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The Perceived Relations between Development Reforms, Stock Market Performance and Economic Growth in Nigeria: 1984-2014

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Abstract

Economic indicators and the stock market performance in Nigeria have been one area of wide debate among the academia as well as the policy makers and implementers. The Nigerian economy and in particular the capital market have witnessed several developmental reforms in the past three decades. Many believe the reforms have rather had negative impact, while others believe otherwise. In view of the above, this recent study was embarked upon to ascertain empirically the relations between the reforms, stock market performance and economic growth over the periods of 1984 to 2014. The study employed the Generalized Method of Moment (GMM) among other technics for the analysis. Our result revealed that the reforms over the period of the study had positive significant impact on the stock market performance, and the stock market also had significant and positive effects on economic growth in Nigeria. The study concluded on the need to intensify reforms in the areas of market security, sensitization and widening the market participation zones to incorporate rural dwellers, as well as small and micro firms.

Keywords: Relations, Development, Reform, Performance, Growth, Market, Nigeria, Economy, Indicators.

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1. Introduction

The importance of investment finance in the performance of any nation economy cannot be overemphasized. It is as important as blood is to the circulatory system of human body. Whenever there is lack of blood or inadequacy of blood in the human system, death becomes inevitable; so is finance to any nation's economy. The capital market is a major conduct that provides finance, particularly long term investment finance to the economy. And because of the importance attached to finance, inter-alia the capital market, many government are now sensitive to the happenings in their capital market, and engages in periodic reforms to improve the soundness, stability and the overall efficiency of the market at all time.

The Nigerian government in particular has put in place various reforms measures to regulate the capital market and make it more relevant in the achievement of the nation overall macroeconomic objectives. The capital market thrives in an environment where market forces are allowed to play their roles of ensuring efficiency in the allocation of financial resources which ensures sustainable economic growth and development through the formation of fixed capital. In addition, the existence of market intermediaries, well developed accounting, auditing and financial disclosure standard together with enforced legal and regulatory framework for investors protection are absolutely critical for the effective contribution of capital market to economic growth (Audu, 2015).

Reforms have been the widely acclaimed measures to stimulate capital market development. De La Torre and Schmukler (2007) have identified four category of reform: (1) reforming the enabling environment for capital market in the area of strengthening macroeconomic stability and enforcement of property rights; (2) reforming to enhance the efficiency of market discipline in the entire financial system through capital account liberalization; (3) reforming the associated and supporting institutions of capital market operation such as pension reforms and privatization programme; and (4) specific reforms for the development of regulatory and supervisory framework and improvement in securities clearance and settlement system.

Nigeria had measured significantly virtually in all the four categories of reforms mentioned. For instance, between 1972 and 1977, it had the Nigeria enterprises promotion degree reform that indigenized most foreign enterprises which allowed Nigerians have some equity ownership of these enterprises. Most of these enterprises were quoted at the stock exchange. Again in 1986, the government introduced the Structural Adjustment Programme (SAP) as an economic policy reform, targeted to reform the financial sector, deregulate the foreign exchange and interest rate to promote domestic savings, and improve domestic and foreign investment flows. There was also in 1988, the privatization and commercialization of public enterprises with the aim of creating favourable investment climate for both domestic and foreign investors and enhance private sector led growth of the economy. All these were made with the intent to promote capital market development.

Furthermore, in 1995 investment promotion and foreign exchange decree were promulgated in order to remove the hiccups to foreign investors' participation in the Nigerian capital market. With this, investors in the capital market can repatriate dividends on investment, transfer foreign loans provided for investment in the country, sale or liquidate enterprise or any interest attributable to investment. Also in 1999, there was Investment and Securities Act enactment that enables Security and Exchange Commission (SEC) to pursue investor protection and capital market development by regulating investments and securities business in Nigeria

Other giant strides in the capital market reforms to enhanced stock market development are the introduction of electronic business (e-business) with automatic access to Central Securities Clearing System (CSCS) in 1999. There was also the introduction of trade alert information system that alerts stock holders of any transaction in their stock within 24 hours. Again in 2001, the Nigerian Stock Exchange (NSE) introduced organizational structural reform of its self to boost performance.

Another remarkable reform that has significant impact to the capital market development was the Pension reform Act of 2004 and the Banking Sector recapitalization reform of 2005. The Pension Act in particular stipulated investment of Pension fund in bonds, bills and other securities guaranteed by the federal government and Central Bank of Nigeria. The commercial Banking Sector recapitalization reform itself opened way for many banks to access the capital market to raise needed developmental funds.

Nigeria like other developing and developed countries of the world has embarked on capital market reform as a veritable tool to enhance the performance of the economy. She has followed after other nations that reformed their capital market such as: China in 1979, Turkey in 1980, Ghana in 1983, India in 1992, Cuba in 1995 and Pakistan in 1999. Many of the reforms from these countries have yielded attendant results. However, for Nigeria, the ensuing economic predicaments manifest in forms of debt burden, sluggish savings mobilization and slow growth rate, particularly in the financial sectors have called to question the effectiveness of the reforms over the years. More so, the reforms have not been limited to the capital market but have included monetary and fiscal policies reforms and other sectorial reforms.

In view of numerous reforms pursued, several questions have been raised by investors, practitioners, academics and policy makers as to how effective capital market reforms are to the advancement of the economy? Is capital market development reforms positively or negatively related to stock market development and economic growth in Nigeria? Empirically, is the impact of reforms on stock market development and the Nigerian economy significant? This study is poised to provide needed answers to the questions raised above.

In lieu of the issues raised, the remaining part of this study is structured into four sections. The second section will provide the literature review. The third section considers the methodology. While the fourth and fifth sections respectively will give empirical analysis of data and summary of the study.

2. Literature Review

The importance of reviewing literature in a research work is enormous. Basically, it provides knowledge of what previous authors or researcher have done in the related field of study; the theories on which previous work was based

on and the empirical findings from such works. In this guise, we highlight the conceptual, theoretical and empirical views of authors in this field.

2.1. Conceptual Review

Conceptually, capital market is seen as an institution that plays the role of channeling resources, promoting reforms to modernize the financial sector and link deficit sectors to the surplus sectors. It is also seen as veritable tool in the mobilization and allocation of savings to critical growth sectors of the economy (Alile, 1996). Capital market is an institution that offers variety of financial instruments with attractive yields, liquidity and risk characteristics that encourages savings in financial form essential for government and other institutions in need of long term funds (Nwankwo, 1999). In a related conceptual explanation, Ekundayo (2006) see the capital market as a means through which a nation attains sustainable economic growth and development through local and foreign investment. To Osaze (2000) capital market is the major driver of any economy to growth and development, as it is vital for long term capital formation, savings mobilization and channeling of same to profitable investments.

The capital market provides the necessary lubricant that keeps turning the wheel of the economy. In its allocative function, the market affects liquidity, acquisition of information about firms, risk diversification, savings mobilization and cooperate control (Anyanwu, 1998).

Furthermore, the functioning of the capital market alters the rate of economic growth (Ekuakun, 2005). To Okereke-Onyiuke (2000) cheap sources of fund from the capital market remain a critical element in sustainable development of the economy. She further enumerated the advantage of capital market financing to include: no short repayment period as funds are held for medium and long term period; funds to state and local government are held without pressures and there is ample time to repay loans. In the reasoning of Al-Faki (2006) capital market is a network of specialized financial institutions, series of mechanisms, processes and infrastructure that facilitates the bringing together of suppliers and users of medium to long term capital for investment in socio-economic developmental projects. To Sule and Momoh (2009) the capital market has two faces (the primary and secondary market); concerning Nigeria, they maintained that activities of the secondary market have impacted more on per capital income by assisting to grow stock market earnings through wealth than the primary market.

2.2. Theoretical Review

There are large volume of theoretical literature which suggests that the functioning of stock markets affects liquidity, information acquisition, risk diversification, savings mobilization, corporate control and economic growth. There are also debates on whether stock market development has positive or negative effect on economic growth. As revealed by Demirgue-Kunt and Levine (1996); Bencivenga *et al.* (1996) and Levine and Zervos (1996) stock markets may affect economic activity through the creation of liquidity. A number of profitable investments require long term capital, but investors are often reluctant to relinquish control of their savings for long period. It is the stock market that make investment less risky and more attractive as it allows savers to acquire equity which it can sell quickly and cheaply whenever they have need to access their savings. Companies at same time enjoy permanent access to raise capital through equity issue. This action facilitates more long term profitable investment, improves capital allocation and enhanced prospect for long term economic growth.

There are other alternative views about the effect of liquidity on long term economic growth. Three channels are identified through which increase in liquidity can affect economic growth. First, it is reported that by increasing return-to investment, greater stock market liquidity might reduce saving rates through income and substitution effects. Secondly, that stock market liquidity might adversely affect corporate governance. This is because liquid stock market makes it easy for dissatisfied investors to sell-off investments. This action invariably weakens investor commitment and incentives to exert corporate control by overseeing managers and indirectly hurts economic growth (Demirgue-Kunt and Levine, 1996). Thirdly greater stock market liquidity reduces uncertainty associated with investment and savings. And less uncertainty makes an investment more attractive to risk averse agents.

The stock market also affects the incentives for acquisition of information about a firm by investors (Holmstrom and Tirole, 1993; Levine and Zervos, 1996). In a larger and liquid stock market investors got information easier to trade at posted prices. This enables an investor to make money before the information become widely available and price changes. The ability to profit from information stimulates investors to research and monitor firms. The end result of this is improved resources allocation that spurs economic growth. The stock market development may also influence saving mobilization that set feasible investment projects: Projects that require large capital injection are made ease through resources mobilization in the stock market with concomitant economic efficiency and accelerated long run economic growth.

Stock market also may impact on economic growth through changes in incentives for corporate control. Efficient stock market makes it easier to tie manager compensation to stock performance (Jensen and Stiglitz, 1990). It helps to align the interests of managers and owners. This induces managers to maximize a firm's equity price (Scharfstein, 1988). A well-functioning stock market promotes efficient resource allocation and economic growth by providing a boost to domestic savings and increasing the quantity and quality of investment. Stock market can encourage economic growth by providing the avenue for companies to raise capital at lower cost. Companies in developed stock market are less dependent on bank financing which can reduce the risk of a credit crunch.

Critics of the stock market have equally argued that operation of the pricing and take over mechanism in stock markets lead to short termism and lower rates of long term investment particularly in firm specific human capital. It also generates perverse incentive, rewarding managers for their success in financial engineering rather than creating new wealth through organic growth (Singh, 1997). Further criticism was that stock market liquidity may negatively influence corporate governance because very liquid stock market may encourage investor myopia. This may prompt investors to sell their shares, weakening investors' commitment and incentive to exert corporate control (Bhide, 1993). It is argued that these problems are further magnified in emerging market countries with weaker regulatory

institutions and greater macroeconomic volatility. These serious limitations of the stock market have led many analysts to question the importance of the system in promoting economic growth in emerging markets (Audu, 2015).

There is further argument among researchers and economists as to the relevance of the financial system in economic growth and development. Many believe that finance plays an inconsequential role in economic growth and development of nations Lucas (1988) and Stern (1989). However, an opposing view among researchers and economists held that financial system of a country plays an important role in economic growth (Ojo, 1984). It is also theorized that capital market development may influence economic growth through risk diversification (Devereaux and Smith, 1994). Risk diversification is discovered to influence growth through the shifting of investments into high return projects. And projects with high expected return tend to be comparatively riskier. Thus better risk diversification through internationally integrated stock markets fosters investment in projects with very high returns; this invariably influences growth positively.

2.3. Empirical Review

There are volumes of empirical literatures on how the functioning of stock market affects liquidity, acquisition of information about a firm, risk diversification, saving mobilization, corporate control and rate of economic growth. However debate exists over the signs of this effect. Some of the studies suggested that stock market development has positive effect on growth, while others predict a negative relationship between stock market development and economic growth Demirgue-Kunt and Levine (1996); Levine and Zervos (1996); Nyong (1996); Anyanwu (1998); Adam and Sanni (2005); Ezeoha *et al.* (2009); Ohiomu and Godfrey (2011); Kolapo and Daramola (2012) and Okoroafor (2014).

For instance, Levine and Zervos (1996) examined whether there was a strong empirical relationship between stock market development and long run economic growth. They found a strong correlation between stock market development and long run economic growth. Demirgue-Kunt and Levine (1996) studied stock market development and economic growth of 44 countries over the period of 1986 to 1993. They found that different measures of stock exchange size are strongly correlated to other indicators such as level of financial banking and non-banking institution as well as insurance and pension funds. They concluded that countries with well-developed stock markets tend to also have well developed financial intermediaries.

Furthermore, Levine and Zervos (1998) using pooled cross-country data of 47 countries from 1976 to 1993 evaluated whether stock market liquidity is related to growth, capital accumulation and productivity. They towed the line of Demirgue-Kunt and Levine (1996) by including measures such as stock market size, liquidity, integration with world market and index of stock development. The rate of Gross Domestic Product (GDP) per capital was regressed on a variety of variables designed to control for political instability, investment in human capital and macroeconomic conditions and index of stock market development. They found empirically that the measures of stock market liquidity were strongly related to growth, capital accumulation and productivity; while stock market size does not seem to correlate with economic growth.

Meanwhile, Harris (1997) did not find supportive evidence that stock markets activity affects the level of economic growth. The work by Atje and Jovanovic (1998) show that stock market development is strongly correlated with growth rates of real GDP per capital. More importantly they found that stock market liquidity predicts the future growth rate of the economy. Also, Rousseau and Paul (1998) examined and found that stock market-growth nexus exhibited positive causal relationship between stock market development and economic activity.

Mohtadi and Agarwal (2001) argue that financial sector development facilitates capital market development, and in turn raises real growth of the economy. Pedro and Erwan (2004) asserted that financial market development raises output by increasing the capital used in production.

Bekaert *et al.* (2005) indicated that capital market development has contributed to the economic growth of Egypt. For Belgium, Nieuwerbugh *et al.* (2005) investigated the long run relationship between growth and financial market development. The authors used a new set of stock market indicators to argue that financial market development substantially affects economic growth, especially in the period of 1973 to 1993. Liu and Hsu (2006) reported a positive impact on economic growth of stock market development in Taiwan, Korea and Japan. Yartey (2008) in his study "The determinants of stock market development in emerging economies: is South Africa different", examined the institutional and macroeconomic determinants of stock market development using a panel data of 42 emerging economies for the period of 1990 to 2004. His result indicates that macroeconomic factors such as income level, gross domestic investment, banking sector development, private capital flows, and stock market liquidity are important determinants of stock market in emerging markets. The result also indicated that political risk, law and order, and bureaucratic quality are important determinants of stock market development because they enhance the viability of external finance.

In Nigeria, several authors have equally examined stock market development and economic growth relationship. For instance, Nyong (1996) looked at the relationship between long run economic growth in Nigeria and aggregate index of capital market development. The study employed time series data from 1970 to 1994. It was found that capital market development is negatively and significantly correlated with long-run economic growth in Nigeria. Anyanwu (1998) also applied aggregate index of capital market development to determine its long run relationship with economic growth in Nigeria. The result indicated that Nigerian stock market development positively and robustly associates with long run economic growth in Nigeria. Also Osinubi and Amaghionyeodiwe (2003) examined the relationship between Nigeria stock market and economic growth during the period of 1980-2000; using ordinary least square (OLS), their result showed positive relationship between the stock market and economic growth and they suggested the pursuit of polices that geared towards the development of the stock market.

Also, Adam and Sanni (2005) investigated the role of stock market on Nigeria growth, using granger causality test and regression analysis. Their result showed a one-way causality between GDP growth and market

capitalization, and market turnover. They also observed a positive and significant relationship between turnover ratio and GDP growth. They concluded that government should encourage the development of the capital market since it has a positive effect on economic growth. Obamiro (2005) investigated relations between stock market and economic growth in Nigeria. The result showed significant positive effect of stock market on economic growth. Ewah *et al.* (2009) studied capital market efficiency on economic growth in Nigeria using time series data on market capitalization, money supply, interest rate, total market capitalization and government development stock, 1961-2004. They applied multiple regressions and ordinary least squares estimation techniques. The result showed capital market in Nigeria has the potential to induce growth. However, that it has not contributed meaningfully to economic growth in Nigeria because of low market capitalization, low absorptive capacity, illiquidity, misappropriation of funds among others.

In Addition, Ezeoha *et al.* (2009) examined the nature of relationship between stock market development and level of investment (domestic private investment and foreign private investment) flows in Nigeria. The author discovered that stock market development promotes domestic private investment flow. The result equally showed that stock market development has not been able to encourage the flow of foreign private investment in Nigeria. Abu (2009) examined if stock market development in Nigeria raises economic growth. He employed error correction approach, and the result indicated that stock market development (market capitalization-GDP ratio) increases economic growth. Pat and James (2010) contended that the capital market indices have not impacted significantly on the GDP. From Kolapo and Daramola (2012) study on impact of capital market on economic growth, the result reveals that the activities in the capital market tend to impact positively on the economy. Again Idowu and Babatunde (2012) studied the effect of financial reforms on capital market development in Nigeria. They applied the Chow-breaking point test, and result reveals that financial reform of 1995 impacted significantly on the capital market development in Nigeria. Also the study by Okoroafor (2014) on the efficiency of the Nigerian capital market and the stock price volatility, confirmed that stock prices in Nigerian stock market is highly volatile and in addition with public holidays influences negatively the capital market performance. Again Audu (2015) reported that the instituted capital market reforms in Nigeria impacted positively on capital market development and economic growth in Nigeria.

3. Analytical Methodology

The method adopted in arriving at solution to research question is very vital to empirical studies. Previous empirical studies as reviewed have suggested a connection between capital market development and economic growth. Most of the relationship posted is a causal one, with no unified model where impact of capital market reforms on stock market development and economic growth are examined simultaneously. This being the fact, the question "do capital market reforms have effect on the development of stock market and economic growth in Nigeria remains unanswered. To provide the required answers to the stated problem of this study, we employed generalized method of moment (GMM) technique.

3.1. The Model Specification

The study is focused to examine the roles of lagged values of the following: market capitalization, index of stock prices, volume traded, turn-over ratios, foreign portfolio investment, real gross domestic product, money supply and openness of the economy on market capitalization. It is also aimed at establishing the impacts of capital market developmental indices on the economic growth. Structurally, the equations are given as:

$MCAP = f(MCAP_{t-i}, INDX_{t-i}, VTR_{t-i}, TVR_{t-i}, FPI_{t-i}, RGDP_{t-i.} M2_{t-i,,} OPN_{t-i})$……..…3.1.1

Where:

MCAP= Stock market capitalization.

INDX = Index of stock prices.

VTR = Volume traded

TVR = Turn over ratios.

FPI = Foreign portfolio Investment.

RGDP = Real Gross Domestic Product.

M2 = Money supply

OPN = Openness of the economy

The explicit form of equation 3.1.1 is represented as:

$MCAP = \beta_0 + \beta_1 MCAP_{t-i} + \beta_2 INDX_{t-i,} + \beta_3 VTR_{t-i} + \beta_4 TVR_{t-i} + \beta_5 FPI_{t-i} + \beta_6 RGDP_{t-i} + \beta_{7M2t-i} + \beta_{8OPNt-i} + \mu_t$……3.1.2

On the other hand the impact of capital market development on economic growth is stated as:

$RGDP = f(RGDP_{t-i}, MCAP_{t-i}, VTR_{t-i}, TVR_{t-i,} OPN_{t-i})$……3.1.3

Where:

RGDP = Real Gross Domestic Product.

MCAP= Stock market capitalization.

VTR = Volume traded

TVR = Turn over ratios.

OPN = Openness of the Economy.

Explicitly, the equation 3.1.3 becomes:

$RGDP = \lambda_0 + \lambda_1 RGDP_{t-i} + \lambda_2 MCAP_{t-i} + \lambda_3 VTR_{t-i} + \lambda_4 TVR_{t-i} + \lambda_6 OPN_{t-i} + \varepsilon_t$ ……...…3.1.4

3.2. Validity of the Method

The use of GMM is informed by the fact that the two relationships to be studied are characterized by joint endogeneity of some variables involved in the study. Besides in a system of simultaneous equation, the issue of identification is upheld. In the case of over-identification, the method of indirect least square is not appropriate. Other methods such as Two Stage Least Squares (TSLS), Three Stage Least Squares (3SLS), Seemingly Unrelated Regression (SUR), General Least Squares (GLS) and Generalized Method of Moments (GMM) are favoured. However, if the rank condition is satisfied, the most appropriate of these techniques to apply is the GMM according to Gujarati (2005) and Yartey (2008).

From our simultaneous equation system, some of the explanatory variables in the model are either simultaneously determined with the dependent variables or have a two way causal relationship with it. In the presence of correlation between the right hand side variable and that of the left hand side, estimation method such as OLS will not be consistent because assumption of strict exogeneity of the explanatory variables would be violated. Again the orthogonalised condition between error term and regressors are not likely to meet for either GLS or SUR estimator to produce consistent estimation. It is still possible to achieve the orthogonal condition between the error term and the regressors through appropriate differencing of data. However because equations contains endogenous regressors as well as effects of lagged endogenous variables, the error term in the differenced equation is correlated with the lagged dependent variable through contemporaneous error term. Therefore, neither application of GLS or SUR estimator will produce consistent estimates under this condition except the use of GMM. GMM estimator is an instrumental variable estimator that uses lagged values of all endogenous regressors as well as lagged and current values of all strictly exogenous regressors as instruments. The equations can be estimated using the levels or the first differences of the variables. The GMM is chosen because of the optimal properties that its parameters estimates possess. Its computational procedure is fairly simple, and it has limited data requirement. It is intuitively appealing. Above all, the GMM technique has over time produced fairly satisfactory results in a range of economic relationship it has been applied, Yartey (2008).

3.3. The Technique of Evaluation

The equations 3.1.2 and 3.1.4 will be subjected further to dynamic estimation using the lag structure of the variables. There will also be determination of the existence of substantial co-movement among the time series variables. Furthermore the data would be tested for unit root by applying the Augmented Dickey Fuller (ADF) tool. Also the Wald Coefficient test will equally be applied to the estimated equation to perform hypothesis tests on the coefficients of the model after using GMM. The Wald test examines whether the positive and negative coefficients in the GMM estimate are significantly different from zero (that is, whether they are symmetric or asymmetric). The coefficient of determination and its adjusted values with Durbin Watson statistics shall equally be applied in the evaluation.

3.4. Sources of Data

The data for this study covering the period of 1984-2014 is a secondary data secured from Central Bank of Nigeria Statistical Bulletin, various issues; Nigerian Bureau of statistics (NBS) and the Nigerian stock Exchange (NSE) fact books.

4. Empirical Analysis

In this section, we presented an analysis of the data used and the interpretation of the result generated from the data. The data for the study is presented in the appendix and it covers the period of 1984-2014. Starting from the model identification, the two equations in our study were discovered to be over-identified.

Table-4.0.1. Unit Root Test.

	5% LOS	Augmented Dickey-Fuller Statistics.			
Variable(s)	Critical values	Level	1st Difference	2nd Difference	Decision
MCAP	5.662	-3.612	-	-	I(0)
VTR	5.621	-3.622	-	-	I(0)
TVR	-4.735	-	3.581	-	I(1)
FPI	-9.653	-3.587	-	-	I(0)
RGDP	-6.060	-	-3.581	-	I(1)
M2	-4.883	-	-3.574	-	I(1)
OPN	-3.632	-3.568	-	-	I(0)
INDX	-5.661	-	-3.574	-	I(1)

Sources: Authors Computation

We therefore proceeded to apply the GMM techniques as pointed to earlier. Meanwhile the Augmented Dickey-Fuller tests of the time series were done to ascertain the time series property of the data. The result of the ADF test is presented and analyzed below.

The result of the unit root test as presented above indicates that MCAP, VTR, FPI and OPN were stationary at level. While TVR, RGDP, and INDX were integrated at order one, each at 5 percent level of significance. It is judged safe to continue with the time series data estimates of our econometrics specifications.

4.1. Presentation of Results of GMM

Table-4.1.1. Generalized Method of Moments (GMM) Result.

Explanatory Variables	Equation 3.1.2 Coefficients (MCAP Is Dependent Variable)	Explanatory Variables	Equation 3.1.4 Coefficients (RGDP Is Dependent Variable)
Constant	-642.38 (-0.375)	Constant	-8.66 (-0.286)
MCAP(-1)	1.332 (2.564) *	MCAP(-1)	0.003 (2.09) *
VTR(-1)	-26.916 (-2.19) *	VTR(-1)	0.188 (3.09) *
TVR (-1)	216.94 (1.68)	TVR (-1)	-3.969 (-2.09) *
OPN(-1)	691.18 (2.17) *	OPN(-1)	-7.27 (-2.59) *
RGDP(-1)	-18.274 (-1.58)	RGDP(-1)	1.307 (10.01) *
FPI(-1)	-127.71 (-0.77)	**R^2 = 0.99** **R^{-2} = 0.98** **DW = 2.32**	
M2(-1)	124.51 (2.23) *		
INDX(-1)	-0.043 (-0.88)		
R^2 = 0.94 R^{-2} = 0.92 DW = 1.92			

Note: * (significant @ 5 percent LOS).

Table-4.1.2. Wald Coefficient Test:

Test Statistic	Value	Df	Probability
F-statistic	123679.9	(8, 21)	0.0000
Chi-square	989439.0	8	0.0000

Source: Authors computation using E-Views.

4.2. Interpretation of Result

The Table 4.1.1 above conveys the result of GMM procedure applied to equations 3.1.2 and 3.1.4 on the impact of reforms on capital market development and that of the effect of capital market development on economic growth in Nigeria over the period of 1984 to 2014.

From equation 3.1.2, the constant coefficient which is negatively signed indicates that there will be a decrease of 642.38 in the value of market capitalization if other variables were zero. However, the figure is not significant at 5 percent significance test. On the lagged explanatory variables, the result presented a significant impact of the combined explanatory variables on the dependent variable. This is revealed by the adjusted R-squared of 0.92. On the contributions of the individual explanatory variables to explain the dependent variable; lagged values of market capitalization (MCAP), volume of shares traded (VTR), openness of the economy (OPN) and Money supply (M2) were highly significant at over 5 percent to determine capital market development over the period of our study in Nigeria. Particularly, the VTR, though it appeared with wrong sign, yet was significant. The same is applicable with Real Gross Domestic product (RGDP), foreign portfolio investment (FPI) and the index of stock prices (INDX). Their various signs are indication that when these variables increase by 1 percent, the market capitalization decreases by the coefficient assigned to each of these explanatory variables. The turn - over ratio (TVR) in particular, though insignificant at 5 percent level, it contributed positively and has a large coefficient of 216.94. The result supports the finding that the market liquidity rates have positive impact on stock market capitalization. According to Levine and Zervos (1996) Liquidity helps investors to facilitate investment projects and make them less risky. Again the result has re-emphasized the importance of openness of the economy. The coefficient of OPN was positive, significant and large. It is clear that openness engenders positive development in the stock market. But the foreign portfolio investment (FPI), though it has large coefficient, it appeared with negative insignificant sign. This indicates that foreign portfolio investment in Nigeria is not yet adequate to contribute positively and significantly to capital market development. It implies that what is taken out of the capital market in terms of capital flight is more than what comes into the market in form of portfolio investment. Also on the result of money supply, it is indicative that increase in money supply make for positive and significant development of the stock market. The coefficient of money supply (M2) is very high at 124.51. The RGDP contributed negatively and insignificantly to capital market development in Nigeria over the period of our study. On the whole, the R^2 and R^{-2} of 0.94 and 0.92 respectively, indicates that capital market development is adequately explained by the model. By implication, 94 percent variations in capital market development are explained by the explanatory variables. The Durbin-Watson (DW) statistics of 1.92 which is approximately '2' indicates absence of autocorrelation and tends to support the model estimated with the GMM procedures. The result and findings shows that there is significant relationship between capital market reforms and capital market development. This result is consistent with the findings from the studies by Yartey (2008); Idowu and Babatunde (2012) and Audu (2015).

On the other hand, column 3 and 4 of Table 4.1.1 shows the result of equation 3.1.4 where RGDP appeared as the dependent variable. It is noteworthy that the three indicators of capital market development (MCAP, TVR and

VTR) yielded significant results to influence economic growth. The MCAP and VTR had positive signs, while TVR appeared negative. The openness of the economy (OPN) was significant but had negative sign. The lagged value of RGDP was highly significant and positive, to explain changes in current RDGP.

The result from R-squared and its adjusted value of 0.99 and 0.98 respectively, indicated that economic growth in Nigeria is adequately explained by the model over the period of 1984 to 2014. Durbin -Watson (DW) of 2.32 which is approximately '2' indicates absence of autocorrelation. This implies that the analysis is free from the problem of serial correlation, and tends to support the model estimated with the GMM procedure. From the evaluation made we can therefore reject the null hypotheses and accept the alternative hypotheses that there is significant relationship between capital market reforms and economic growth in Nigeria. The result are consistent with studies by Levine and Zervos (1996); Anyanwu (1998); Ohiomu and Godfrey (2011); Kolapo and Daramola (2012) and Audu (2015).

Also the result of Wald coefficient test on Table 4.1.2 shows a chi-square value of 989439 and probability value of 0.0000. The low probability value is indicative that the null hypothesis is strongly rejected. Therefore, the coefficient are asymmetric (i.e. significantly different from zero) as evidenced by the low probability values.

5. Summary and Conclusion

The analysis done in this study has shown that the capital market reforms introduced in Nigeria over the period of 1984-2014 had significant positive impact on stock market development and economic growth in Nigeria. The reform variables such as volume traded (VTR), turnover ratio (TVR), market capitalization (MCAP), openness (OPN), money Supply (M2) and RGDP had significantly impacted the models of our study over the periods covered by the study. All these implies that further reforms especially in market security, sensitization and widening the participation zone to incorporate rural dwellers and small firms will go a long way to develop the capital market in particular and the economy in general.

References

Abu, N., 2009. Does stock market growth raise economic growth? Evidence from Nigeria. Journal of Banking and Finance, 1(1): 15-26.

Adam, J. and I. Sanni, 2005. Stock market development and Nigerian economic growth. Journal of Economics and Allied Fields, 2(2): 116-132.

Al-Faki, M., 2006. The Nigerian capital market and socio-economic development. Paper Presented at the 4th Distinguished Faculty of Social Science Public Lecture. University of Benin. pp: 9-16.

Alile, H., 1996. Government must divest. Nigeria Business Concord: December, 2(2): 8.

Anyanwu, J., 1998. Stock market development and Nigerian economic growth. Nigerian Financial Review, 7(2): 6-13.

Atje, R. and M. Jovanovic, 1998. Stock market and development. European Economic Review, 37: 632-640.

Audu, K., 2015. The impact of capital market reforms on capital market development and economic growth in Nigeria: 1970-2011: An MSc Economics Dissertation, University of Abuja Nigeria.

Bekaert, G., C. Harvey and C. Lunlad, 2005. Do financial liberation spur growth? Journal of Financial Economics, 77(1): 3-55.

Bencivenga, V.R., B.D. Smith and R.M. Starr, 1996. Equity markets, transaction cost and capital accummulation: An illustration. World Bank Economic Review, 10(2): 241-265.

Bhide, A., 1993. The hidden cost of stock market liquidity. Journal of Financial Economics, 34(1): 31-51.

De La Torre, A. and S. Schmukler, 2007. Emerging capital market and globalisation, the Latin America experience. Washington: Stanford University Press.

Demirgue-Kunt, A. and R. Levine, 1996. Stock market, corporate finance and economic growth: An overview. World Bank Review, 10(2): 223-239.

Devereaux, M. and G. Smith, 1994. International risk sharing and economic growth. International Economic Review, 35(4): 275-287.

Ekuakun, C., 2005. The Nigerian capital market impact on economic growth. An Unpublished MSc Economics Dissertation, University of Benin, Benin City.

Ekundayo, I., 2006. Creating a conducive environment for investment in the Nigerian capital market. Paper Presented at Public Enlightenment on Opportunities in the Capital Market for Industrial Development of Kogi State, Lokoja.

Ewah, S.O.E., A.E. Essang and J.U. Bassey, 2009. Appraisal of capital market efficiency on economic growth in Nigeria. International Journal of Business and Management, 4(12): 219-225.

Ezeoha, A., O. Ebele and O.O. Ndidi, 2009. Stock market and private investment growth in Nigeria. Journal of Sustainable Development in Africa, 11(2): 20-35.

Gujarati, N., 2005. Basic econometrics. 6th Edn., New Delhi: Tata McGrow-Hill.

Harris, R., 1997. Stock markets and development: A re-assessment. European Economic Review, 41(1): 139-146.

Holmstrom, B. and J. Tirole, 1993. Market liquidity and performance monitoring. Journal of Political Economy, 101(4): 678-709.

Idowu, A. and M. Babatunde, 2012. Effects of financial reforms on capital market development in Nigeria. Asian Journal of Business and Management Sciences, 1(8): 44-52

Jensen, M. and J. Stiglitz, 1990. Performance, pay and top management incentives. Journal of Political Economy, 98(2): 225-264.

Kolapo, F. and A. Daramola, 2012. The impact of the Nigerian capital market on economic growth. International Journal of Developing Societies, 1(1): 11-19.

Levine, R. and S. Zervos, 1996. Stock market development and long run growth. World Bank Economic Review, 10(3): 323-339.

Levine, R. and S. Zervos, 1998. Sock market, banks and economic growth. American Economic Review, 88(3): 537-558.

Liu, W. and C. Hsu, 2006. The role of financial development in economic growth: The experience of Taiwan, Korea and Japan. Journal of Asian Economics, 17: 666-680.

Lucas, R., 1988. On the mechanics of economic development. Journal of Monetary Economics, 22(1): 3-42.

Mohtadi, H. and S. Agarwal, 2001. Stock market development and economic growth: Evidence from developing countries. Available from http//www.uwm.edu/mohadi/PA-4-01.pdf.

Nieuwerbugh, S., F. Buelens and L. Cuyvers, 2005. Stock market development and economic growth in Belgium. NYU Working Paper No. 05-024.

Nwankwo, G., 1999. Money and capital market in Nigeria today. Lagos: University of Lagos Press.

Nyong, M.O., 1996. Capital market development and long run econopmic growth: Theory, evidence and policy proposal for another development strategy. In J.E.U. Ndebbio and U. Essia (Eds), Nigeria, another development strategy. Calabar: But-Bass Educational Book. pp: 129-155.

Obamiro, J.K., 2005. Nigerian economy: Growth and the role of stock market. Journal of Economic and Financial Studies, 2(2): 147-152.

Ohiomu, S. and O.E. Godfrey, 2011. The effect of stock market on economic growth in Nigeria. Jorind Journal, 9(1): 287-295.

Ojo, O., 1984. Financial intermediation and growth, inaugural lecture series, 68. Osun State, Nigeria: University of Ife Press. ILE-Ife (68). pp: 2-16.

Okereke-Onyiuke, N., 2000. Stock market financing options for public projects in Nigeria. Nigerian Stock Exchange Fact Book, October 2000 Edition: 41-49.

Okoroafor, O.K.D., 2014. Capital market efficiency and asset price volatility in the Nigerian stock market: 2004-2010. A PhD Economics Thesis, University of Abuja , Abuja, Nigeria.

Osaze, B., 2000. The Nigerian capital market in the African and global financial system. Benin City: Bofic Consults Group Limited.

Osinubi, T. and L. Amaghionyeodiwe, 2003. Stock market development and long-run growth in Nigeria. Journal of African Business, 4(3): 103-129.

Pat, D. and O. James, 2010. An empirical analysis of the impact of Nigerian capital market on her socio-economic development. Journal Social Science, 24(2): 135-142.

Pedro, S. and Q. Erwan, 2004. The implication of capital-skill complementarity in economies with large informal sectors. Centre for Latin America Working Papers, 0404, Federal Reserve Bank of Dallas.

Rousseau, P.L. and Paul, 1998. Financial intermediation and economic performance: Historical evidence from five industrialized countries. Journal of Banking and Finance, 30: 1933-1957.

Scharfstein, D., 1988. The disciplinary role of takeovers. Review of Economic Studies, 55(2): 185-199.

Singh, A., 1997. Stock markets, financial liberalisation and economic development. Economic Journal, 107(4): 771-782.

Stern, N., 1989. The economics of development, a survey. Economics Journal, 99(397): 597- 685.

Sule, O. and O. Momoh, 2009. The impact of stock market earnings on Nigerian per capita income. African Joiurnal of Accounting, Economics, Finance and Banking Research, 5(5): 77-89.

Yartey, C., 2008. The determinants of stock market development in emerging economies: Is South Africa different. IMF Working Paper, African Department. WP/08/32.

Table-4.1. Stock Market and Other Economic Development Indicators (1984 – 2014)

YEAR	MCAP	VTR	TVR	FPI	GDP	M2	OPN	INDX
1984	3.000000	0.140000	2.140000	0.030000	183.5600	33.72000	0.090000	118.5000
1985	3.280000	0.160000	2.080000	0.930000	201.0400	32.84000	0.090000	127.3000
1986	3.300000	0.240000	1.370000	0.050000	205.9700	34.43000	0.070000	163.8000
1987	4.000000	0.190000	2.140000	0.050000	204.8100	26.20000	0.240000	190.9000
1988	4.550000	0.390000	1.180000	0.050000	219.8800	27.58000	0.240000	233.6000
1989	5.410000	0.260000	2.100000	0.050000	236.7300	21.17000	0.380000	325.3000
1990	6.090000	0.080000	7.230000	0.040000	267.5500	19.76000	0.580000	513.8000
1991	8.700000	0.090000	9.540000	0.050000	265.3800	24.16000	0.790000	783.0000
1992	11.50000	0.180000	6.350000	0.080000	271.3800	20.86000	1.290000	1107.600
1993	17.28000	0.290000	5.910000	0.240000	274.8300	24.18000	1.400000	1543.800
1994	24.07000	0.360000	6.720000	0.260000	275.4500	25.59000	1.340000	2205.000
1995	64.11000	0.650000	9.810000	0.420000	281.4100	14.95000	6.060000	5092.200
1996	97.30000	2.380000	4.090000	0.420000	293.7500	12.80000	6.370000	6992.100
1997	93.34000	3.420000	2.730000	0.420000	302.0200	14.75000	6.910000	6440.500
1998	84.47000	4.370000	1.930000	0.490000	310.8900	18.02000	5.110000	5672.700
1999	96.10000	4.510000	2.130000	0.490000	312.1800	19.69000	6.570000	5266.400
2000	143.4800	8.550000	1.680000	0.480000	329.1800	19.17000	8.900000	8111.000
2001	185.5800	16.16000	1.150000	0.450000	356.9900	26.86000	9.040000	10953.10
2002	176.5700	13.71000	1.290000	0.380000	433.2000	21.79000	7.520000	12137.70
2003	284.6500	25.21000	1.130000	0.370000	477.5300	23.01000	10.82000	20128.90
2004	400.4200	42.80000	0.940000	0.470000	527.5800	18.68000	12.49000	23844.50
2005	516.1000	46.79000	1.100000	0.580000	561.9300	18.10000	17.88000	24085.80
2006	859.4900	78.93000	1.090000	0.810000	595.8200	20.46000	18.02000	33189.30
2007	2096.110	169.6500	1.240000	0.870000	634.2500	24.82000	20.01000	57990.20
2008	1422.640	249.8000	0.570000	0.590000	672.2000	32.96000	23.93000	31450.80
2009	977.9000	95.37000	1.030000	0.610000	718.9800	37.96000	18.72000	20827.20
2010	1277.570	14.27000	1.240000	21.25000	776.3300	32.47000	24.53000	24770.50
2011	1159.560	25.20000	1.510000	26.01000	834.1600	32.42000	39.41000	20730.60
2012	14800.90	21.02000	9.710000	41.64000	717.1400	21.17000	20.40000	28078.80
2013	19077.40	34.40000	7.330000	56.33000	800.9300	13.89000	19.70000	41329.20
2014	16127.82	76.12000	0.820000	16.26000	890.4400	15.16000	19.20000	34557.20

Sources: CBN, SEC, NBS and NSE Year Book Various Issues.