

## **CAPITAL MARKET DEVELOPMENT AND ECONOMIC GROWTH IN NIGERIA**

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### **ABSTRACT**

This Study examined the implications of capital market development on economic growth of Nigeria from 1986 – 2015. The specific objectives of the study are to; (i) investigate the extent to which stable long run relationship exist between capital market development indicators and economic growth in Nigeria. (ii) determine if market capitalization has any significant impact on economic growth in Nigeria. (iii) determine if stock traded turnover ratio has any significant impact on economic growth in Nigeria. (iv) investigate if there exist any significant causal relationship between capital market development indicators and economic growth in Nigeria. The study adopted co integration, error correction mechanism and Granger causality test in estimation of the variables of the model with the following results; (i) stable long run relationship was identified between the dependent and independent variables as indicated by four (4) co integrating vectors. (ii) LMCAP has a positive insignificant impact on LRGDP in the short run as supported by the coefficient of 5.00E+08 and p value of 0.2210 and positive significant relationship with LRGDP in the long run supported by a coefficient of 8.15 and t –statistics of 4.0519. (iii) STTR has a negative significant impact on LRGDP both in the short and long run as supported by their respective coefficients and p values; -1.05E+12 (0.0004) and -1.44 (13.5253). (iv) the result of the Granger causality indicated a unidirectional causality running from LRGDP to LMCAP with a p value of 0.0003, STTR to LRGDP with a p value of 0.0049. The major implication of these results is that capital market development has not contributed significantly

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to the growth of the Nigerian economy within the period of the study. Based on the findings and policy implications, the study makes the following recommendations; (i) there should be a deliberate collaboration between government and private sector towards building conducive enabling environment that is supportive to the operations of the capital market. (ii) Government should initiate conscious and deliberate policies that will stimulate foreign portfolio investment in Nigeria especially in areas of security, provision of critical infrastructures to increase trading activities in the capital market. (iii) Government should strengthen the Nigeria already weak private sectors through additional funding from Central Bank of Nigeria and the introduction of relevant policies that will enhance their performance in the development of the capital market. The study concludes that a conducive business environment where security and investor's confidence are guaranteed is indispensable in the realization of effective and efficient capital market activities needed to achieve economic growth.

**Keywords: Market capitalization, Stock traded turnover ratio, Economic growth, Nigeria, Business environment**

## **INTRODUCTION**

The contributions of financial intermediaries especially the capital market in the growth of both developing and developed economies enjoys consensus by almost all economists. These economists and other financial experts believe that the role of the capital market is critical mostly by channeling resources, initiating reforms and serving as a link between those who has resources and those that uses them. Capital market activities serves as a means of identifying firms with high productivity, thereby promoting economic expansion and increase in national income (Donwa and Odia, 2010). This shows that the capital market is an intricate body with the capacity to move funds from one sector of the economy to the other, being guided with the aim of achieving efficiency and return in investment. The challenge of transforming a weak economy for growth and increase in national output, according to Chinwuba and Amos (2011) has been the trait of capital market activities. Okpara (2010) opines that capital market is the bedrock of financial development in any economy because of its leading role in providing fund for the growth of micro and macro businesses including financing major government activities. The role of capital market as a stimulator of economic activities was emphasized by Echekoba, Ezu and

Egbunike (2013). The place of capital market on the development and growth of economies has been acknowledged globally.

Capital market is a body that provides long term resources to different sectors of the economy. It is composed of establishments that aid the issuance and secondary trading of lasting financial instruments. The growth of the capital market in recent time is credited to 2004/2005 banking reforms. Capital market activities has assisted corporate bodies and government alike in raising long term funds for the financing of new projects and growth in industrial and commercial areas of the economy (Kolapo, 2012). Odetayo and Sajuyigbe (2012) believe that the operations of the capital market are responsible for increase in national output and the determination of direction of investment in the Nigeria economy. For the attainment of sustainable growth in an economy, domestic and international investment is necessary (Oditia, 2013 & Ogboi, 2012). Such investment requires huge fund which is made possible by the activities of the capital market. The Nigeria capital market has also been identified as contributing significantly in bridging the savings gap and also channeling such savings to efficient productive sectors of the economy.

According to Okereke – Onyiuke (2000), the Nigeria capital market by this fundamental role contribute to the positive change in the growth rate of the economy.

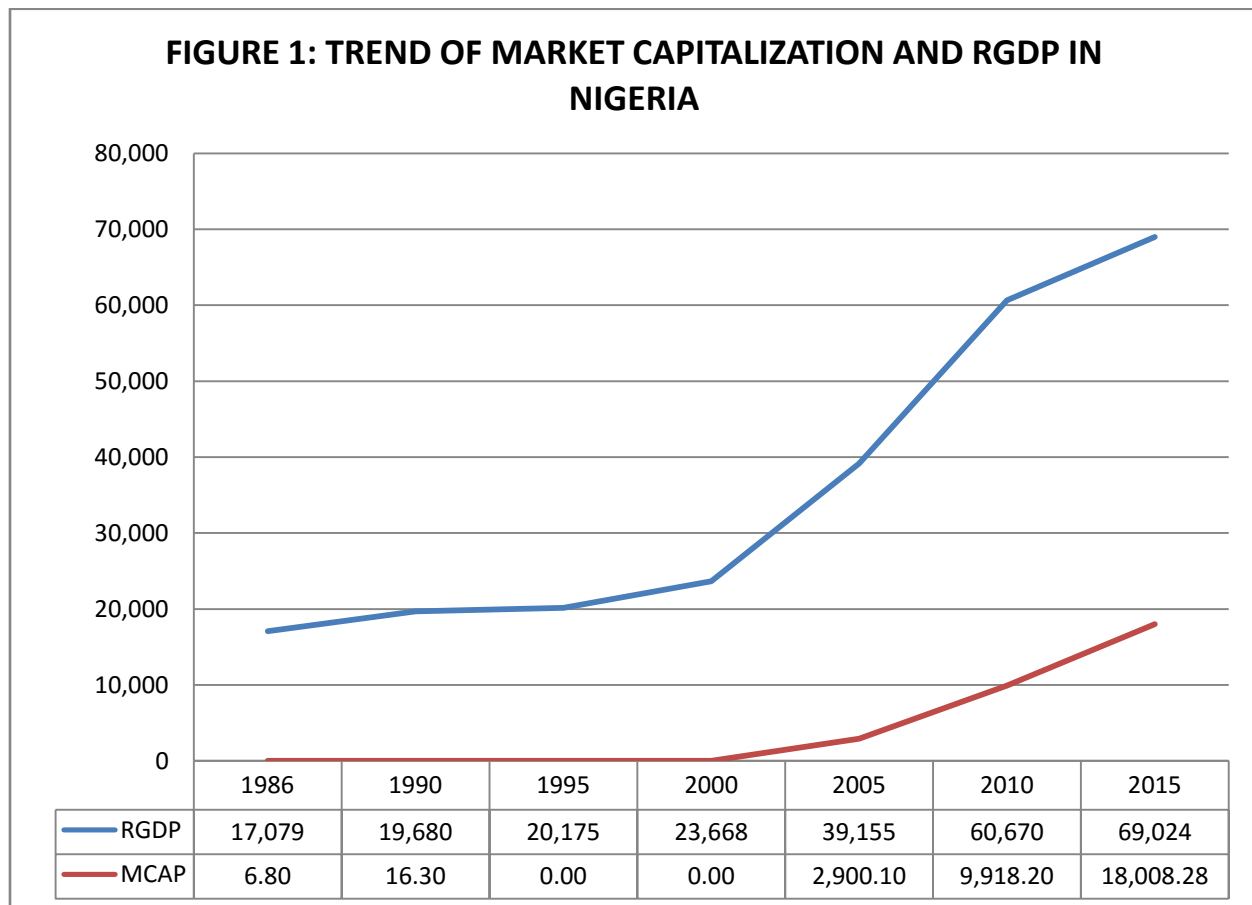
Developing economies, Nigeria inclusive is characterized by shortage of long term capital due to the inefficiencies associated with the activities of the capital market in these economies. Capital market has also been identified as the mover of the economy for its perceived role in domestic investment (Eze & Nwankwo, 2013). Erimo (2014) identified capital market as a cheap source of funding when compared to fund from alternative sources like the money market and other financial intermediaries. He listed the gains from capital market financing to include, longer repayment periods which allows investors ample time to consolidate in their investment and opportunities for the various tiers of government to finance their budget deficits and consequently improve the provision of social services to the people without pressure to repay the funds borrowed. Al-faki (2006) described capital market as set of connections of related financial institutions with the target of contributing to the growth of the economy by providing cheaper funds to investors.

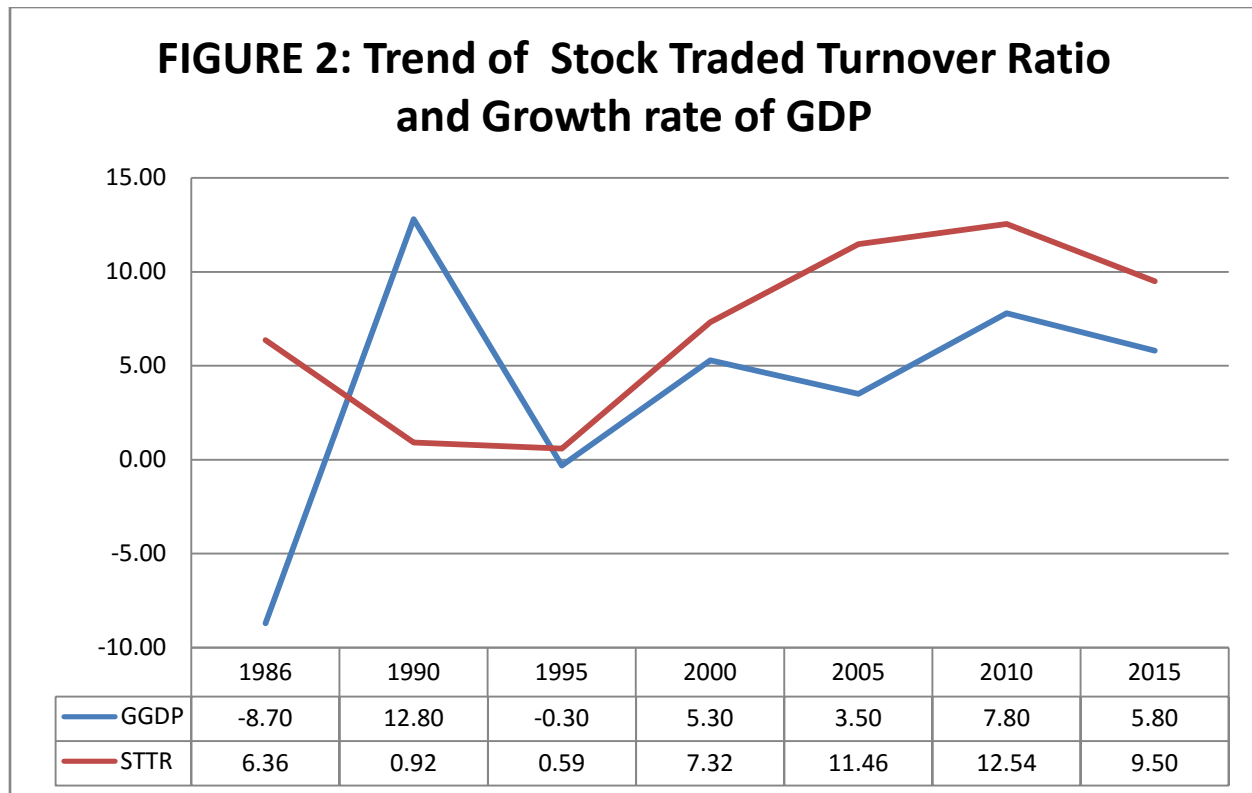
The size of the Nigeria capital market has been adjudged small in comparison with similar markets existing in other developing nations. An analysis of the trend in quoted listed companies in 1988, 1998, 2008 and 2015 with corresponding figures of 102, 186, 213 and 189 is obviously not adequate to bring the needed impact in an economy considered to be the largest in Africa. The republic of South Africa for instance whose economy is relatively smaller has 754, 668, 379 and 351 listed companies within the same corresponding period. It is believed that the indifference of Nigeria investors to invest in shares and securities is responsible for the small size of the market. This indifference has been attributed to the pessimism of losing grip over their investment. This inadequate number of investors in Nigeria capital market is also seen as the manifestation of the problem of illiquidity. Apart from small size of listed companies, the stock turnover ratio, a capital market indicator that measures the value of stock traded in comparison to domestic market capitalization is also believed to be very low in Nigeria, especially when its average ratio of 2% per year is compared to Botswana 10%, Zimbabwe 9% and Mauritius 4.6% (World Bank, 2013). It has been noted that the good performance of these countries is attributable to their open door investment policy, while ownership structure, buy and hold attitude of Nigeria investors has been described as major factors militating against the growth of the market.

One of the major problems identified against the growth of the Nigeria capital market is the perceived conflict among major regulators of the market. This is in addition to the issue of multiple taxation and macro economic instability. Economists and other financial experts agree that long term macro stability are imperative in stimulating long term investment as such policies would create enabling environment for savings and investors confidence in the economy. Frequent variations in exchange rate and negative real interest rate has also been contributory to lack of investor's confidence which have affected the growth of foreign capital inflow. Similarly, the market capitalization of the 196 listed equities lost 17.4 per cent from N7.91tn at the beginning of the year to N6.53tn, December 30, 2011. The Nigerian capital market has also recorded some instability since 2012, with the market capitalization of the listed equities dropping by N77bn or 1.2 per cent from N6.579tn at the beginning of February to N6.502tn. Likewise, the Nigerian stock exchange's All Share Index has recorded a decline by 244.45 basis points or 1.2 per cent in the same period (CBN 2012).

The trends in listed domestic companies from 2004 to 2014 for instance are as follows; 207 (2004), 214 (2005), 202 (2006), 212 (2007), 213 (2008), 214 (2009), 215 (2010), 196 (2011), 192 (2012), 188 (2013) and 189 (2014) respectively. This is against growth rate of 33.7 (2004), 3.4 (2005), 8.2 (2006), 6.2 (2007), 6.3 (2008), 6.9 (2009), 7.8 (2010), 4.9 (2011), 4.3 (2012), 5.4 (2013) and 6.3 (2014) respectively.

An overview of the trending of growth rate of gross domestic product and other capital market development indicators as shown below reveals obvious inconsistency with economic theory. For instance, in 1986, 1990, 1995, 2000, 2005, 2010 and 2015 Real Gross Domestic Product were 17,079, 19,680, 20,175, 23,668, 39,155, 60,670 and 53,453 trillion naira, maintaining a steady increase and a decrease in the later year. Market Capitalization within the same period were 6.80, 16.30, 180.40, 472.30, 2900.10, 9918.20 and 18008.28 billion naira, respectively (World Bank development indicators, 2015). Interval analysis of trends of GDP and MCAP, GGDP and STTR in Nigeria within the period of study is as shown below;





From the above graphs, it is obvious that capital market activities have not contributed significantly to economic growth in Nigeria within the period of study. Also from the tables 1 & 2 in the appendix, it is evident that the number of listed companies in Nigeria does not reflect the size of the economy when compared to other related economies like South Africa and Egypt in this instance. These contradictory trends obviously call for investigation and the reassessment of capital market development and economic growth nexus in Nigeria, hence this study.

## Conceptual Review

### Nigerian Economic Background

It has been the interest of financial sector managers to correct and adjust the deteriorating Nigeria economy through relevant financial policies as entrenched in the structural adjustment programme (SAP) of 1986. As earlier mentioned, institutions such as, banks, stock market, insurance companies, etc, have the capacity by active participation to bring the Nigerian economy to the part of recovery that is capable of reducing poverty, inequality and unemployment. Within 1972, Nigeria stock market was meant mainly for indigenous investors

with slight access of foreign investors to the market. In 1995, the Nigeria stock exchange Act released the embargo for foreign investors in order to beef up mobilized funds from local investments.

There is no doubt that Nigeria businesses have heavily depended on short term funds which is risky in managing mature and growing business. This short term financing leads an economy to low productivity which brings low income level of the populace thereby causing increase in both local and foreign debt. The increase in deficit will in turn cause low investment, depression in the economy and mostly low standard of living (World Bank, 2013). These problems emanating from short term funding brought concern to some African countries which led to the creation of the capital market that can raise long term money values for businesses and government activities and bring growth to the economy. But in Nigeria scenario, the capital market that is charged with the function of raising this long term fund is not developed compared to the foreign capital body and has not lived up to its primary role. Stock prices should be a reflection of economic indicator rate which should have a positive link to the growth of the economy (Mondher et al, 2013, Aruma, 2013; Awolabi and Ajayi, 2013, Kingsley, 2013).

This study has identified certain features of the capital market that will assist the authors in evaluating the growth and development of the capital market within the study period.

### **Market Size**

The size of the capital market can be measured by the number of listed companies or their growth rate, market capitalization or its growth rate and the market capitalization ratio (Ratio of value of shares listed to GDP). This study adopted nominal value of market capitalization in testing the hypothesis.

### **Market Liquidity**

Liquidity of the capital market refers to the simplicity in which shares are traded in the capital market. We can measure liquidity by ratio of security traded to GDP (total value traded/GDP) and turnover ratio (% value of share traded/market capitalization). Turnover ratio is adopted in this study as a measure of capital market development.

### **Market Concentration**

This feature concerns the part of market capitalization accounted for by the major companies, mainly the foreign companies compared to domestic firms, example, ratio of selected largest stock to total capitalization in the market.

### **Market Efficiency**

This indicator provides the signal in monitoring market information in terms of security prices and availability of stocks. In an efficient market, prices completely and precisely reveal available and important information which investors use in making investment decisions. There are three levels of market efficiency; weak, semi – strong and strong market efficiency.

For the purpose of this study, only indicators related to market capitalization and liquidity is specified in the model for estimation.

### **Capital Market and Economic Growth**

The role of capital market in stimulating growth in the economy is evident by the long term funds which the market provides to investors and government both in developed and emerging economies. The growth of the economy without doubt depends on the efficiency of the financial sector through the mobilization of domestic savings and attraction of foreign capital for investment purposes. When the capital market does not function effectively or are illiquid with high interest rate, it makes it difficult for foreign investors to invest in the economy. In Nigeria, inefficiency of this market brings impediment to capital formation due to inadequate domestic savings. Local investors are also seriously affected with the poor performance of the Nigeria capital market which makes it difficult to raise fund and in most cases drives them to foreign sources in search of funds (Mishra, 2010).

Despite the perceived poor performance of the Nigeria capital market over the years, its contribution to the growth of the economy cannot be denied. Riman (2008) believes that the Nigeria capital market has witnessed considerable changes judging by the degree of participation of private and public investors at the floor of stock exchange and in various public offers of listed companies. The Nigeria capital market has also attracted the interest of foreign investors



thereby raising the level of capital inflow into the country and consequently increasing foreign direct investment. For instance, market capitalization increased from 1,698.1m (1980) to 7030.8m (2009). Securities raised from 16.6m in 1970 to 685716.2m 2009, number of deals from 634 in to 1739365m in 2009, listed companies of 91 in 1980 to 23 in 2008 but decreased to 188 in 2013 (World Development Indicators, 2013).

It is clear from the above that effective and efficient capital market affects liquidity, the nature of information available about firms, risk diversification options, how to close savings gap and indexes for corporate management (Anyanwu, 1993). Therefore, when the quality of these services is compromised, the operations of the stock market can affect the growth rate of the economy (Equakun, 2005).

### **Theoretical Review**

Some of the theories of capital market include; capital asset pricing model, efficient market hypothesis, modern portfolio theory, arbitrage pricing theory, coherent market hypothesis among others. For the purpose of this study, capital market theory, efficient market hypothesis and endogenous growth theory is reviewed.

### **Capital Market Theories**

The theories of capital market explain how capital or financial market performs using available mathematical models. Generally, capital market theory is used in evaluating issues related to securities. When investors want to compare the degree of risk and the likely return of investment in terms of profit or interest, capital market theories comes to mind to offer solutions in that direction. Capital market theory is also employed consciously or unconsciously when formulating financial, investment or retirement plan and such theories include but not limited to arbitrage pricing theory, capital assets pricing model, coherent market hypothesis, efficient market hypothesis, fractal market hypothesis or modern portfolio theory.

Other issues associated with capital theory are how shares are offered, the role of capital market, leading global stock market, the role of regulatory bodies, etc. Capital market theory is developed following the assumptions of Markowitz portfolio model which is based on the

believe that investment is anchored on efficiency, lending and borrowing are done at the risk free rate which assumed not to change irrespective of the amount of money involved. All investors face the same time lag in their choice of investment, fractional shares can be traded and infinitely divisible, investment outcome is not affected by taxation and cost of transaction, all investors face the same profitability curve and no inflation exist.

The theory of capital market explains returns in the following manner:

$$K = \frac{P_t + C_t - P_{t-1}}{P_{t-1}} \dots \dots \dots (1)$$

Where, the time of purchase of the asset of price  $P_{t-1}$  is  $t-1$ . If this be the case, then the return (K) from the time period  $t-1$  to  $t$  is the above mentioned formula.  $C_t$  is the cash gotten from assets between  $t-1$  and  $t$ .  $P_t$  is the price of the asset at time  $t$ .

### **Efficient Market Hypothesis**

The market efficiency theory assumes that share prices are clear signals of information available in the market based on believe that cost of buying and selling, actual cost of information are usually zero (Grossman and Stiglitz (1980)). However, an alternative theory argues that this is possible to the extent that profitability is less than additional cost of investment (Jensen (1978)). If we have positive information and cost of buying and selling, the extreme account of the market efficiency hypothesis definitely cannot be true. The benefit of this theory is that it helps on the parameter of deciding sensible inquiry and market price with suggestion of adjustment on diverse information.

### **Endogenous Growth Theory**

It has been recommended that the growth of capital market affect economic growth in developing countries (Levine, 1991, Levine and Zervos, 1996 and Demirguc-Kunt and Levine, 1996). However, the precise channel through which this is achieved has been a subject of debate among financial experts. In contemporary growth theory, the rate of growth is seen as a positive function of exogenous technical progress. According to Pagano (1993), financial development relates to capital per worker and not economic growth, however, endogenous growth models depict that increase in the growth of the economy is related to financial development through technological innovation and income distribution. According to Greenwood and Jovanovic and

Grossman (1990), income per capital assists in achieving information efficiency which helps in investor's decision and growth in national output. The role finance is integrated into the models of endogenous growth to officially establish the link between financial market and economic growth.

Endogenous growth model concentrates on the correlation between financial development and long run economic growth, stressing that productive growth is an obvious channel from financial development to economic growth. The Cobb–Douglas production function known as an endogenous growth model is denoted as  $f(K, L) = K^\alpha L^{1-\alpha}$  means that the output (the quantity produced) is a function of the inputs capital ( $K$ ) and labor ( $L$ ) and the marginal product of capital is the ratio of capital income to output (that is, GDP). However, economic growth is affected by labor in terms of average hours worked per worker to output and the quality of the labor force (that is, human capital). More so, growth comes through capital stock in terms of investment in the physical stock, growth in capital stock and composition of the physical capital.

### **Empirical Review**

In the year 2015 and for the period 1981 – 2013, Oluremi, Adeagbo and Abiola conducted a study on the relevance of capital market on the growth of Nigerian economy. They employed Wald test analysis and Linear multiple regression (OLS) technique for the estimation using stock market variables. It was confirmed from their result that stock market exhibit positive influence on the growth of Nigeria economy. This means that if private and public investors should involve on stock activities, it will lead to positive change which has the capacity of attracting foreign investors and thereby causing rise in the flow of capital in the economy. They therefore suggest that private companies should be encouraged; the market operators should remove restrictions on the market and maintain easy access of stock goods for capital formation purposes.

Suraya, Solung and Umar (2015) surveyed the connection arising from changes in bond market and its effect on the Nigeria economy. The researchers presumed they were doing a new work as it affects capital market sales and national output in Nigeria. This paper analyzed empirically other studies up to 2014 which falls within the scope of the study. According to them, the works reviewed adopted OLS and VECM method of analysis. They argued that the Nigeria economic

environment has undergone major changes. In their opinion, the previous authors ignored the analysis of structural breaks or the possibility of employing representative's samples knowing very well that financial data has the tendency of being influenced by such changes.

Eriemo (2014) empirically investigated how security cost affects the growth of stock market in Nigeria and its influence on national output, looking at the contribution of capital goods value to increase in any economy in the world. By this study, a stationarity test was conducted which showed a result of tested variables co-integrating of the same order and a long run correlation test ascertained via co-integration econometric tool. The result of the lower chamber of the VECM, which signifies the effect of independent variables on dependent variable in the short run, confirmed that the tested indicators for stock market influenced changes and developments in the economy and conclude that rules on the price of capital goods have helped in amplifying the stage of increase in the national output. The authors subsequently suggest that policy bodies make more plans in order to accurately guide and protect costs and values of capital goods in the capital market and also encourage openness to accommodate all influential institutions for the sole purpose of boosting the economy at large.

In the year 2013 and for a period covering 1990 – 2011, Eze and Nwankwo conducted a research on the influence of capital market reform on macroeconomic expansion in the economy of Nigeria. In the study, MCAP, ASI and TVT were used to represent capital market reform while GDP served as a substitute for increase in national output. This study anchored the research on an economic theory that assumes that if capital market reforms are effective, it will raise the growth rate of the economy. Before the model estimation, a stationarity test was conducted with the aid of ADF and PP which later showed the stationarity of each variable at 5% critical value in its 1<sup>st</sup> differential. The findings of co-integration test showed (1) co-integrating vector at 5% critical value. The VECM result indicated a significant influence of stock market activities on expansion of the Nigeria economy both in the short run and long run. Based on the long run relationship established by the co-integration test, Eze and Nwankwo suggested the pursuance of lasting policies that will help to increase security and shares activities in the economy. They recommended the introduction of additional stock market instruments in order to boost all share index.

Evaluation on the influence of stock activities on national output of Nigeria was carried out in 2013 by Edame and Okoro. Edame and Okoro stressed that the rise in private and public investor's participation on the sales of shares and bonds, other listed corporations inclusive shows that there exist in point of fact expansion of stock development in the economy. They argued that the Nigeria capital market has distinguished itself judging by the level of interest it has received across the globe. The study adopted ordinary least square method of econometric estimation in determining the relationship between GDP as dependent variable, number of deals, market capitalization, volume of transaction and interest rate as explanatory variables. It was found that capital market has positive and major influence on national output. The study based on the findings recommended the implementation of strategies to engender business efficiency in stock market and strengthen the economy of the country.

The correlation between capital progress and increase in national output in Nigeria spurred this research by Ogboi and Oladipo in the year 2012. Annual time series figures of relevant variables which were collected from Nigeria apex bank covering 1981 to 2008 were estimated with a test of long run relationship, VECM, in addition to a test of causality using the pair wise procedure. The findings indicated that gross domestic product granger causes stock market within the specified degree of freedom of 5 % level. The influence of the stock market on national output was negative in the short run period and positive in the long run based on the VECM result. Based on the above empirical result Ogboi and Oladipo concluded that events in the Nigeria stock market showed similar trend with others across the globe, hence government should initiate relevant policies that will spur growth in the market in other to promote economic progress as in other developing economies.

## **Methodology**

The theoretical framework of this study is anchored on one of the endogenous growth model by Charles Cobb and Paul Douglas in 1928 which describes the relationship of an output to inputs. Endogenous growth model states that increase in the growth of the economy is related to financial development through technological innovation by research and development (R & D) and income distribution. The role of finance is integrated into the models of endogenous growth to officially establish the link between financial market and economic growth. The Cobb–

Douglas production function as an endogenous growth model denoted as  $f(K, L) = K^\alpha L^{1-\alpha}$  means that the output (the quantity produced) is a function of the inputs capital ( $K$ ) and labour ( $L$ ) and the marginal product of capital is the ratio of capital income to output (that is, GDP). However, economic growth is affected by labour in terms of average hours worked per worker to output and the quality of the labour force (that is, human capital). More so, growth comes through capital stock in terms of investment in the physical stock, growth in capital stock and composition of the physical capital.

This means that production output is determined by the amount of labor involved and the amount of capital invested.

The basic model of the Cobb-Douglas production function is as follows:

$$Q(L,K) = AL^\beta K^\alpha \dots\dots\dots (4)$$

Where:

$Q, L, K, A, \alpha$  &  $\beta$  stands for the total production, labour input, capital input, technological efficiency,  $\alpha$  and  $\beta$  are the output elasticity of labour and capital, also a positive constants that lies between 0 and 1. This growth model specifies output as a function of Labour ( $L$ ), Capital ( $K$ ) and the index of technology ( $A$ ), transposed in a functional form as:

$$Y = f(K, L, T) \dots\dots\dots (5)$$

Where:  $Y$  is output,  $K$  is capital,  $L$  is labour and  $T$  is an index of technology efficiency

This study adopted the model above as used by Edame and Okoro (2013) which they presented as;

$$GDP = f(MAKAP, NDEALS, VTRAN, INT) \dots\dots\dots (6)$$

Where;  $MAKAP$  = Market capitalization,  $NDEALS$  = Number of deals,  $VTRAN$  = Value of transaction,  $INT$  = Interest rate.

The model is modified to integrate the variables that are relevant to this study, such as real GDP (RGDP), market capitalization (MCAP), stock traded turnover ratio (STTR), gross capital formation (GCF) and domestic credit to private sector percentage of GDP (DCPSGDP). The variation in the variables above is as a result of the key interest on the capital market size and liquidity which this study has as its emphasis. The model for this study in its functional form is presented as follows:

$$\log \text{RGDP} = f(\log \text{MCAP}, \text{STTR}, \log \text{GCF}, \text{DCPSGDP}) \dots \dots \dots (7)$$

Where:

RGDP represents real Gross Domestic Product, measuring economic growth as a dependent variable, MCAP means Market Capitalization which is a proxy for capital market size, STTR refers to Stock traded turnover ratio, a measure of market liquidity, GCF denotes gross capital formation, DCPSGDP means domestic credit to private sector percentage of GDP as control variable while log mathematically means the inverse operation to exponentiation. That means the logarithm of a number is the exponent to which another fixed number, the base, must be raised to produce that number. The variables with absolute values were logged to them to the same level with those in rates.

The model in its econometric linear form can be written as:

$$\log \text{RGDP}_t = \alpha_0 + \alpha_1 \log \text{MCAP}_{t-1} + \alpha_2 \text{STTR}_{t-1} + \alpha_3 \log \text{GCF}_{t-1} + \alpha_4 \text{DCPSGDP}_{t-1} + \varepsilon_t \quad (8)$$

### Tests and Results

Unit root test was conducted to check the stationarity of the variables using both the Augmented Dickey Fuller and Philip Perron test. Both the dependent and independent variables were not stationary at levels in ADF and PP. However, at the first difference, all the variables became stationary at both ADF and PP test. Considering the time series using ADF and PP at trend and intercept, all their calculated statistics are greater than critical values at both 5% and 10% levels of significance. The result shows that the time series are integrated of the same order 1(1), with the application of ADF and PP test respectively. Thus, a linear combination of series integrated of the same order are said to be co integrated. The level of their integrations indicates the number of times a time series have to be differenced before their stationarity is induced.

### Hypothesis One

There is no significant long run relationship between capital market development and economic growth in Nigeria.

The long run relationship between capital market development and economic growth was conducted using Johansen co integration test with the result showing four (4) co integrating equations. Therefore, the null hypothesis of no co integration among the variables is rejected since about four variables in the equation are statistically significant at 5% level of degree of freedom. The result therefore, indicated the existence of a long run equilibrium relationship among the variables. The nature of the long run relationship is seen from the normalized co integrating equations; hence, the regression equation is stated thus;

$$\text{RGDP} = -8.81 + 8.51 [4.0519] - 1.44 [13.5253] - 3.28[14.0281] + 9.13 [7.4343]$$

### **Hypothesis 11**

Market capitalization has no significant impact on economic growth in Nigeria.

With the proof of co integration among the variables, hypothesis two was tested using vector error correction mechanism (VECM). From the VECM result, the p value of market capitalization (LMCAP) which is a measure of market size is 0.2210 which is greater than 0.05 and t – statistics of 5.00E+08. The study therefore, accept the null hypothesis and conclude that capital market development have no significant impact on economic growth of Nigeria. The implication of this result is that the growth in the size of the capital market resulting from increase in market capitalization has not contributed significantly to the growth of the economy.

### **Hypotheses III**

Stock traded turnover ratio has no significant impact on economic growth in Nigeria.

Hypothesis three is also tested using vector error correction mechanism (VECM). From the VECM result, the p value of stock traded turnover ratio (STTR) a measure of market liquidity is 0.0004 which is less than 0.05 and t-statistics of -1.05E+12. The study therefore, reject the null hypothesis and conclude that stock traded turnover ratio have significant impact on economic growth of Nigeria.

This is contrary to the assumption of the economic theory which posits that the growth in capital market activities should contribute to the overall growth of the economy. However, this negative and insignificant influence on economic growth by capital market development indicators can be



attributable to the Nigerian negative business environment which is considered globally as inhibiting growth in investment, (see World Bank ease of doing business in appendix).

ECM result also revealed that GCF has negative significant correlation with economic growth also contrary to apprio expectation, which could be explained by the fact that private investments which constitute reasonable proportion of gross capital formation are hardly statistically accounted for due to the negative attitude of the private investors aimed at evading tax and absence of proper legislation. Only DCPSGDP exhibited a positive and significant relationship with GDP showing that growth in the economy within the period of the study can be explained by credit to the private sector.

However, the error correction term (ECT) has the expected negative sign with the coefficient of -0.889496; this implies that capital market increases by 89 percent annually to economic growth for equilibrium to be restored in the long run. This result is supported by the ECT p value of 0.0000 indicating statistical significance. The R- square is 0.721806 showing that 72.18 percent variation in the dependent variable is explained by the independent variables while the remaining 27.82 percent is explained by other variables not captured by the model which is represented by error term (et). The F – statistics of 9.081128 with p value of 0.000059 which is less than 0.05 shows that the joint influence of explanatory variables on the dependent variables is statistically significant. This entails that all the independent variables jointly impact on economic growth in Nigeria. The DW as shown in the above table has the value of 1.673730 indicating the absence of auto correlation among the residuals.

In the long run, MCAP and DCPSGDP were found to have a positive significant relationship with RGDP, implying that the two variables contribute positively to the growth of the economy. This study therefore suggests that capital market development policies should be directed towards increasing market capitalization and credit to private sector as these have been seen to be beneficial to the economy. STTR and GCF maintained the same outcome as in the short run. The implication of this result is that there is no significant departure of the results both in the short and long run period in the economy. This indicates that the influence of Nigeria negative

business environment on investment demands strong policy prescriptions both in the short and long run in order to bring the desired change in the development of the capital market.

#### **Hypotheses IV**

There is no significant causal relationship between capital market development indicators and economic growth in Nigeria.

From the Granger causality test result, the p value of 0.0003 for LRGDP is less than 0.05; therefore, the study rejects the null hypothesis and concludes that unidirectional causality runs from gross domestic product (LRGDP) to market capitalization (LMCAP). The granger causality result also reveal a unidirectional causality running from stock traded turnover ratio (STTR) to RGDP as supported by the p value of 0.0049 and another one way causality also from LRGDP to gross capital formation. This indicates that an increase in RGDP leads to an increase in the value of the capital market shares. This implies that government policies should be directed towards boosting economic growth which in turn develops the capital market. More so, one way causality runs from STTR to RGDP implies that an increase in market liquidity will in turn lead to increase in RGDP suggesting that policy considerations should focus on stimulating stock market turnover by creating enabling environment aimed at instilling investor's confidence.

#### **Conclusion and Recommendation**

The study concludes that capital market development has not contributed significantly to economic growth of Nigeria within the period of the study.

Based on the findings and policy implications, the study makes the following recommendations;

- i. There should be a deliberate collaboration between the government and the private sector towards building conducive enabling business environment that is supportive to the operations of the capital market.
- ii. Government should initiate conscious and deliberate policies that will stimulate foreign portfolio investment in Nigeria especially in areas of security, provision of critical infrastructures to increase trading activities in the capital market.

- iii. Government should strengthen the Nigerian already weak private sector through additional funding from Central Bank of Nigeria and by introduction of relevant policies that will enhance their performance in the development of the capital market.

### **Contribution of the Study to Knowledge**

The main contribution of this study to knowledge is the awareness that increase in investment by increase in number of companies is only achievable in a conducive business environment which enhances liquidity in capital market.

### **Suggestions for Further Studies**

This study suggests that further study on this subject should consider the effect of the efficiency of the capital market and concentration on the growth of Nigeria economy using qualitative research approach considering that data on capital market efficiency and concentration are not readily available. Also the contribution of GDP to capital market should be considered by future researchers in a bid to resolve the causality debate.

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## Appendixes

**Table 1: GDP LCU AND LISTED COMPANIES FOR NIGERIA, SOUTH AFRICA AND EGYPT**

YEAR	NIGERIA		SOUTH AFRICA		EGYPT	
	GDP	LST COMP.	GDP	LST. COMP.	GDP	LST. COMP.
1986	1.707	206	1.503	536	5.439	387
1990	1.968	131	1.632	740	6.515	573
1995	2.017	181	1.703	612	7.7	732
2000	2.366	195	1.955	604	9.919	1,076
2005	3.915	215	2.359	348	1.179	744
2010	5.546	215	2.748	352	1.592	227
2015	6.978	183	3.055	316	1,801.83	250

**Table 2: GDP (\$m) AND LISTED COMPANIES FOR NIGERIA, SOUTH AFRICA AND EGYPT**

YEAR	NIGERIA		SOUTH AFRICA		EGYPT	
	GDP	LST COMP.	GDP	LST. COMP.	GDP	LST. COMP.
1986	2.072	206	7.950	536	3.588	387
1990	3.075	131	1.120	740	4.313	573
1995	2.854	181	1.554	612	6.015	732
2000	4.638	195	1.363	604	9.983	1,076
2005	1.122	215	2.577	348	8.968	744
2010	3.691	215	3.753	352	2.189	227
2015	4.811	183	3.146	316	3.308	250

**Table 3: Augmented Dickey Fuller Unit Root Test**

Trend and Intercept @ Levels

Series	ADF Test Statistic	5% critical values	10% critical values	critical	Order	Remarks
LRGDP	-1.923796	-3.574244	-3.221728		0(0)	Not Stationary
LMCAP	-1.650122	3.574244	-3.221728		0(0)	Not Stationary
STTR	-2.574167	3.574244	-3.221728		0(0)	Not Stationary
LGCF	-2.429394	3.574244	-3.221728		0(0)	Not Stationary
DCPSGDP	-2.738341	3.574244	-3.221728		0(0)	Not Stationary

Sources: Researcher's compilation from E-view (version 7.0)

**Table 4: Phillips-Perron Unit Root Test**

Trend and Intercept @ Levels

Series	ADF Test Statistic	5% critical values	10% critical values	critical	Order	Remarks
LRGDP	-2.003050	-3.574244	-3.221728		0(0)	Not Stationary
LMCAP	-1.475616	-3.574244	-3.221728		0(0)	Not Stationary
STTR	-2.429394	-3.574244	-3.221728		0(0)	Not Stationary
LGCF	-2.306955	-3.574244	-3.221728		0(0)	Not Stationary
DCPSGDP	-2.456122	-3.574244	-3.221728		0(0)	Not Stationary

Sources: Researcher's compilation from E-view (version 7.0)

**Table 5: Augmented Dickey Fuller Unit Root Test**

Trend and Intercept @ 1<sup>st</sup> Difference

Series	ADF Test Statistic	5% critical values	10% critical values	critical	Order	Remarks
LRGDP	-5.513026	-3.580623	-3.225334		1(1)	Stationary
LMCAP	-5.687241	-3.580623	-3.225334		1(1)	Stationary
STTR	-5.109350	-3.580623	-3.225334		1(1)	Stationary
LGCF	-5.295554	-3.580623	-3.225334		1(1)	Stationary



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DCPSGDP	-4.609447	-3.580623	-3.225334	1(1)	Stationary
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Sources: Researcher's compilation from E-view (version 7.0)

**Table 6: Phillips-Perron Unit Root Test**Trend and Intercept @ 1<sup>st</sup> Difference

Series	ADF Test Statistic	5% critical values	10% critical values	critical	Order	Remarks
LRGDP	-5.510561	-3.580623	-3.225334		1(1)	Stationary
LMCAP	-12.93509	-3.580623	-3.225334		1(1)	Stationary
STTR	-5.435904	-3.580623	-3.225334		1(1)	Stationary
LGCF	-5.297298	-3.580623	-3.225334		1(1)	Stationary
DCPSGDP	-7.428431	-3.580623	-3.225334		1(1)	Stationary

Sources: Researcher's compilation from E-view (version 7.0)

**Table 7: Co integration Test**

Unrestricted Co integration Rank (Trace) Test

Hypothesized No. of CE(s) Prob. *	Eigenvalue	Trace statistics	0.05 crit.val
None*	0.868881	140.6077	69.81889
0.0000			
At most 1*	0.738820	83.72141	47.85613
0.0000			
At most 2*	0.621993	46.13017	29.79707
0.0003			
At most 3*	0.467944	18.89055	15.49471
0.0148			
At most 4	0.042718	1.222394	3.841466
0.2689			

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Trace test indicates 4 co integrating equations at the 0.05 level, \* denotes rejection of the hypothesis at the 0.05 level, \*\* Mackinnon – Haug – Michel (1999) P – value.

Table 8: VECM Test

<b>Error correction: P - values</b>	<b>Coefficient</b>	<b>Std. Error</b>	<b>T - statistics</b>
ECT = C(1) 0.0000	-0.889496	0.141643	-6.279832
D(LRGDP(-1)) = C(2) 0.6965	-0.049040	0.124026	-0.395397
D(LMCAP(-1)) = C(3) 0.2210	5.00E+08	3.97E+08	1.261450
D(STTR(-1)) = C(4) 0.0004	-1.05E+12	2.51E+11	-4.185307
D(LGCF(-1)) = C(5) 0.0029	-1.19E+09	3.52E+08	-3.367713
D(DCPSGDP(-1)) = C(6) 0.0080	3.05E+11	1.04E+11	2.931075
C = C (7) 0.0032	1.85E+12	5.58E+11	3.321906
<b><math>R^2 = 0.721806</math>, F – statistics = 9.081128, Prob (F – statistics) = 0.000059, DW = 1.673730</b>			

Table 9: Causality Test

<b>Pair wise Granger Causality Tests</b>			
<b>Null Hypothesis:</b>	<b>Obs</b>	<b>F-Statistic</b>	<b>Prob.</b>
LMCAP does not Granger Cause LRGDP	29	0.08333	0.7751
LRGDP does not Granger Cause LMCAP		17.7030	0.0003
STTR does not Granger Cause LRGDP	29	9.47036	0.0049
LRGDP does not Granger Cause STTR		0.47114	0.4985