needs while the general public is the major investors. The issuing houses as the financial intermediaries facilitate the fund raising activities.

The investments advisers are brokers who engage in the business of advising others directly

or through the publication of writing, as to the value of securities or as to the advisability of investing in purchasing or selling securities. The underwriters engage in risk reduction of undertaking to take up the unsubscribed portion of the issue while the registrars are the official keeper of the records of a quoted company with regards to:

- Particulars of shareholders
- Payment of dividends
- Transfer of shares
- Registration of legal documents

Finally the Securities and Exchange Commission regulation the pricing timing and issue of new securities in the market

**Secondary market:** This is the market in which registered companies and operator trade securities previously issued on the primary markets. It is a market where invested capital in the form of debentures and shares are bought and sold. It is, therefore, a market for old securities and not primarily a source of new supply to the capital market basically, the secondary market provides the avenue for investors to liquidate their investment or adjust their portfolio whenever they desire.

Nzotta [5] the secondary market is a formal market for trading in stocks and shares, bonds or debentures and other long term securities. The market is generally referred to as the stock market and provides the fulcrum for the market. The market essentially measures changes in general economic activities through a stock market index. Examples of secondary market are:

- The Stock Exchange Nigerian Stock Exchange
- National Association of Securities Dealers (NASD) still on its formation stage
- Over the counter (OTC) market it is on this market that securities of public companies not quoted on the exchange are marketed.

Elumelu (2005) opined that the opportunities which the secondary market offers for subsequent trading in issued stocks is a major factor to capital mobilization and that the marketability of the issue stocks help to annihilate any inhibition that an inventor might have a parting with his excess funds secondary market transaction are carried out by licensed stock brokers on the seven trading floors of the Nigerian stocks exchange located in Lagos,

Kaduna, Kano, Onitsha, Ibadan, port Harcourt and Abuja. Stockbrokers buy and sell the share on behalf of their client's individuals and dealing members who are stocks broking firms incorporated in the Nigerian stock exchange as accompany limited by guarantee in 1960 the Nigerian stocks exchange commenced operation in 1961 with 13 listed securities.

According to Tanko [8] government patronage legislation and police have influenced the growth of the Nigerian capital market in the 1960s and 1990s, government raised fund from the market usually by floating stocks also government enacted legislation such as tax management act of 1961 required both the person and provident funds to invest a substantial proportion of their funds in government stock. The trustee investment act of 1962 and the insurance (miscellaneous) provision act of 1964 require trustees to invest in government stocked and quoted industrial security and insurers to invest a stipulated percentage of their risk premium in government securities.

According to Asalu (1996), seven securities of British companies operating in Nigerian whose shares were already quoted on the London stock exchange to a large extent, influenced activities at the capital the Lagos stock exchange later metamorphosed into the Nigerian stock exchange following the Okigbo Financial System Review Committee Report of 1976. The committee recommended the establishment of two independent stock exchanges in addition to the Lagos stock exchange. The Nigerian stock exchange operated as the only stock exchange in Nigerian until 1988 when the government approved the establishment of Abuja stock exchange as an independent stock exchange.

Nwankwo [6] summarized some function of the Nigerian stock exchange as follows:

1. To provide a central meeting place for members to buy and sell existing stock and share.
2. To provide opportunities for raising fresh capital
3. To provide machinery for mobilizing private and public serving
4. By facilitating the purchase and sales of securities
5. To facilitating dealings in government securities.
6. To act as a channel for implementers the indigenization decree by providing facilities for foreign business.

Nzotta [5] argued that the Nigerian capital market has been remarkable and has recorded significant growth in the following indicator:

1. Capital market capitalization – this is the most widely used indicator in accessing the size of the capital market to an economy. In a bearish market, the market capitalization falls and vice versa for a bullish market. Before 1988 the total market capitalization was less than N10 billion from 1988 to 1994, N65.5 trillion and N1587.00 trillion in 2006. The market capitalization recorded the highest value of N9560.04 trillion in 2007. But this fell to N6957.02 trillion in 2008 due to the global financial meltdown. The observed growth was driven by factors such as new listing, bonus issues and increased in company stock price during the period.
2. The number of listed securities in Nigerian capital market increased from 8 in 1961 to 178 in 1983 and 217 in 1990, 288 in 2005 and 301 in 2008 but declined to 250 in 2011 and recently to 247 in 2016. It would be observed that the total listed securities are still low despite over 50 years of the existence of the Nigerian stock exchange.

Jerome (2003) asserts that the Nigerian economy has benefited from the capital market in several ways and could be said to be the most influencing factor on listing in recent times.

Agarwal (1996) stated that the development of the capital market has altered the financing behaviour of the corporate sector changing their dependence from the bank dominated loans to capital market-based equity capital. Below are regulatory bodies of the Nigerian Capital Market:

1. Federal Ministry of Finance;
2. Central Bank of Nigerian;
3. Securities and Exchange Commission; and
4. Nigerian Stock Exchange.

### **2.3 Empirical Review of Capital Market and Economic Development in Nigeria**

Capital is one of the factors of production which plays a very important role in industrial development. A country industrialization objective and economic development cannot be achieved the availability of adequate financial resources. Nzotta [5] posit that capital is needed in a productive process to embrace productivity and to increase the tempo of industrialization.

Okereke-Onyuike [3] stressed that the growing importance of the capital market as a means of capital mobilization by arguing that the event of recent years principally represented by the worldwide recession and the unending schemes of debt restructuring and rescheduling have altogether highlighted the disadvantages and dependence of foreign capital flow and have reinforced the importance of developing a strong base of domestic long term savings especially in developing economies of African, Asia, and Latin American. The capital market in each of these countries forms the corner stone of the savings mobilization process.

Alile [2] acknowledge that for many less developed countries (LDCS) running programmes of self-reliance, the development of local raw material and production of agriculture and industrial goods frequently requires huge investment outlays of varying size and timing. He also pointed out that the paucity of long term capital for economic development and growth has been the bane of many African countries including Nigerian and to move away from this depressed state, funds must be affectively mobilized to harness material and management resources for optimal output in the productive sector.

Levine [9] argued that a well-developed stock market may be able to offer financial services of different kinds than what the banking system may offer. Their establishment, therefore, provides a wind of impetus to investment and growth than the development of just the banking system. They further demonstrate that after various economic and political factors, the measure of banking and stock markets development indicators robustly correlated with current and future rates of economic growth and efficiency through increase liquidity and lower risk.

Singh (1997) argues that pressures may emanate from transactions induced by the euphoria created by financial liberalization and an undesirable implication of economic pressures may exert upward pressure on the interest rate and reduce the total volume of real sectors investment and growth. If the primary role of the capital market is the mobilization and allocation of a nation's limited capital market resources among numerous competing alternative uses, then it must be accepted that this allocation function can often be critical in determining the overall growth of the economy.

Shaw (1997) recognized the allocation function of the financial institution most of which participants in capital activities when they wrote that the development process requires efficient allocation of available domestic resource. An efficient allocation of available domestic resources can be mobilized and directed from less essential uses, to more productive investment is offered by the financial institution.

SEC (1987) emphasized the role of the capital market under the Structural Adjustment Programme (SAP) as that of providing the most crucial support to the government especially with its privatization programme aimed at the transformation of the affected companies to public limited liability companies with quotations on the Nigerian stock exchange. It also noted in consonance with the egalitarian philosophy enshrined in the Federal constitution that the capital market through the allotment committee of securities and exchange of commission ensure a wide spread of share ownership thereby enhancing the opportunity for the Nigerian populace, regardless of their levels of income to invest their savings in a wide range of financial instruments with attendant risk and rewards.

Hassan [10] explained that the stock market tends to be very efficient in the allocation of capital to the highest value users. These market also help increase savings and investment which are essential for economic development an equity market by allowing diversification across a variety of assets, helps reduce the risk the inventors must bear thus reducing the cost of capital which in turn spurs investment and economic growth.

Onyuike [3] economic growth and capital market development to hand in glove and the growth phenomena on the two associated areas are not mutually exclusive at any stage in the development process. The reformed of the Nigerian capital market have generated some interest especially because of the limited level of efficiency of the market in the intermediation process and resource mobilization generally [11].

According to Alile [2], the tremendous imputes which the capital market introduced to the capital formation and investment processes of an economy could be summarized as:

1. It can act as a reliable medium for broadening the ownership base from the erstwhile family dominated firms.



2. An efficient mechanism for the allocation of savings among competing for the productive investment project.
3. A leading indicator of economic activity in the aggregate economy and a measure of confidence.
4. Machinery for mobilizing long term financial resources for industrial development.
5. The necessary liquidity mechanism for investors through a formal market for debt and equity shares.
6. It provides an idea of the current cost of capital and this can be important in determining the level an rate of investment through its pricing mechanism.

$$B1 = \frac{\sum x_1 y \sum x_2 - \sum x_2 y \sum x_1 x}{\sum x_1^2 \sum x_2^2 - (\sum x_1 x_2)^2} \dots\dots\dots (1)$$

$$B2 = \frac{\sum x_2 y \sum x_2^2 - \sum x_1 y \sum x_1 x_2}{\sum x_1^2 \sum x_2^2 - (\sum x_1 x_2)^2} \dots\dots\dots (2)$$

$$B0 = y - (b_1 x_1 + b_2 x_2) \dots\dots\dots (3)$$

Where  $x_1$ ,  $x_2$  and  $y$  are deviations such that

$y = y - \bar{y}$ ,  
 $x_1 = x_1 - \bar{x}_1$ , and  
 $x_2 = x_2 - \bar{x}_2$ , etc.

### 3. METHODOLOGY

#### 3.1 Research Design

The design is a desk research approach to collect data through the documentary method which involves several issues of the corporate report from both government and non-governmental agencies.

#### 3.2 Nature and Sources of Data

1. The Central Bank Of Nigerian (CBN);
2. Nigerian Stock Exchange (NSE) fact books the research design adopted two approaches; and
3. The descriptive desk research while applying the e-view statistical tool for evaluation.

#### 3.3 Model Definition

The research adopted the following regression model for the analysis

$$Y = b_0 + b_1 x_1 + b_2 x_2 + \dots\dots\dots + b_n x_n + e_1$$

$$R^2 = b_1 \sum x_1 y + b_0 \sum x_2 y$$

Where  $b_0$ ,  $b_1$ = represent the parameters to be estimated

$Y$ = is the dependent variable  
 $X_1, x_2, x_3, \dots, x_n$  = are the independent variables  
 $e_1$ = is the error term

The multiple regression models used as follows;

$$Y = b_0 + b_1 x_1 + b_2 x_2 + \dots\dots\dots + b_n x_n + e_1$$

The equation for the computations of these estimate are as follows:

### 3.4 Method of Data Analysis

The data obtained from the various sources were further analyzed using the following:

1. Percentage and ratios to describe and interpret various of the variable of the study such as market capitalization and gross domestic product (GDP). Equally, to determine the contribution of the Nigerian capital market to the gross domestic product (GDP), simple ratio/percentage were used to show the ratio of the market capitalization to the gross domestic product (GDP).
2. Test of significance and measure of association the parametric test analysis is done on the e-view platform. To test the hypothesis, multiple regression analysis was employed because we want to examine the significance of the relationship between a given dependent variable and two or more independent variables in a regression function. The calculated p-value was obtained and compared with the tabulated alpha-value (0.05) and used to the explanatory power of significance in their relationship.

### 4. RESULTS

The data used is compiled from various issues of the Central Bank of Nigerian Annual Statement of Account, Nigerian Stock Exchange Fact Book and Federal Bureau of Statistics Bulletin.

The data covered thirty-six years period from 1983 -2016 as depicted in Table 1.

Data for these years (1983 -2016):

$X_1$  – all share indexes;

X2 – market capitalization;  
X3 – numbers of listed securities;

X4 – numbers of listed companies; and  
Y – gross domestic product (GDP).

**Table 1. Relevant Nigerian economic variables for the study from 1981-2016**

Year	GDP at basic market prices (billions) Y	All share index (millions) X <sub>1</sub>	Market capitalization (billion) X <sub>2</sub>	Number of listed securities X <sub>3</sub>	Number of listed companies X <sub>4</sub>
1983	163.00	102.20	4200.00	178.00	92.00
1984	170.38	105.50	5500.00	175.00	92.00
1985	192.27	128.40	6400.00	181.00	96.00
1986	202.44	163.80	7700.00	186.00	99.00
1987	249.44	190.00	8900.00	185.00	100.00
1988	320.33	233.60	9700.00	188.00	102.00
1989	419.20	325.30	12000.00	198.00	111.00
1990	499.68	513.80	15900.00	217.00	131.00
1991	596.04	784.00	22600.00	239.00	142.00
1992	909.80	1107.60	32500.00	251.00	153.00
1993	1259.07	1548.80	46900.00	272.00	174.00
1994	1762.81	2205.00	65500.00	286.00	177.00
1995	2895.20	5092.15	171100.00	276.00	181.00
1996	3779.13	6992.10	285600.00	276.00	183.00
1997	4111.64	6440.51	292000.00	264.00	182.00
1998	4588.99	5672.76	263000.00	264.00	186.00
1999	5307.36	5266.45	299900.00	269.00	196.00
2000	6897.48	8111.01	478600.00	260.00	195.00
2001	8134.14	10963.00	662600.00	261.00	194.00
2002	11332.25	12137.72	763900.00	258.00	195.00
2003	13301.56	20128.94	1356000.00	265.00	200.00
2004	17321.30	24254.09	1287300.00	277.00	207.00
2005	22269.98	26357.40	1426100.00	288.00	214.00
2006	28662.47	29355.81	1587000.00	294.00	201.00
2007	32995.38	57990.22	9560000.00	310.00	212.00
2008	39157.88	31450.78	6957000.00	301.00	213.00
2009	44285.56	23091.55	7030800.00	265.00	200.00
2010	54612.26	24770.52	9918820.00	264.00	201.00
2011	62980.40	26632.14	10275308.00	250.00	183.00
2012	71713.94	29853.02	14800090.00	246.00	181.00
2013	80092.56	41329.19	19078000.00	255.00	190.00
2014	89043.62	34657.15	16875000.00	253.00	189.00
2015	94144.96	28642.25	17003000.00	257.00	190.00
2016	101489.49	26874.62	16186000.00	247.00	170.00

Source: Central Bank of Nigerian (CBN), NSE Statistical Bulletin and Securities and Exchange Commission (SEC) Various Issues

#### 4.1 Test of Hypotheses

##### Hypothesis 1:

**H0:** There is no significant relationship between gross domestic product (GDP) and capital market.

**H1:** There is a significant relationship between gross domestic product (GDP) and the capital market.

##### Decision Rule:

We shall reject the null hypothesis (H0) if the p-value is less than the alpha (0.05), otherwise, we will not.

**Table 2. Multiple regression output**

Variable	Coefficient	Std. error	t-statistic	P-value
C	4324.814	12995.14	0.332802	0.7417
X <sub>1</sub>	-0.134545	0.174733	-0.770008	0.4475
X <sub>2</sub>	0.004916	0.000362	13.59554	0.0000
X <sub>3</sub>	-134.1552	112.8722	-1.188558	0.2443
X <sub>4</sub>	207.1159	109.4861	1.891708	0.0686
R-squared	0.955170	Mean dependent var		23701.82
Adjusted R-squared	0.948987	S.D. dependent var		31725.02
S.E. of regression	7165.449	Akaike info criterion		20.72698
Sum squared resid	1.49E+09	Schwarz criterion		20.95145
Log likelihood	-347.3587	Hannan-Quinn criter.		20.80353
F-statistic	154.4727	Durbin-Watson stat		1.538243
P-Value	0.000			

**Regression Model:**

Where:

Y = GDP

X1 = All Share Index

X2 = Market Capitalization

X3 = Number of listed Securities

X4 = Number of listed Companies

**Decision:** Since the p-value (0.000) is less than the alpha (0.05), we reject the null hypothesis (H0) and conclude that there is a significant relationship between gross domestic product (GDP) and capital market.

**Hypothesis 2:**

**H0:** Not all the capital market variables made a significant impact on the economic development of Nigeria.

**H1:** All the capital market variables made a significant impact on the economic development of Nigeria.

**Decision Rule:**

We shall reject the null hypothesis (H0) if the p-value is less than the alpha (0.05), otherwise, we will accept.

**Decision:** From Table 2, the p-values of the variables show that only X2 (Market Capitalization) with a p-value (0.000) less than alpha (0.05), made a significant contribution to the economic development of Nigeria. The other variables had p-values above alpha, therefore their impact (contributions) were not significant. This generally means that we will not reject the null hypothesis; therefore we conclude that not

all the capital market variables made a significant impact on the economic development of Nigeria

**5. DISCUSSION**

To present and discuss the finding of the research, it will be important to note that the following deductions could be made:

1. The analyses were run using E-View version 10. E-View is Statistical and Econometrics software for advanced data analysis and visualization.
2. Using the package to rank the most significant component of the capital market, it can be seen that x2- that is, the market capitalization ranked first and demonstrates an effective correlation with Nigerian GDP 1983 to 2016.
3. Considering the table, it is also seen that the p-value of x1, x3 and x4 are greater than 0.05, while that of x2 is less than 0.05. Thus, implying that only market capitalization (x2) has a significant impact on GDP while other variables individually, do not have a significant impact. This literarily means that each of the components of the Nigeria Capital Market has a significant effect on the Nigerian economy.

Thus, one can conclude the following the liberalization:

1. The components x1, x2, x3 and x4 have combined effect on Y.
2. But only X2 has an impact on Y1 from 1983 to 2016
3. Nigerian economic growth depended on Capital Market operations and model fitted

can be used for prediction and decision making since  $R^2=95.5\%$

## 6. SUMMARY AND RECOMMENDATION

### 6.1 Summary of Findings

The capital market has generated some interest especially in the view of the limited level of efficiency of the market in the intermediation process and in resource mobilization generally. The major reason for the regulations of any capital markets has always been an attempt to avoid the stock market crash. As interest rates got liberalized and bank lending rate rose, many companies went to the capital market to raise funds. This created awareness about the importance of proper matching of the term of funds by their activities.

Following the Federal Government liberalization policy in 1995, the capital market was internationalized with the abrogation to laws that constrained foreign participation in the Nigerian capital market. Consequent upon the abrogation to the exchange control act of 1962 and the Nigerian enterprise's promotion decree of 1988, foreigners now participate in the Nigerian capital market both as operators and investors. At the end of 2003, the numbers of listed securities stood at 265.

Nigeria is undergoing several economic problems and indications show that future at least in the short run might not be too encouraging and this has led to various economic reforms to save the situation. Prominent among these reforms have been the deregulation of the capital market according to the World Bank GDP in sub-Saharan Africa has to need down in the recent past and while African governments have given prominence to general economic reforms adequate focus does not seem to have been given to capital market development.

However, in the course of the research I discovered from the data analysis that the relationships between economic growth (GDP), market capitalization is significant.

### 6.2 Conclusion

Nzotta [5] agree that the deregulation and internationalization of the stock market have greatly exposed it to participation by foreign investors. Moreover, the capital has become necessary with increased demands for long term funds by investors due principally to the high cost

of funds at the money market and also the high level of distress afflicting financial institutions (Banks) that provide investment funds at the money market.

The steady implementation of the privatization programmed for all outstanding public utilities total liberalization of the economy, implementation of the anti-corruption crusade all represents critical success factors that need proper attention in preparing the ground for the globalization of the Nigerian capital market in the immediate future.

The Securities and Exchange Commission on its part should continue to consult with and encourage constructive inputs from markets operators and other participants to foster an active, efficient and globally competitive capital market which would steer the industrialization of the Nigerian economy in the 21st century

### 6.3 Recommendation

The following are the recommendations:

1. **Review of the cost of borrowing from the market:** There needs to encourage more enterprises to come into the market to expand and deepen the market. This can be achieved through the review of the cost of borrowing from the market. The high cost of raising funds on the market has been recognized as one of the factors militating against the growth of the Nigerian capital market
2. **Appropriate saving/ investments inducing measures:** There is a need to pursue economic and financial policy reforms that encourage savings in the capital market. In this respect, monetary policies should be designed in such a way that savings are encouraged for investment.
3. **Tax incentives and listing requirements:** Furthermore, small scale enterprises need to be encouraged through various tax incentives and listing requirements to come to the market such policy has been used in Brazil and some south East Asian countries. Though the government has repealed all laws restricting the free flow of foreign investment into the countries, there further need to ensure all infrastructures in the country are revamped to provide the necessary basic support for the new enterprises.
4. **Enlightenment on the need to patronize the capital market:** The problem of illiquidity needs to be addressed to public

- enlightenment to the general public on the need to patronize the capital market and also to discourage Nigerian investors from buying and hold attitude.
5. **Increased internationalization of the capital market:** Given the low depth in of the market, there is a need for various policies denominated securities on the stock exchange in Nigerian.
  6. **Economic stability and liberalism:** There is the need for the government to be up and doing in policy implementations so that so many promises made so far to investors will materialize. The government should still effectively loosen its grip on the vital sectors like petrochemical, power and energy and solid mineral sectors.
  7. **Political stability:** The stability of any economy is intricately connected to the stability of its political environment since frequent political upheavals and changes could, in turn, disrupt economic activities.
  8. **Formation of underwriters syndicate:** Lack of effective under –writing has remained one of the problems of the Nigerian stock market. There is need to re-examined this problem and form an under writing syndicate.
  9. **Cooperation between SEC and the stock exchange:** The issue of cooperation and understanding between SEC and the stock exchange should also be looked into so as not bring class but efficiency, and effectiveness in the capital market.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

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