The Impact of Stock Market Development on Economic Growth in Nigeria

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Abstract
This study examined the impact of the Nigerian Stock market development on the nation's economic growth from 1985 to 2014. The economic growth was proxy by the GDP while the stock market variables considered included; market capitalization and market turnover ratio as proxy for stock market development in terms of size and liquidity. The study utilizes the Johansson's co integration test in establishing if a long run relationship does exist between stock market development and economic growth in Nigeria. The empirical results suggest that the stock market is significant in determining economic growth in Nigeria using the error correlation model and it was found that the stock market has impacted insignificantly on the economic growth. It is recommended that policy makers should ensure improvement in the market capitalization, by encouraging foreign direct investment participation in the market. Small and medium entrepreneurs should be encouraged to access the market for investible funds given their close affinity with the grass root funds mobilization ability.

Key Words: *Stock Market, Economic Growth, Development, Nigeria*

1.0 Introduction

It is obvious that the stock market plays a very critical role in economic growth and development of any nation. Therefore, the development of stock market is regarded as key and important vehicle in accelerating the growth of economy. Over the years, Nigeria stock market experienced phenomenon growth from year 1985 with market capitalization of paltry N6.6 billion to an average of N13 trillion in 2014.

The enormous benefits which the stock market possessed have made it an interesting topic for

so many authors, economists and policy makers. The fact that Nigeria has been enjoying tremendous inflow of foreign direct investment in its stock market cannot be ignored. This has greatly impacted the development of the market especially in the period preceding global recession of year 2008. Stock market is regarded as a guide to business and was argued that an active capital market is a reliable platform to measure general economic activities with the use of market index (Obadan, 1998).

The main essence of the stock market is to consolidate growth in the financial systems, and enhance the consequent impact of the latter on economic development. According to Yartey and Adjasi (2007), the establishment of stock markets in Africa is expected to boost domestic savings and increase the quantity and quality of investments. Singh (1997) emphasized that in principle, the stock market is expected to accelerate economic growth by providing a boost to domestic savings thereby increasing the quantity and the quality of investment.

Equally, stock exchange can increase economic growth by making available information on firms' prospects and redistributing investible capital. Supporting this view, in the case of Africa, Yartey and Adjasi (2007) establish that the stock markets have contributed to the financing of the growth of large corporations in certain African countries and that large corporations in Africa have made considerable use of the stock markets to finance their growth.

In the case of Africa, however, little proofs are available to support arising theoretical projections on the role of the stock market in encouraging capital formation and investments. This situation has instead helped to tilt public opinion towards believing the allegation that emerging African economies have not felt the impact of the huge growth recorded by the stock markets over the years.

According to Levine (1991) liquid equity market makes investment less risky and more attractive because they allow savers to sell their equity quickly and cheaply if they need access to their savings. In other words investors will have confidence in markets that are assessable whenever the need arises. The more accessible the participants are to the market, the more liquid the market will become.

Dermirguc-kunt and Levine (1995) further expounded that large companies enjoy permanent access to capital raised through issues. That is to say that, through facilitating long term and profitable investment, liquid market improves the allocation of capital and enhances the prospect of long economic growth. Stock markets play key role in allocating capital to corporate sector, which in turn exerts real effect on the domestic growth of the economy, (Caporale, G. M., Howells, P., and Soliman. A. M. 2005). Empirical investigation on the link between financial development in general and stock market in particular have been relatively limited, particularly, regarding developing economies. Substantial economic literature dating back to Bernanke and Gertler (1990) and Schumpeter (1911) had emphasis positive contribution of the financial system to economic growth.

1.1 Statement of Problem

Previous studies have examined the relationship between stock market development and economic growth. While some studies revealed negative association between stock market and economic growth, others showed a positive connection between stock market development and economic growth.

Levine and Zervos (1996), as well as Harris (1997) studies reveal positive relationship between stock market and economic growth. On the other hand, study by Osinubi and Amaghionyeodiwe (2003), using Nigerian data, affirm that stock market development statistically had no significant impact on economic growth in Nigeria during the period 1980 to 2000. According to the study, the Nigerian Stock Market was unable to make significant contribution to rapid economic growth because of the existence of certain policies that distort the effectiveness of the channel through which stock market activities influence economic growth. Demirguc-Kunt and Levine (1996) also questioned the contribution of stock market liquidity to long-term economic growth.

The current realities existing in most of the Exchanges in Africa today leave some significant gap in the debate on the impact of stock market development on economic growth. In the case of Nigeria, for instance, the market indicators have declined very rapidly as a result of the global recession that affected the financial system of Nigeria. The activities of investors engaging in capital flight and profit taking on the stock market could impact on the economy overtime with instability of the market.
The study of Nigeria stock exchange market is justifiable based on the fluctuating market capitalization and movements in the key market indicators such as value of traded securities, as well as the All-share Index. With this scenario, there is a need to establish its empirical connection with economy growth. Therefore, the objective of this study is to determine the effect of stock market development on economic growth in Nigeria.

Evolution of Nigeria Stock Market
The stock exchange market was pioneered by the Lagos Stock Exchange in 1960. The Lagos Stock Exchange thereafter metamorphosed into Nigeria stock exchange in 1977 with establishment of branches in parts of Nigeria. By 1999, the exchange has spread its tentacle to several cities in the country including Kaduna, Port Harcourt, Kano, Onitsha, Ibadan and Lagos as head office.
The growth of stock market has been phenomenon since 1960 when it was established with the number market instruments traded. The market operators and size of the market capitalization has also multiplied in great dimension and which eventually impacted on the economy. Hamid and Sumit (1998) actually confirm the positive impact of market indicators on economic growth of developing countries.

2.0 Literature Review
2.1 Empirical Review
In some prior studies, diverse authors established relationship that exists between stock market development and economic growth. Nyong (1997) developed an aggregate index of capital market development and used it to determine its relationship with long-run economic growth in Nigeria. The study employed a time series data from 1970 to 1994. Four measures of capital market development-ratio of market capitalization to GDP (in %), ratio of total value of transactions on the main stock exchange to GDP (in %), the value of equities transactions relative to GDP and listing were used. Demiurgic-Kunt and Maksimovic (1998) cited in Henry (2000) found a relationship between economic growth and the stock market activity in the field of transmission of security (secondary market) more than in funds channeling (primary market).

Again, Demiurgic-Kunt and Maksimovic (1998) have shown and re-emphasized the complementary role of the stock market and banks that they were not rival or alternative institutions using 30 countries from 1980 to 1991. Levine and Zervos (1998) used pooled

cross-country time series regression of 47 countries from 1976 to 1993 to evaluate whether stock market liquidity is related to growth, capital accumulation and productivity. They towed the line of Demiurgic- Kunt and Levine (1996) by conglomerating measures such as stock market size, liquidity and integration with world market, into index of stock market development. The rate of Gross Domestic Product (GDP) per capita was regressed on a variety of variables designed to control for initial conditions, political instability, investment in human capital and macro-economic condition and then, included the conglomerated 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 seems to correlate to economic growth.

Some studies reported that stock market liquidity and size is crucial for growth (Bencivenga V. Smith B and Starr R. 1996; Levine, 1991). Although the investments in capital markets are much profitable for investors, investors do not want to block their investments for long periods. Liquid equity markets are the solution for long term investments as they provide such assets which can be sold easily and inexpensively by the investor. On the other hand, the firms also have permanent access to capital raised through equity issues (Levine and Zervos, 1998).

Furthermore, Paudel (2005) confirmed that stock markets, on account of liquidity, facilitate firms to attain the much needed capital quickly; therefore, it facilitates capital allocation, investment and growth. In this regard, Adajaski and Biekpe (2008) found a considerable positive impact of stock market development on economic growth in countries of upper middle-income economies. Their findings were more strengthened by Bahadur and Neupane (2006), who concluded that stock markets fluctuations help to predict the future growth of an economy. Stock markets also provide the opportunities to investors to make diversified investments in reducing their unique risk; contribute to the mobilization of domestic savings by increasing the investment options available to investors and branch out their portfolios. Thus, investors are provided with an important source of investment capital at relatively lower cost (Dailami and Aktin, 1990).

The results of a study carried out by Adjasi and Biekpe (2008), which examined the effect of stock market development on economic growth in 14 African countries, revealed a positive relationship between the two and indicated that stock market developments played a significant role in growth only for moderately capitalized markets. On the basis of these results, they recommended that low income African countries and less developed stock markets needed to grow more and develop their markets to elicit economic gains from stock markets. Some other studies have equally found evidence in support of the argument that a significant positive relation between savings and stock market size and liquidity do exist and that a growing or deepening stock market would not necessarily spore higher savings rate.

In recent times, research interests have focused on investigating whether stock markets, especially in developing countries, have achieved the development-oriented goals for which they were originally conceived. The concept of stock market liquidity, for instance, has been used to demonstrate how developments in the securities market transmit to economic growth. This liquidity argument is based on the proposition that stock markets enable firms to acquire much needed capital quickly and, by so doing, helps in facilitating capital allocation, investment, and growth. It also assists in reducing investment risk due to the ease with which equities are traded and play crucial role in helping to determine the level of economic activities in most economies (Yartey and Adjasi, 2007). Some other major studies that

investigated the link between stock market and economic growth – including, Levine and Zervos (1996), as well as Harris (1997) - equally reached similar conclusions that indeed; some definite kind of relationship exists between stock market development and economic growth.

The current realities existing in most of the Exchanges in Africa today leave some significant gap in the debate on the impact of stock market growth on economic development. In the case of Nigeria, for instance, the level of growth in the stock market (measured by growth in total market capitalization) by far outweighs the GDP growth rates in the country.

2.2 Theoretical Review

Among the relevant theories on growth is the classical growth models which basically consist the eighteenth-century pioneering work of Adam Smith, David Ricardo, and Thomas Robert Malthus. The interest in growth developed out of the philosophical question of progress as basic tenet of enlightenment thought that applied equally to ideas, scientific innovations, social norms, and more generally the material bases of society.

The second is the endogenous growth theory of economist Paul Romer and Robert Lucas, Jr. in the late 1980s and early 1990s developed the endogenous growth theory that includes a mathematical explanation of technological advancement. This model also incorporated a new concept of human capital, the skills and knowledge that make workers productive.

Thirdly is the Keynesian growth models derive from a number of John Maynard Keynes's twentieth-century insights on employment and economic stability. They tend to emphasize the difficulty of fine tuning the economy to achieve full employment or optimal growth.

Finally, Neoclassical Growth model tend to emphasize the ease of substitution among factors of production (labour, capital, land, or other essentials in the production of commodities), which permits the economy to achieve steady-state growth (a constant proportionate rate of growth of all real variables).

3.0 Research Methodology

Secondary data collected from Nigerian Stock Exchange (NSE), Security and exchange commission (SEC) market bulletin and Central Bank of Nigeria (CBN) statistical bulletins from 1985 to 2014 were used in this study. The data for the stock market indicators was obtained from the NSE/SEC bulletin while the data for real gross domestic product for the relevant years was obtained from the CBN statistical bulletin.

Key variables for the study are grouped into the dependent (or endogenous) variable, the independent variables, and the controlled variables. While the major dependent variable is the real GDP, the independent variables are stock market capitalization (defined in terms of the ratio of stock market capitalization to GDP) and the Turnover ratio (measured by Total value of traded shares derived as the stock market liquidity (Total value of traded shares /GDP), while the controlled variables for this study were Labour and Capital. The inclusion of the independent variables is motivated by the methodologies of previous researchers.

The multiple regression analysis was used to test whether the stock market indices (Market Capitalization, turnover ratio) have impacted on the economic growth of Nigeria, proxy by (Real Gross Domestic Product (RGDP).

Definition of Variables

Stock Market Capitalization: The stock market capitalization is the total value of tradable shares of public companies.

Turnover Ratio (TR): This ratio equals the value of total shares traded divided by market capitalization.

3.1 Model Specification

3.1.1 Impact of Stock Market Development on Economic Growth

In other to estimate the impact of stock market development (proxy by stock market capitalization and turnover ratio) on economic growth, the study will be adopting a model. For this purpose, Stock market development is measured by two proxies, that is, size proxy and liquidity proxy. 'Size' is the stock market capitalization, whereas 'Liquidity' is the market turnover.

The model for this study would be based on Demirgue-Kunt and Levine (1996), Levine and Zervos (1996) and Ewah S. O. Esang A. E, and Bassey J. U. (2009) which have investigated the linkage between stock market and economic growth, with slight modifications, which have investigated the impact of stock market development and economic growth, but with some modifications..

The modified model is formulated as follows:

$RGDP = F (LAB, CAP, MCAP, TURN)$

$RGDP = a_0 + a_1LAB + a_2CAP + a_3MCAP + a_4TURN + U$

Where the apriori expectation is: $a_1, a_2, a_3, a_4 > 0$ and

RGDP = Real Gross Domestic Product,

LAB= Labour

CAP= Capital

MCAP = Market capitalization,

TURN= Turnover Ratio,

U = Disturbance Term,

a_0 = Intercept,

$a_1 – a_4$ = coefficient of the independent variables.

Having the Cobb-Douglas production function as:

$RGDP = AK^{\alpha}L^{\beta}$

Incorporating the variables into the Cobb-Douglas production function, we have:

$RGDP = A\ LAB^{a1}\ CAP^{a2}\ MCAP^{a3}\ TURN^{a4}\ U$

This can be specifically expressed in explicit econometric (linear equation) form as:

$RGDP = a_0 + a_1LAB + a_2CAP + a_3MCAP + a_4TURN + U$

Adopting a log-linear specification, taking the natural logarithm of both sides of the equation and assuming linearity among the variables gives:

$Log\ RGDP = a_0 + a_1logLAB + a_2logCAP + a_3LogMCAP + a_4LogTURN + U$

Note that Log A = a0.

3.2 Method of Data Analysis

In determining the effect of stock market development on economic growth, the study used Error correction method.

4.0 Data Analysis and Interpretati on Introduction

4.1 Empirical Result

4.1.1 Unit Root Test

This study commenced its empirical analysis by first testing the properties of the time series, used for analysis. This is important because most macroeconomic time series data exhibit

non-stationary behaviour in their level form, which often poses a serious problem to econometric analysis, leading to spurious result if appropriate measures are not taken. To guard against spurious result, it is necessary to perform a pre-test to ensure that there is a stationary co-integrating relationship among variables. This study took caution by checking the properties of the variables via the Augmented Dickey-Fuller (ADF) and Phillips perron (PP) test.

Table1:

AUGMENTED DICKEY-FULLER TEST			PHILLIPS-PERRON TEST		
VARIABLES	LEVEL	1ST DIFFERENCE	LEVEL	1ST DIFFERENCE	REMARK
LRGDP	0.659801	-4.098341*	-0.764412	-6.054195*	I(1)
LMCAP	-0.572602	-4.412110*	-0.248065	-3.921691*	I(1)
LTURN	0.537158	-4.427985*	0.687369	-4.545685*	I(1)
LLABOUR	-0.316499	-5.459161*	0.205202	-7.769879*	I(1)
LCAPITAL	-2.044882	-3.625259**	-2.305374	-5.377461*	I(1)
CRITICAL VALUES					
1%	-3.7343	-3.7497	-3.7204	-3.7343	
5%	-2.9907	-2.9969	-2.9850	-2.9907	
10%	-2.6348	-2.6381	-2.6318	-2.6348	

Source: Authors computation. Note: *=1%, and **=5% significance level.

WHERE:
LRGDP = Log of real gross domestic product
LMCAP = Log of Stock market capitalization
LTURN = Log of Market turnover
LLABOUR = Log of labour
LCAPITAL = Log of capital

The result in the table above (table 1) shows that all the variables were not stationary in levels for both the ADF and PP test. This can be seen by comparing the observed values (in absolute terms) of both the ADF test statistics and the Phillips perron test with the critical values (also in absolute terms) of the test statistics at the 1%, 5% and 10% level of significance. But that all the variables were stationary at first difference, on the basis of this, the null hypothesis of non-stationary is rejected and it is safe to conclude that the variables are stationary. This implies that the variables are integrated of order one, i.e. 1(1).

Based on the foregoing, it became necessary to test for co-integration. By using the log-level form of the series, a multivariate co-integration relationship was estimated to establish the existence of a long-run equilibrium.

4.3.2 Co-Integration Rank Test

Having confirmed the stationary nature of the variables at 1(1), the study proceeded to examine the existence of co-integration among the variables. Note that when series are found to be integrated of the same order, such as 1(1) as in this case, it implies that an equilibrium relationship exists among the variables.

The Johansen multivariate co-integration technique was adopted rather than the Engel-Granger techniques. This was based on two reasons. First, the variables for analysis are I(1) series, which is a pre-condition for the adoption of the Johansen technique and secondly, the models are multi-variate models, consequently there is the possibility of having more than

one co-integrating vector in the model. This is against the Engel-granger technique which is only suitable for testing co-integration between two variables. The results obtained from the Johansen multivariate co-integration method is summarized in table 2.

Table2:
Summary of the Co-integration Tests

Trace Test				Maximum Eigen value Test			
Null	Alternative	Statistics	5% critical values	Null	alternative	Statistics	5% critical values
r=0	r≥1	85.01368	69.81889	r=0	r=1	38.57432	33.87687
r≤1	r≥2	46.43937	47.85613	r≤1	r=2	25.41462	27.58434
r≤2	r≥3	21.02474	29.79707	r≤2	r=3	12.74617	21.13162
r≤3	r≥4	8.278578	15.49471	r≤3	r=4	7.348412	14.26460
r≤4	r≥5	0.930166	3.841466	r≤4	r=5	0.930166	3.841466

Source: Author's Computation.
* denotes rejection of the hypothesis at the 0.05 level

As observed from the table above, the null hypothesis of no co-integration, for r=0, in the model, was rejected in the trace statistics and the maximum eigen-value statistics. The statistical values of these tests were greater than their critical values. However, the null hypothesis of no co-integration, that is r≤1r≤2 r≤3 r≤4 could not be rejected in both the trace statistics and the maximum eigen-value statistics, because its value was less than the critical value, implying that there are at least one co-integrating vectors among the series. The implication of this result is that there is the possibility that a long run relationship exist between real GDP and other macroeconomic variables used in the model. The existence of cointegrating relationship among the five I(1) variables implies that the determinants of stock market in Nigeria is most efficiently represented by an error correction specification.

4.4 Impact of Stock Market on Economic Growth

Based on the empirical model specified above, an examination of the impact of stock market development on economic growth was examined. Having identified the co-integrating vector using Johansen above, the study employed the error correction model to correct the short run imbalances. The results of the error correction model were presented in table 3 below:

Table 3: PARSIMONOUS MODEL

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECM(-1)	-0.245448	0.097777	-2.510272	0.0274
D(LMCAP,1)	0.038870	0.033152	-1.172480	0.2638
D(LTURN,1)	0.021793	0.019567	1.113759	0.2872
D(LCAPITAL,1)	0.027442	0.016716	1.641659	0.1266

D(LRGDP(-1),1)	-0.155688	0.145048	-1.073357	0.3042
D(LTURN(-1),1)	0.012143	0.014159	0.857584	0.4079
D(LLABOUR(-1),1)	-1.651265	0.790538	-2.088786	0.0587
D(LCAPITAL(-1),1)	-0.050349	0.011236	-4.480921	0.0008
D(LTURN(-2),1)	-0.033633	0.016040	-2.096825	0.0579
D(LLABOUR(-2),1)	-2.055916	0.954846	-2.153137	0.0523
C	0.110933	0.044398	2.498591	0.0280

R-squared	0.816356	Mean dependent var	0.003538
Adjusted R-squared	0.663319	S.D. dependent var	0.049718
S.E. of regression	0.028848	Akaike info criterion	-3.947594
Sum squared resid	0.009987	Schwarz criterion	-3.404532
Log likelihood	56.39733	F-statistic	5.334380
Durbin-Watson stat	1.664695	Prob(F-statistic)	0.004078

Source: Authors computation.

Table 3 reports the final parsimonious estimated equation. The results show that the coefficient of the error-term for the estimated growth model is both statistically significant and negative. Thus, it will rightly act to correct any deviations from long-run equilibrium. Specifically, if actual equilibrium value is too high, the error correction term will reduce it while if it is too low, the error correction term will raise it.
The R-squared above shows that 81.64 percent of the variation in the RGDP is explained by the explanatory variables. The Adjusted R-Square of 66.33 percent further buttress the fact the variation in RGDP is explained by the explanatory variables. There is no serial autocorrelation given that the Durbin Watson Statistic (1.66) is within the acceptable bound. In addition, the probability of the F-Statistic suggests that the model has a very good fit. Thus, for the regression above, the *p*-value is essentially zero, so we reject the null hypothesis that all of the regression coefficients are zero.

Comparing table 3 with the over-parametized model (appendix 2), it is evident that some variables have been dropped. This is because they had statistically insignificant coefficients in all experimental runs. From the result presented in the table above, LMCAP has a positive relationship with RGDP, that is an increase in LMCAP leads to approximately 0.0389 increases in RGDP but, this increase is not significant thus, LMCAP has a positive but insignificant relationship with RGDP. The lag values of LMCAP were not presented in the parsimonious model because they presented an insignificant value at all experimental runs.

The finding that the stock market has not contributed meaningfully to the economic growth of Nigeria could be due to low market capitalization, small market size, few listed companies, low volume of transactions, illiquidity etc. This result confirms the position of Singh (1999) that the stock market might not perform efficiently in developing countries and that it may not be feasible for all African markets to promote stock markets given the huge costs and the poor financial system.

The result of LTURN (0.0217) presented a positive, insignificant relationship with RGDP. This implies a 0.0217 increase in real GDP with every increase in LTURN. The same relationship goes for the lag 2 of LTURN (LTURN(-2)), that is the capital coefficient of two previous years ago has a positive impact on the present RGDP of the country but its

insignificant but then, lag 1 of LTURN (LTURN(-1)) presented a negative and significant relationship with the RGDP.

The result of LCAPITAL (0.0274) presented a positive, insignificant relationship with RGDP. This implies a 0.0274 increase in real GDP with every increase in LCAPITAL, but then, lag 1 of LCAPITAL (LCAPITAL (-1)) presented a negative and significant relationship with the RGDP. . It implies that any increase by l leads to -0.0503 decrease in economic growth.

The lags of LLABOUR presented a negative and significant relationship. This relationship can be explained by the law of diminishing returns which implies that as more unit of labor is included in production, it would result to decreasing returns to scale. This kind of relationship is detrimental to the economy as to be able to correct it; labour would be dropped leading to unemployment. The lags of LLABOUR has the coefficients of LLABOUR (-1), LLABOUR (-2); -1.6512 and -2.0559 respectively, has negative significant impact on the present economic growth which implies that labor is stable overtime.

5.0 Summary, Recommendation and Conclusion

An attempt has been made to examine the relationship between stock market development and economic growth in Nigeria, by employing the relevant methods. It was shown that economic growth contributes positively to stock market development (market capitalization).
The increasing importance of financial markets has reinforced the need to study the impact of stock market development on economic growth. The present study is an attempt to investigate the impact of stock market development and economic growth by taking size and liquidity as independent variables along with labour and capital as controlled variables in Nigeria.
The impact of stock market development is empirically tested on real GDP as a dependent variable of economic growth for the period of 1985 to 2014 using least squares methodology. As such, the results reported the expected positive signs except for the variables though some were statistically significant at some level of significance while others were not.

5.1 Conclusion

The stock market degree of capitalization has always been used as a benchmark to evaluate the performance of the Nigerian Stock Market towards economic growth. It is a major performance indicator used in determining the worth of the market and a parameter that cannot be ignored by operators and dealers in capital market. Therefore, this study concluded that stock market capitalization and turnover ratio had a positive influence on economic growth as confirmed using the Error correction method. Since stock market development (captured by market capitalization-GDP ratio) has statistical positive influence on economic growth, it implies that higher stock market capitalization increases the ability of firms to raise capital. Thus, they (firms) will be able to increase investment spending and expand production of goods and services which translate to higher growth rate overtime.

This findings agree with Ewah et al (2009) who found that the stock market in Nigeria has the potentials for growth inducing but has not contributed meaningfully to the economic growth of Nigeria due to low market capitalization, small market size, few listed companies, low volume of transactions, illiquidity etc. Furthermore, the result also supports Harris (1997) who found no hard evidence and strong positive relationship between stock market and economic growth and is contrary to the literatures that there is positive relationship between stock market and economic growth.

5.2 Recommendations

The results obtained in this study have a number of policy implications for both the monetary authorities and the national governments. In all stages of economic growth in Nigeria, great reliance has been placed on the stock market as the medium of interaction which facilitates the exchange of the long-term funds within the nation's economic units to achieve an optimal financial flow so as to optimize investment and growth. For the stock market to achieve this objective, it is recommended that policy makers should ensure improvement in the market capitalization, by encouraging foreign direct investment participation in the market. Moreover, there is a need to invigorate and strengthen the financial market; more companies should be encouraged to get listed on the floor of the market. Small and medium entrepreneurs should be allowed to access the market for investible funds given their close affinity with the grass root funds mobilization ability.

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APPENDIX 1

TABLE 1:

Year	RGDP (Nm)	MCAP (Nb)	TURN (Nb)	LABOUR	CAPITAL	ASI	VLS	TNI
1985	**201,036.27**	6.6	0.31	2.70E+07	40934.55	127.3	316.6	817.2
1986	**205,971.44**	6.8	0.49	2.70E+07	35536.21	163.8	497.9	833
1987	**204,806.54**	8.2	0.29	2.80E+07	27159.19	190.9	382.4	450.7
1988	**219,875.63**	10.0	0.25	2.90E+07	28369.81	233.6	850.3	400
1989	**236,729.58**	12.8	0.65	2.90E+07	28937.12	325.3	610.3	1,629.90
1990	**267,549.99**	16.3	0.31	3.00E+07	90121.31	513.8	225.4	9,964.50
1991	**265,379.14**	23.1	0.23	3.10E+07	39968.52	783.0	242.1	1,870
1992	**271,365.52**	31.2	0.49	3.20E+07	38771.57	1,107.6	491.7	3,306.30
1993	**274,833.29**	47.5	0.66	3.20E+07	44973	1,543.8	804.4	2,636.90
1994	**275,450.56**	66.3	0.9	3.30E+07	40404.28	2,205.0	985.9	2,161.70
1995	**281,407.40**	180.4	1.84	3.40E+07	29820.29	5,092.2	1,838.8	4,425.60
1996	**293,745.38**	285.8	7.06	3.50E+07	35216.28	6,992.1	6,979.6	5,858.20
1997	**302,022.48**	281.9	11.07	3.60E+07	38329.17	6,440.5	10,330.5	10,875.70
1998	**310,890.05**	262.6	13.5	3.70E+07	36390.66	5,672.7	13,571.1	15,018.80
1999	**312,183.48**	300.0	14.1	3.80E+07	35325.93	5,266.4	14,072.0	12,038.50
2000	**329,178.74**	472.3	28.15	3.90E+07	41342.64	8,111.0	28,153.1	17,207.80
2001	**356,994.26**	662.5	57.68	4.00E+07	6331.64	10,963.1	57,683.8	37,198.80
2002	**433,203.51**	764.9	59.41	4.20E+07	7936.78	12,137.7	59,406.7	61,284
2003	**477,532.98**	1,359.3	120.4	4.30E+07	12991.61	20,128.9	102,402.6	180,079
2004	**527,576.04**	2,112.5	225.8	4.40E+07	44443.72	23,844.5	225,820.0	195,418.40
2005	**561,931.39**	2,900.1	262.94	4.50E+07	39795.29	24,085.8	262,935.8	552,782
2006	**595,821.61**	5,121.0	470.25	4.60E+07	63428.72	33,189.3	470,253.4	707,400

2007	**634,251.14**	13,294.6	2,100	4.70E+07	78981.31	57,990.2	1,076,020.4	1,935,080
2008	**672,202.55**	9,563.0	2,200	4.80E+07	73606.48	31,450.78	1,679,143.7	1,509,230
2009	**718,977.33**	7,030.8	2,350	5.00E+07	80310.24	20,827.17	685,717.3	1,609,320
2010	**775,525.70**	9,918.2	2,541	5.02E+07	77438.02	24,770.52	799,910.9	1,674,570
2011	**776,202.55**	10,283.0	2,460	5.20E+07	84606.48	19,950.76	779,543.8	1,724,620
2012	**784,977.63**	8,077.8	2,780	5.60E+07	81340.28	25,457.07	861,347.1	1,119,120
2013	**794,242.75**	13,263.0	2,740	5.70E+07	83745.86	21,780.39	752,493.6	1,739,191
2014	**799,852.95**	11,163.0	2,230	5.90E+07	79239.12	33,508.64	679,871.9	1,489,242

APPENDIX 2
OVERPARAMETIZED MODEL
TABLE 2:

Dependent Variable: D(LRGDP,1)
Method: Least Squares
Date: 09/25/16 Time: 15:34
Sample(adjusted): 1985 2014
Included observations: 26 after adjusting endpoints

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ECM(-1)	-0.071045	0.160146	-0.443623	0.6729
D(LMCAP,1)	0.012252	0.042693	-0.286974	0.7838
D(LTURN,1)	0.034914	0.027489	1.270087	0.2511
D(LLABOUR,1)	0.837778	1.422378	0.588998	0.5773
D(LCAPITAL,1)	0.010097	0.019964	0.505742	0.6311
D(LRGDP(-1),1)	0.100612	0.264753	0.380021	0.7170
D(LMCAP(-1),1)	-0.057069	0.044463	-1.283511	0.2467
D(LTURN(-1),1)	0.047112	0.027902	1.688471	0.1423
D(LLABOUR(-1),1)	-1.238876	0.958458	-1.292572	0.2437
D(LCAPITAL(-1),1)	-0.041275	0.016373	-2.520970	0.0452
D(LRGDP(-2),1)	-0.053527	0.214358	-0.249707	0.8111
D(LMCAP(-2),1)	-0.028743	0.047635	-0.603405	0.5683
D(LTURN(-2),1)	-0.025568	0.022643	-1.129205	0.3019
D(LLABOUR(-2),1)	-0.467427	1.298809	-0.359889	0.7313
D(LCAPITAL(-2),1)	0.024272	0.022265	1.090149	0.3175
C	0.031116	0.072091	0.431620	0.6811

R-squared	0.893786	Mean dependent var	0.000214
Adjusted R-squared	0.628251	S.D. dependent var	0.048201
S.E. of regression	0.029389	Akaike info criterion	-4.061151
Sum squared resid	0.005182	Schwarz criterion	-3.267666
Log likelihood	60.67266	F-statistic	3.365979
Durbin-Watson stat	2.634249	Prob(F-statistic)	0.071161

Source: Author's Computation