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STOCK MARKET OPERATIONS IN A DEVELOPING ECONOMY: EMPIRICAL EVIDENCE FROM THE NIGERIA EXPERIENCE

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ABSTRACT

The stock market is a common feature of a modern economy and is reputed to perform necessary functions which are expected to impact positively on the economy of Nigeria. The paper examined the impact of stock market on Nigerian economic growth. Data on Stock market from 1985 to 2008 were analyzed using least square regression equation. The economic growth was proxied by the gross domestic product (GDP) while the stock market variables considered included market capitalization, total listed equities and government stock, total new issues and 'value of transactions. The result indicated that economy responds favourably to measures taken to increase total listing of equity and government stock in the Nigerian stock exchange (TNSE). The TNSE was statistically significant at 5% level perhaps due to recent moves to encourage listing in the market. The market capitalization of equities and debt (MCED) and value of the transactions of government and industrial securities (TGlS) exhibit positive relationships with GDP but have not made significant impact on economic growth in Nigeria. Policies geared towards rapid development of the stock market and measures to step up investors' confidence and activities in the market are strongly encouraged so that it could contribute significantly to the Nigerian economy.

INTRODUCTION

The growth of any economy depends on its ability to mobilize resources and channel them to profitable investments. As a result, the centrality of savings and investments in economic growth has been given considerable attention in the literature (Rostow, 1960; Malivaud, 1979; Soyode, 1990; Aigbokan, 1995; Samuel, 1996; Demirgue-Kunt and Levine, 1996). The stock market has been identified as an institution that contributes to the socioeconomic growth and development of emerging and developed economies. This is made possible through some of the vital roles played such as channeling resources, promoting reforms to modernize the financial sectors, financial intermediation capacity to link deficit to the surplus sector of the economy, and as a veritable tool in the mobilization and allocation of savings among competitive uses which are critical to the growth and efficiency of the economy (Alile, 1984).

In essence, the stock market is an economic institution which promotes efficiency in capital formation and allocation. The stock market enables governments and industry to raise long-term capital for financing new projects, expanding and modernizing industrial/commercial concerns. If capital resources are not provided to those economic areas, specifically industries where demand is growing and which are capable of increasing production and productivity, the rate of expansion of the economy often suffers. A unique benefit of the stock market to corporate entities is the provision of long-term, non-debt financial capital. Through the issuance of equity securities, companies acquire perpetual capital for development. Through the provision of equity capital, the market also enables companies to avoid over-reliance on debt financing, thus improving corporate debt-to-equity ratio (Akinifesi, 1987). Nigeria stock market is categorized into primary and secondary markets. New securities are issued in the primary market, and companies issuing these securities receive the proceeds for the sales. The secondary market provides a forum for the sale of securities by one investor to another investor. The efficient functioning of the market paves way for the primary market by making investors more willing to purchase new securities in anticipation of selling such in the secondary market. These securities are the major instrument used to raise funds at the capital market (Soyode, 1990).

The link between stock market performance and economic growth has often generated strong controversy among analysts based on their study of developed and emerging markets (See Akinifesi, 1987; Samuel, 1996; Demirgue-Kunt and Levine, 1996; Levine and Zervos, 1996, Obadan, 1998; Onosode, 1998; and Osinubi, 1998). According to Nyong (1997), the financial structure of a firm, that is, the mix of debt and equity financing, changes as economies develop. The tilt is however more towards equity financing through the stock market. As economies develop, more funds are needed to meet the rapid expansion. The stock market serves as a veritable tool in the mobilization and allocation of savings among competing uses which are critical to the growth and efficiency of the economy (Alile, 1984).

The determination of the overall growth of an economy depends on how efficiently the stock market performs its allocating functions of capital. As the stock market mobilizes savings, concurrently it allocates a larger proportion of it to the firms with relatively high prospects as resources are channeled by the mechanism of the forces of demand and supply to those firms with relatively high and increasing productivity thus enhancing economic expansion and growth (Alile, 1997). Due to these sensitive roles of the stock market, a nation has an interest in the way and manner it functions and operates in order to enhance the scale and full utilization of resources that invariably improve the economic growth and development. Given the foregoing, the study is to carry out an empirical investigation whether the stock market impacts positively on the Nigerian economy.

THE NEXUS BETWEEN STOCK MARKET AND ECONOMIC IMPACT

The impact of the stock market on the economic growth and development has been a reoccurring concern (Sule and Momoh, 2009; Ewah, Esang and Bassey, 2009). The capital market (otherwise called stock market) according to Okereke Onyiuke (2010), is made up of markets and institutions which facilitate the issuance of new securities and secondary trading of long term financial instruments. Mbat (2001) described it as a forum through which long term funds are made available by the surplus to the deficit economic units. The stock market is in the focus of the economist and policy makers because of the perceived benefits on economy. 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 (Ologunde, Elumilade and Asaolu, 2006).

However, there have been mixed results; while some are in support of a positive link, others do not find any empirical evidence to support such conclusion. For instance, Atje and Jovanovic (1993) found in a cross-country study of stock and economic growth of 40 countries from 1980 to 1988 that there was a significant correlation between the average economic growth and stock market capitalization. Demiurgic-Kunt and Levine (1996) using data from 44 countries for the period 1986 to 1993 found that different measures of stock exchange size are strongly correlated to other indicators of activity levels of financial, banking, non-banking institutions as well as to insurance companies and pension funds. They concluded that countries with well-developed stock markets tend to also have well-developed financial intermediaries.

The capital market in Nigeria is most especially important now that the country is just recovering from its deteriorating state occasioned by the recurring military intervention in government. The government through the regulatory agencies and the capital market actors/operators should pursue adequate sensitization of the public on the enormous potentialities derivable from investing in the capital market. Effective supervisory and regulatory measures should be insituted to prevent/discourage unhealthy/unethical/sharp practices by the actors/ operators in the capital market. This implies that all aspects of the financial services sector must begin to reflect transparency in all deals (Salisu and Ajide, 2010).

Donwa and Odia (2010) in their study of the impact of the Nigeria capital market on the socio-economic development opined that for the Nigerian capital market to be a pivotal force in socio economic growth and development, there must be improvement in the declining market capitalization by encouraging more foreign investors to participate in the market, maintain state-of-the-art technology like automated trading and settlement practices, electronic fund clearance and eliminate physical transfer of shares. There is also the need to restore confidence to the market by regulatory authorities through ensuring transparency and fair trading transactions and dealings in the stock exchange. Ewah *et al.,* (2009) appraise the impact of the capital market efficiency on the economic growth of Nigeria using time series data from 1961 to 2004.They found that the capital market in Nigeria has the potential of growth inducing but it has not contributed meaningfully to the economic growth of Nigeria because of low market capitalization, low absorptive capitalization, illiquidity, misappropriation of funds among others.

In 1986, Nigeria embraced the International Monetary Fund (lMF) - World Bank Structural Adjustment Programme (SAP) which influenced the economic policies of the Nigerian government and led to reforms in the late 1980s and early 1990s. However, until SAP was abandoned in 1994, the objectives were not achieved due to the inability of government to judiciously implement some of its policy measures (Oyefusi and Mogbolu, 2003). The notable reforms include monetary and fiscal policies, sectoral reforms such as removal of oil subsidy in 1988 to the tune of 80%, interest deregulation from August 1987, financial market reforms and public sector reforms which entail the full or partial privatization and commercialization of about 111 public owned enterprises. The Nigerian Stock Exchange was to play a key role during the offer for sale of the shares of the affected enterprises (Oyefusi and Mogbolu, 2003).

The introduction of SAP in Nigeria has resulted in a very significant growth of the country's stock market as a result of deregulation of the financial sector and the privatization which exposed investors and companies to the significance of the stock market (Alile, 1996; Soyode 1990). The capital market was instrumental to the initial 25 (now 24) banks that were able to meet the minimum capital requirement of ₦25billion during the banking sector consolidation in 2005. The stock market has helped government and corporate entities to raise long-term capital for financing new projects, and expanding and modernizing industrial/commercial concerns (Nwankwo 1991). Ariyo and Adelegan (2005) contend that the liberalization of capital market led to the growth of the Nigerian capital market yet its impact at the macro-economy was negligible. It is pertinent therefore to assess the extent of impact of the Nigerian stock market on its economy at the micro level?

METHODOLOGY

Time series data from 1985 - 2008 were obtained from the Nigeria Stock Exchange (NSE) Fact Books, Security and Exchange Commission (SEC) Market Bulletins and the Central Bank of Nigeria (CBN) Statistical Bulletins. The impact of stock market on Nigeria's economic growth was determined by size of the stock market indices which include market capitalization, total number of listed equities and government stock, new issues and value of transactions. The economic growth was taken as a proxy with gross domestic product (GDP). Augmented Dickey-Fuller ADF) test was done to determine the serial correlation among stock market variables. The ordinary least square regression function was specified to analyze the data as:

GDP = f (MCED, TLNSE, TNI, TGIS) 1

The regression equation based on the above functional notation is given as:

$GDP = \beta_o + \beta_1 MCED + \beta_2 TLNSE + \beta_3 TNI + \beta_4 TGlS + U$ 2

The dependent variable represents the gross domestic product (GDP) which is a proxy for the economic growth. The independent variables are represented by micro-economic factors: MCED represents market capitalization of equities and debt; TLNSE represents total listed equities and government stock on Nigerian stock; TNI represents the total new issues; TGIS represents value of transactions of government and industrial securities; U is the stochastic error term; β_0 is the intercept while β_1-β_4 are coefficients of the independent variables. The *a priori* expectation is that $\beta_1 - \beta_4 > 0$.

The hypothesis that was tested stated that:

H_0: there is no significant relationship between market capitalization, total listed issues and value of transactions and the economic growth of Nigeria.

H_1: there is a significant relationship between market capitalization, total listed issues and value of transactions and the economic growth of Nigeria.

RESULTS AND DISCUSSIONS

Augmented Dickey-Fuller (ADF) Test

The time series properties of the stock market variables were obtained from the Augmented Dickey-Fuller Test. The results are as contained in appendix II. ADF results reveals that gross domestic product (GDP) was found stationary at the second differencing while and total listing in Nigeria stock exchange (TNSE) was stationary at the first differencing. Other stock market variables namely market capitalization of equities and debt (MCED), the total new issues (TNI) and the value of transactions of government and industrial securities (TGIS) were stationary at the level as indicated in Appendix III-IV.

Impact of the Stock Market on the Nigerian Economy

The process of economic growth has an intricate explanation because many variables can be used to explain economic growth. However, the interaction between stock market development and economic growth is derived from the services the stock market provides to the economy as a whole. For instance, the stock market helps in mobilizing resources in the economy and allocates such resources in the most efficient ways to competing sectors of the economy. The least square regression results measures a satisfactory overall goodness of fit of the equation. The adjusted R-squared value shows that market capitalization of equities and debt (MCED), total listing (TNSE), total new issues (TNI) and value of transaction (TGlS) explained 67.9% of the variations in the gross domestic product (GDP) at current price.

The Total New Issues (TNI) has a negative coefficient while the remaining economic factors are positive as presented in Table 1. An increase of 1.0% in the MCED will increase the GDP by 4.7% while TGIS will increase the GDP by 0.7%. A unit increase in the Total Listing on the Stock Exchange (TNSE) reflects in the GDP by 2140.98 units. This implies that the economy responds favourably to measures taken to increase total listing of equity and government stock in the Nigerian Stock Exchange. The TNSE was statistically significant at 5% level perhaps connected to the recent moves to encourage listing in the market. The Market Capitalization of Equities and Debt (MCED) and value of the Transactions of Government and Industrial Securities (TGlS) though exhibit positive relationships with GDP but have not made significant impact on economic growth in Nigeria. The negative impact of TNI may not be unconnected with the yet shallow nature of the Nigerian stock market even though total new issues tend to have improved remarkably since banking consolidation of 2005.

Table 1. Regression results of stock market variables

Variable	**Coefficient**	**t-statistic**	**Prob.**
TNSE	2140.98	1.942	0.067
TNI	-0.142841	-0.342	0.735
MCED	0.046628	0.782	0.444
TGIS	0.007038	0.194	0.848
Constant	-261118.1	-0.905	
R-squared	0.7350	F-statistic	13.178
Adjusted R-squared	0.6793	Prob.(F-statistic)	0.000026
Durbin-Watson Stat.	0.829		

The F-statistic shows a significant overall regression equation. However, the Durbin Watson (DW) test for serial correlation appears to be inconclusive in the equation, indicating some degree of autocorrelation. Market Capitalization of Equities and Debt (MCED) and value of the Transactions (TGlS) had positive but insignificant impact on the GDP whereas the total new issues (TNT) had a negative influence on GDP. However, the total listing (TLNSE) was positively signed and also statistically significant. These results agree with Ariyo and Adelegan (2005) and Ewah *et al*., (2009) that the capital market in Nigeria has potentials for growth 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, low absorptive capitalization, illiquidity etc. Nevertheless, there is a significant relationship between market capitalization, total listed equities and government stock, total new issues and value of transactions and the economic growth of Nigeria in tandem with the alternative hypothesis formulated for thestudy as shown in Appendix II-IV.

POLICY CONCLUSIONS

The stock market serves as an important mechanism for effective and efficient mobilization and allocation of savings which is a crucial function for an economy desirous of growth. The stock market is very vital to the growth, development and strength of any country because it supports government and corporate initiatives, finances the exploitation of new ideas and facilitates the management of financial risk. Since 1961, the Nigerian capital market has grown tremendously, particularly during the periods of the indigenization decrees of 1972 and 1977. The securities increased from 8 in 1961 to about 301 in 2008. Over the years, the Nigerian stock market has recorded relative stability and impressive growth. This has positioned it to positively impact the economy. There is clear evidence that the stock market remained an important source of capital for the nation's economic development in financing infrastructural projects, the privatization programme of the government and banking sector recapitalization in Nigeria. The recent consolidation exercise of major financial institutions and privatization exercise of most publicly owned enterprises are key indications of government faith in the capital market to drive growth of the Nigerian economy. The government should therefore pursue economic policies geared towards rapid development of the stock market and put up measures to step up investor's confidence and activities in the market so that it could continue to contribute significantly to the economy of Nigeria.

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APPENDIX 1: Gross Domestic Product and Stock Market Variables From 1985 - 2008

Year	GDP at current Price (N Million)	Market Capitalization Eaquity & Debts (N Million)	Total listing on NSE(Equity, industrial loan & Govt Stock	Total New Issues (N Million)	Value of Transactions Govt & Ind. Securities(Nm)
1985	201,036.30	6,670.70	220	817.20	319.60
1986	205,971.40	6,794.80	240	833.00	494.40
1987	204,806.50	8,097.60	244	450.70	348.00
1988	219,876.80	10,020.80	253	400.00	137.60
1989	263,729.60	12,848.60	267	1,629.90	521.60
1990	267,660.00	16,358.40	295	964.50	265.50
1991	265,379.10	23,125.00	239	1,870.00	136.00
1992	271,365.50	31,272.60	251	3,306.30	313.50
1993	274,833.30	47,436.10	272	2,636.90	402.30
1994	275,450.60	66,368.00	276	2,161.70	569.70
1995	281,407.40	180,305.10	276	4,425.60	1,838.80
1996	293,745.40	281,815.80	276	5,858.20	7,062.70
1997	302,022.50	281,887.20	264	10,875.70	11,072.70
1998	310,890.10	262,517.30	264	15,018.10	13,572.30
1999	312,183.50	300,041.10	268	12,038.50	14,027.40
2000	329,978.70	472,290.00	260	17,207.80	28,154.60
2001	356,994.30	662,561.30	261	37,198.80	57,637.20
2002	433,203.50	764,975.80	258	61,284.00	60,088.60
2003	477,833.00	1,350,274.20	267	180,079.90	120,703.00
2004	527,576.00	2,102,549.60	277	195,418.40	225,820.60
2005	561,931.40	2,900,062.10	288	552,782.00	262,929.60
2006	597,821.60	5,120,000.00	294	707,400.00	470,253.00
2007	634,251.00	13,294,059.00	310	1,935,080.00	2,100,000.00
2008	674,889.00	9,562,290.00	301	1,509,230.00	4,400,000.00

Source: SEC, NSE, CBN (Various Issues)