



Evaluation of Stock Market Development and Its Contribution to Economic Growth in Nigeria

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Abstract

Studies have been carried out on the impact of stock market development on economic growth across the globe but the findings remain inconclusive. This study therefore evaluates the contribution of stock market development to economic growth in Nigeria between the periods of 1986 to 2016. The study employed the method of short run error correction model (ECM) as analysis technique. The study revealed that only the banking sector development has a significant direct relationship with the economic growth of Nigeria at 10% level of significance while all other explanatory variables were not. Therefore, the study concluded there is no evidence that Nigerian stock market development contributed to the economic growth. It is therefore recommended that (1) stock market growth strategy should be pursued and all impediments to its development be removed (2) regulators and operators in the stock market should enhance the liquidity of the market (3) operators and participants should implement policy that will boost turnover ratio in the market.

Keywords: Stock Market Development, Economic Growth, Market Liquidity, Market Turnover Ratio, Stock Market Size

1.0 Introduction

The stock market plays a major role as an economic institution which enhances the efficiency in capital formation and allocation. It enables both corporations and the government to raise long-term capital which enables them to finance new projects and expand other operations (Olweny & Kimani, 2011). It was further mentioned by Odetayo and Sajuyigbe (2012) that capital market is an engine of economic growth and development globally, Nigeria inclusive. Capital market is made up of markets and institutions which facilitate the issuance and secondary trading of long term financial instrument. In a developing economy like Nigeria, the development and growth of stock markets have been widespread in recent times. In spite of the size and illiquid nature of stock market, its continued existence and development could have important implications for economic activity (Alajekwu & Achugbu, 2012). They further noted, that even in less developed countries, capital markets are able to mobilize domestic savings and able to allocate funds more efficiently. Thus, stock markets can play a role in inducing economic growth in less developed country like Nigeria by channeling funds from surplus unit to deficit unit of the economy. Mobilization of such resources to various sectors certainly helps in economic development and growth. Okey (2012) asserted that in principle, the stock market is expected to accelerate economic growth by providing an avenue for growing





companies to raise capital at lower cost. Countries with developed stock markets provide alternative sources of financing to companies thereby making them less dependent on loan financing, which in turn mitigate the risk of credit crunch. In this way, stock markets are able to positively influence economic growth by encouraging savings amongst individuals and providing avenues for firms financing (Levine & Zervos, 1998). This is in light of the reasoning opined by Olweny and Kimani (2011) that, for a proper stock market to thrive the prevailing economic conditions must be favorable; and again in order for the economic growth to prosper, there ought to be a vibrant and liquid stock market that ameliorates the allocation of capital and consequently enhancing the prospect for a long-term economic growth.

Development of Nigeria's economy has been a bane of successful administration in the country. As a result of the acclaimed catalytic impact of developed stock markets on economic growth, ample studies such as Okey (2012); Yartey (2008); Yadirichukwu and Chibu (2014); Olweny and Kimani (2011) now focus on the relationship between stock market development and economic growth. The Nigerian financial sector as observed by Adekunle, Salami, and Adedipe (2013), like many other less developed countries, was highly regulated leading to financial disintermediation which retarded the growth of the economy. The link between the financial sector and the growth of the economy has been weak. The real sector of the economy, most especially the high priority sectors which are also said to be economic growth drivers are not effectively and efficiently serviced by the financial sector. The banks are declaring billions of profit, yet the real sector is not well developed (Adekunle, *et al.*, 2013). They further emphasize that most of the operators in the productive sector are folding up due to the inability to get loan from the financial institutions or the cost of borrowing was highly prohibitive. The Nigerian banks have concentrated on short term lending as against the long term investment which should have formed the bedrock of a virile economic transformation. An attempt was made to quicken the recovery of the economy from its deteriorating conditions which led to the adoption of the Structural Adjustment Programme (SAP) in 1986. Since then, a great deal of interest has been shown in the activities and development of capital market and financial sector. This is so because the restructuring of this sector was a central component of the SAP reform. Since the introduction of SAP in Nigeria, the country's stock market has grown very significantly (Alile, 1996; Soyode, 1990). This is as a result of deregulation of the financial sector and the privatization exercises, which exposed investors and companies to the significance of the stock market. Equity financing became one of the cheapest and flexible sources of finance from the capital market and remain a critical element in the sustainable development of the economy (Okereke-Onyiuke, 2000). Obviously, these developments in the stock market should have impacted positively on the economic growth of Nigeria over time. It is against this backdrop that this study set to empirically evaluate stock market development and its contribution to the economic growth of Nigeria between the periods of 1986 and 2015.

The following research questions were examined against the background of acclaimed catalytic impact of stock market development on economic growth: (1) What is the impact of Nigerian stock market size on economic growth? (2) What is the impact of Nigerian stock market liquidity on economic growth? (3) What is the impact of Nigeria's stock market turnover ratio on economic growth? (4) What is the impact of banking sector development in Nigeria on her economic growth?





2.0 Literature Review

2.1 Nigerian Stock Market Development and Economic Growth

According to Mohtadi and Agarwal (2001), using a variety of measures provides a richer picture of the potential links between stock market and growth than if a single measure is used. Although theory does not provide us with a foundation for any unique indicator of stock market development, it does suggest that stock market size, liquidity, and integration with the world capital markets may affect economic growth (Demirguc_Kunt & Levine, 1996). In this section, various measures of stock market development and other control variables are described.

Stock market size: A common index often used, as a measure of stock market size is the market capitalization. Market capitalization equals the total value of all listed shares. In terms of economic significance, the assumption is that market size and the ability to mobilize capital and diversify risk are positively correlated (Alajekwu & Achugbu, 2012). According to Donwa and Odia (2010), market capitalization is the most widely used indicator in assessing the size of a capital market to an economy. In a bearish market the market capitalization falls and vice versa for a bullish market. However, Market Capitalization Ratio (MCR) equals the value of listed shares divided by GDP. The assumption behind this measure is that overall market size is positively correlated with the ability to mobilize capital and diversify risk on an economy-wide basis (Mohtadi & Agarwal, 2001).

NSE All-Share Index (ASI): A market index is a quick measure to judge the overall direction of the market and the scope of its movements. It can be representative of the entire market - like the NSE all-share index - or just for a section - like tech stocks or top 100 most capitalized stocks or whatever. The NSE All-share Index is a total market (broad-base) index, reflecting a total picture of the behaviours of the common shares quoted on the Nigerian Stock Exchange. The All-Share Index tracks the general market movement of all listed equities on the Exchange, including those listed on the Alternative Securities Market (ASeM), regardless of capitalization (NSE, 2016). The Nigerian Stock Exchange NSE Index is a major stock market index which tracks the performance of all stocks listed on the Nigerian Stock Exchange (Smartproinvesting, 2007; NSE, 2016). Since its measure is an overall indicator of market performance, it is considered a very important variable to determine the effect of stock market performance on economic growth.

Liquidity: Liquidity is used to refer to the ability of investors to buy and sell securities easily. It is an important indicator of stock market development because it signifies how the market helped in improving the allocation of capital and thus enhancing the prospects of long-term economic growth (Yadirichukwu & Chigbu, 2014). This is possible through the ability of the investors to quickly and cheaply alter their portfolio thereby reducing the riskiness of their investment and facilitating investments in projects that are more profitable though with a long gestation period. Two main indices are often used in the performance and rating of the stock market: total value traded ratio; and turnover ratio (Alajekwu & Achugbu, 2012).

Total Value of Shares Traded Ratio (STR): This measure equals total value of shares traded on the stock exchange market divided by GDP. The total value traded ratio measures the organized trading of firm equity as a share of national output and therefore expected to positively reflect liquidity on an economy-wide basis. The total value traded ratio complements the market capitalization ratio: although a market may be large, there may be little trading





(Alajekwu & Achugbu, 2012; Mohtadi & Agarwal, 2001). To examine the Nigeria's stock market depth, this study measures the activity of stock market using the total value traded as share of GDP, which gives the value of stock transactions relative to the size of the economy (Short, 2016).

Turnover Ratio (TR): This ratio equals the value of total shares traded divided by market capitalization. Turnover ratio is used as an index of comparison for market liquidity rating and level of transaction costs. Though it is not a direct measure of theoretical definitions of liquidity, high turnover is often used as an indicator of low transaction costs. The turnover ratio complements the market capitalization ratio. A large but inactive market will have a large market capitalization ratio but a small turnover ratio. Turnover also complements the total value traded ratio. While the total value traded ratio captures trading relative to the size of the economy, turnover measures trading relative to the size of the stock market. A small liquid market will have a high turnover ratio but a small total value traded ratio (Alajekwu & Achugbu, 2012; Mohtadi & Agarwal, 2001).

Apart from the above indicators of stock market development, the study controls for foreign direct investment, financial deepening and foreign exchange rate. Gujarati (2005) opined that the use of control variables in regression analysis is to avoid the problem of simultaneity bias.

Foreign Direct Investment (FDI): Foreign direct investment is used as a control variable since it is presumed that FDI is a determinant of economic growth (Mohtadi & Agarwal, 2001). In essence, the purpose of foreign direct investment is to complement indigenous efforts. Specifically, foreign direct investment may be defined as a situation whereby the concern of the investing countries is to exercise control over the assets created in the capital importing countries by means of that investment (Olugbenga & Grace, 2015). In the last few decades, foreign investors have emerged as major participants in emerging stock markets. Errunza (1982) argued that the long term impact of foreign capital inflows on the development of the stock market is broader than the benefits from initial flows and increased investor participation. Foreign investment is associated with institutional and regulatory reform, adequate disclosure and listing requirements and fair trading practices. Capital flows is measured in this paper using foreign direct investment as a percentage of GDP.

Banking Sector Development (Financial Deepening): Financial deepening is quantified as the ratio of broad money supply (M2) relative to nominal GDP. This is used as a measure of banking sector development. A measure of banking sector development is used in the regression in order to determine whether banking sector development is significantly correlated with economic growth. Most studies use M2 relative to GDP as a measure of financial depth (Yartey, 2008). This measure encompasses all liabilities of those of the central bank, commercial banks and other depository institutions (King & Levine, 1993). From the literature, financial deepening exerts some influence on economic growth (Okey, 2012), hence its inclusion as one of the control variables employed in the study.

Foreign Exchange Rate: Foreign exchange is the exchange of one currency for another or the conversion of one currency into another currency. The U.S. dollar (\$) is the most actively traded currency in the foreign exchange market. The exchange of \$1 for naira equivalent is the concern of this study. It is abbreviated as FRX.





Gross Domestic Product (GDP) is the value of a country's overall output of goods and services (typically during one fiscal year) at market prices, excluding net income from abroad. It can be estimated in three ways which, in theory, should yield identical figures. They are (1) Expenditure basis: how much money was spent, (2) Output basis: how many goods and services were sold, and (3) Income basis: how much income (profit) was earned. These estimates, published quarterly, are constantly revised to approach greater accuracy. The most closely watched data is the period to period change in output and consumption, in real (inflation adjusted) terms (World Bank, 2009). According to Dickinson (2012), the concept of Gross Domestic Product (GDP) was first developed by Simon Kuznets for a US Congress report in 1934. In this report, Kuznets warned against its use as a measure of welfare. However, after the Breton Woods conference in 1944, GDP became the main tool for measuring a country's economy. (GDP) is one of the most widely used measures of an economy's output or production. It is defined as the total value of goods and services produced within a country's borders in a specific time period – monthly, quarterly or annually. GDP is an accurate indication of an economy's size, while GDP per capital has a close correlation with the trend in living standards over time, and the GDP growth rate is probably the single best indicator of economic growth (Samuelson & Nordhaus, 2001). They neatly sum up the importance of the national accounts and GDP. They liken the ability of GDP to give an overall picture of the state of the economy to that of a satellite in space that can survey the weather across an entire continent. GDP enables policymakers and central banks to judge whether the economy is contracting or expanding, whether it needs a boost or restraint, and if a threat such as a recession or inflation looms on the horizon.

2.2 Theoretical Issues

2.2.1 Economic Growth Theory

Theoretically, the relationship between stock market development and economic growth has been a subject of controversy. Previous studies carried out have hardly come to a unanimous conclusion on the causal linkage between stock market development and economic growth. While some studies maintain that stock market development vigorously drives growth others are of the view that it retards growth (Okey, 2012). For example, Singh (1997) is of the view that stock market accelerates economic growth by providing a boost to domestic savings and increasing the quantity and quality of investment. Yet, there is disagreement among economists on the role of stock markets in economic growth. While the supply leading theorists are of the view that technological innovation is the force underlying long-run economic growth, and the cause of innovation is the financial sector's ability to extend credit to the real sector (Hicks, 1969; Schumpeter, 1912). The demand following (growth led) theorists maintain that economic growth creates a demand for various types of financial services to which the financial system responds. "Where enterprise leads finance follows" (Robinson, 1952). Rogers (2003) noted that the importance of economic growth is not arguable and spans across disciplines affecting all areas of society directly and indirectly. In addition, macroeconomic policies on factors like interest rates and inflation rates assist in promoting economic growth and also equally important, are vehicles of economic growth such as the stock market. However, a basic proposition of growth theory is that, in order to sustain a positive growth rate of output per capita in the long run, there must be constant advances in technological knowledge in the form of new goods, new markets, or new processes (Olweny & Kimani, 2011). King and Levine (1993) suggested another approach to identifying the channel of transmission between finance and growth, and in their model they pointed at innovation as the engine of growth. In this aspect, financial markets evaluate the potential innovative projects, finance the most promising ones





and monitor the carrying out of investment. This way financial markets help in the function of efficient resource allocation. Therefore, an economy with proper functioning financial markets will experience a higher growth rate of productivity (Demetriades & Hussein 1996). This is considered appropriate for this study in the sense that it establishes a link between stock market and economic growth.

2.3 Empirical Evidence

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 macroeconomic condition and then, included the conglomerated index of stock market development. They found empirically that various measures of stock market activity are positively correlated with measures of real economic growth across countries, and that the association is particularly strong for developing countries.

Also, some studies in Nigeria did not acquiesce to the claim of positive impact of stock market development on economic growth. To start with, Osinubi and Amaghionyeodiwe (2003) had examined the relationship between the Nigerian stock market and economic growth during the period 1980-2000. Unfortunately, their results did not support the claim that stock market development promotes economic growth. (Donwa & Odia, 2010) conducted a study to empirically analyze the impact of the Nigerian capital market on her socio-economic development from 1981 to 2008. The socio-economic development was proxy by the gross domestic product (GDP) while the capital market variables considered included market capitalization, total new issues, volume of transaction and total listed equities and Government stock. Using the ordinary least square it was found that the capital market indices have not impact significantly on the GDP. The government is therefore advised to put up measures to stem up investors' confidence and activities in the market so that it could contribute significantly to the Nigerian socio-economic development. From this empirical review, it is clear that research findings in this field are inconclusive. This study therefore attempts to fill this gap in the existing body of literature.

3. Materials and Method

This study adopted the model of Alajekwu & Achugbu (2012) with slight modifications. In their model, the authors expressed economic growth as a function of stock market development (measured by the size of and liquidity level of the stock market). Their model was modified by inclusion of three additional variables (financial deepening, foreign direct investment and foreign exchange rate).

$$GDPT = \alpha_0 + \beta_1 MCR_t + \beta_2 VTR_t + \beta_3 TOR_t + U_t \text{-----} (1)$$

Where GDPT is the Gross Domestic Product at 1990 factor cost over the time period. MCR is the stock market capitalization ratio over the time period, VTR is the value traded ratio of domestic stock over the time period, TOR is the turnover ratio over the time period. α and β are unknown parameters to be estimated while U_t is the error term (Alajekwu & Achugbu, 2012).





The modified model on economic growth adopted for this study was specified as:

$$\text{Economic growth} = F(\text{MCR}, \text{VTR}, \text{TOR}, \text{FDI}, \text{FD}, \text{FRX}) \text{-----} (2)$$

The econometric model of equation (2) was:

$$\text{GDP}_t = \alpha_0 + \beta_1 \text{MCR}_t + \beta_2 \text{VTR}_t + \beta_3 \text{TOR}_t + \beta_4 \text{FDI}_t + \beta_5 \text{FD}_t + \beta_6 \text{FRX}_t + \varepsilon_t \text{-----} (3)$$

Where: GDP = Gross Domestic Product at 2010 constant basic prices over the time period. MCR is the stock market capitalization ratio over the time period, VTR is the value traded ratio of domestic stock over the time period, TOR is the turnover ratio over the time period, FDI is foreign direct investment over the time period and FD is the financial deepening over the time and FRX is the average foreign exchange rate of 1USdollar/naira per annum over the time period. α and β are unknown parameters to be estimated while U_t is the error term.

A – Priori criteria: Theoretically, it will be expected that $\beta_1 > 0$, $\beta_2 > 0$, $\beta_3 > 0$ and $\beta_4 > 0$

In order to capture the actual effect of GDP on the other variables, the model above was translated to first difference from the level. This took care of effect of changes in GDP on others variables. Thus the new equation derived as first difference ARDL Model:

$$\begin{aligned} &D(\text{GDP}) \text{ C } D(\text{MCR}) \text{ D}(\text{STR}) \text{ D}(\text{TR}) \text{ D}(\text{FD}) \text{ D}(\text{FDI}) \text{ D}(\text{FRX}) \text{ D}(\text{GDP}(-1)) \text{ D}(\text{MCR}(-1)) \text{ D}(\text{STR}(-1)) \text{ D}(\text{TR}(-1)) \\ &D(\text{FD}(-1)) \text{ D}(\text{FDI}(-1)) \text{ D}(\text{FRX}(-1)) \text{-----} (4) \end{aligned}$$

The error correction term (ECT) model was stated thus:

$$\begin{aligned} &D(\text{GDP}) \text{ C } D(\text{MCR}) \text{ D}(\text{STR}) \text{ D}(\text{TR}) \text{ D}(\text{FD}) \text{ D}(\text{FDI}) \text{ D}(\text{FRX}) \text{ D}(\text{GDP}(-1)) \text{ D}(\text{MCR}(-1)) \text{ D}(\text{STR}(-1)) \text{ D}(\text{TR}(-1)) \\ &D(\text{FD}(-1)) \text{ D}(\text{FDI}(-1)) \text{ D}(\text{FRX}(-1)) \text{ ECT}(-1) \text{-----} (5) \end{aligned}$$

After several iterations to the equation (5), the parsimonious model was reached thus stated below:

$$D(\text{GDP}) \text{ C } D(\text{FD}) \text{ D}(\text{GDP}(-1)) \text{ D}(\text{FD}(-1)) \text{ ECT}(-1) \text{-----} (6)$$

The study employed explanatory research design. The design enabled the study to explain the impact of all explanatory variables on the dependent variable as related to the period of the study (i.e. 1986 to 2016). The study covers the Nigerian Stock Market as a whole. The data used for this study was secondary data collected from Nigerian Stock Exchange fact books (various years), Central Bank of Nigeria's Statistical Bulletin CBN. The dependent variable which was GDP was measured using annual change in GDP figure. The annual GDP figure was obtained from CBN statistical bulletin over the specified time period of 1986 to 2016. Whereas each of the explanatory variables was measured by using their annual data for the time period obtained from CBN statistical bulletin and NSE fact books various issues.

This study adopted an error correction model (ECM) using the least square method due to the evidence of short run disequilibrium among the variables. It measures the speed of adjustment from short run disequilibrium to equilibrium. Furthermore, this method was employed due to the fact that the series were not stationary at level. The





stationarity test was carried out using the Augmented Dickey-Fuller (ADF) and the Phillip Peron test of unit root. In the same vein, co-integration test using Engle-Granger and Phillip Ouliaris residual based test was carried out. The co-integration test showed evidence of long-run relationship among the variables

4.0 Data Analysis and Results

The result of unit root test conducted through Augmented Dickey-Fuller (ADF), as presented in Table 4.1 for the model showed that all the variables are statistically stationary at 5%. The result of ADF test of unit root revealed that both dependent variable and all the independent variables are stationary at first difference which implies they are all I(1) series. Hence, we proceed to conduct cointegration test.

Table 4.1 ADF Stationary Test Result

Variable	T. statistics	Probability	Order of integration	Remarks
D(GDP)	-6.2887	0.0000	I(1)	Intercept
D(MCR)	-5.8850	0.0000	I(1)	Intercept
D(STR)	-2.5063	0.0126	I(1)	None
D(TR)	-6.3089	0.0000	I(1)	Intercept
D(FDI)	-3.4535	0.0204	I(1)	Intercept
D(FD)	-4.6324	0.0010	I(1)	Intercept
D(FRX)	-5.1206	0.0003	I(1)	Intercept

Source: Author's computation (2018)

4.1 Cointegration Test

The cointegration tests are conducted using single-equation cointegration test. This is important to find out whether there is an existence of long run relationship among the variables. The cointegration test result from Table 4.2 shows that the series are cointegrated. It is indicated with at least one existing cointegrating vector in the models. We reject the null hypothesis that the series are not cointegrated at 1% and 5% level of significance. We therefore conclude that there is a long run relationship among the variables under study. Hence, we estimate the equation using short run cointegration model.

Table 4.2 Cointegration Test Result

Series: DGD⁰ DMCR DSTR DTR DFD DFDI DFRX

Cointegrating equation deterministics: C

Dependent	tau-statistic	Prob.	z-statistic	Prob.
D(GDP)	-2.171033	0.9842	-7.197980	0.9954
D(MCR)	-7.775026	0.0013	-37.86923	0.0017*
D(STR)	-7.102802	0.0044	-35.51932	0.0060*
D(TR)	-5.996481	0.0312	-31.40262	0.0345**
D(FD)	-4.396336	0.3124	-24.29375	0.2507
D(FDI)	-1.309898	0.9993	13.45452	0.9999
D(FRX)	-5.183413	0.1127	-27.89390	0.1058

Note *, ** represents 1% and 5% level of significance

Source: Author's computation (2018)





4.2 Regression Result

Table 4.3 is the regression result of the parsimonious model. It shows the linear relationship between change in GDP and all the explanatory variables with the use of least squares regression analysis, using error correction term (ECT) model. The ECT coefficient is -0.5745 while the p-value is 0.0922 i.e. significant at 10% level of significance.

The results obtained from the estimated equation indicate the goodness of fit of the model from the overall coefficient of determination R-squared (R^2). 72.2 percent of variations in GDP are explained by the combined effect of the explanatory variables. It thus shows the joint significance of the endogenous variables. The Durbin-Watson stat of 2.02 indicates the absence of serial autocorrelation.

The least square regression results from the parsimonious model as reported in Table 4.4 clearly show that market capitalization ratio (MCR), value traded ratio (VTR), and turnover ratio (TR) are not statistically significant in explaining economic growth. On the other hand, financial deepening (FD) has correlation with GDP with a statistical significance among all the explanatory variables included in the original model at first difference. The coefficient of FD clearly has significant positive effect on GDP as indicated by coefficient (172.0129) with probability (0.091) at 10% level of significance. By implication, a unit percent increase in FD will induce 172 percent increase in GDP. The result is in agreement with *a priori* expectation with positive sign. Also, we reject the hypothesis that banking sector development does not have any impact on economic growth in Nigeria. It implies that banking sector development positively impact on economic growth of Nigeria significantly. This finding is in line with Yartey (2008) and Levine and Zervos (1998) whose findings concluded that banking sector development has a positive impact on economic growth.

However, the effects of the remaining two explanatory variables that were used are not statistically significant at 10% level of significance. The FDI and FRX with positive signs imply their consistence with *a priori* expectation. Thus, there is no statistical relationship between market capitalization ratios, shares value traded ratio, turnover ratio, foreign direct investment and foreign exchange rate and economic growth given the prevailing economic situation of Nigeria.

The results show that we are inclined to accept the remaining three underlying null hypotheses that (1) stock market size does not have any impact on economic growth in Nigeria; (2) stock market liquidity does not have any impact on economic growth in Nigeria and (3) stock market turnover ratio does not have any impact on economic growth in Nigeria. The determinant is their exclusion from the parsimonious model in Table 4.4 and their calculated p-values in the first ECT model in the Appendix 1 which are all outside the significant level at 10% level of significance. It means that the effects of stock market variables do not statistically affect economic growth in Nigeria. This findings are consistent with Ndako (2009), Ake and Ognaligui (2010) who found that Douala Stock Exchange does not affect Cameroonian economic growth, Osinubi and Amaghionyeodiwe (2003), Donwa and Odia (2010) who found that capital market indices have not impact significantly on GDP of Nigerian economy and Ezeoha *et al.* (2009) whose findings concluded that stock market development has not been able to encourage the flow of foreign private investment in Nigeria.





The result of this study which shows that stock market development does not significantly influence economic growth in not in line with the economic growth theory discussed in section two of this work. The major reasons responsible for this deviation from theory may be due to corruption, macroeconomic policy inconsistency, and unreliable economic data which affect stock market development and consequently economic growth.

Furthermore, Appendix 1 shows the first regression result of the initial ECT model. The result shows the linear relationship between change in GDP and all the explanatory variables with the use of least squares regression analysis, using error correction term (ECT) model. The results obtained from the estimated equation indicate the goodness of fit of the model from the overall coefficient of determination R-squared (R^2). 82.6 percent of variations in GDP are explained by the combined effect of the explanatory variables. It thus shows the joint significance of the endogenous variables. The Durbin-Watson stat of 2.19 indicates the absence of serial autocorrelation.

In terms of signs and magnitude of the coefficient which signify the effect of explanatory variables on GDP in Nigeria, the ECT coefficient is negative value of (-0.0600) but not statistically significant at 10% level of significance. Hence, the need to further re-estimates the equation by dropping the highest insignificant variables among the independent variables. This process was continued until we reached a parsimonious model whereby the ECT was both negative in coefficient and statistically significant at 10%.

Table 4.3 Regression Result

Dependent Variable: D(GDP)

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	448.3851	251.0553	1.786002	0.0873
D(FD)	-131.9749	93.92859	-1.405056	0.1734
D(GDP(-1))	0.785398	0.107599	7.299308	0.0000
D(FD(-1))	172.0129	97.49712	1.764287	0.0910
ECT(-1)	-0.057454	0.032696	-1.757222	0.0922
R-squared	0.722462	Mean dependent var		1920.000
Adjusted R-squared	0.674195	S.D. dependent var		1398.422
S.E. of regression	798.2100	Akaike info criterion		16.36305
Sum squared resid	14654202	Schwarz criterion		16.60095
Log likelihood	-224.0827	Hannan-Quinn criter.		16.43578
F-statistic	14.96790	Durbin-Watson stat		2.019779
Prob(F-statistic)	0.000004			

Source: Author's computation (2018)

5.0 Conclusion and Recommendations

The results show that stock market capitalization ratio (a proxy for stock market size), turnover ratio (a proxy for liquidity), stock value traded ratio (also a proxy for liquidity), foreign direct investment and foreign exchange rate





are not statistically significant for economic growth as a result of their exclusion in the parsimonious model. Hence they are not statistically significant. In the overall, the study concluded that stock market development has not been able to significantly affect the economic growth in Nigeria. The results also show that financial deepening (a proxy for banking sector development) has a positive and significant effect on economic growth of Nigeria. We therefore conclude that banking sector development has impacted positively on the economic growth of Nigeria.

In view of the empirical results of the study and the conclusion drawn from it, the following recommendations are made: (1) Stock market growth strategy that will enhance its positive impact on the economy should be pursued by the policy makers and there should be removal of impediments to stock market development in the form of tax, legal and regulatory barriers among others. (2) Regulators and operators in the stock market should enhance the liquidity of the market. Participants also have to desist from activities that contradict liquidity in the stock market. (3) Stock market operators and participants in the Nigeria Stock Exchange should implement programmes and policies that will boost turnover ratio in the market.

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Appendix

Table 4.4 Regression Result

Dependent Variable: D(GDP)

Method: Least Squares

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	266.6845	325.8627	0.818395	0.4279
D(MCR)	19.12975	74.48044	0.256843	0.8013
D(STR)	-4.846692	874.7726	-0.005541	0.9957
D(TR)	8.926295	155.3641	0.057454	0.9551
D(FD)	-175.3232	139.1202	-1.260228	0.2297
D(FDI)	-2.092885	1.324925	-1.579625	0.1382
D(FRX)	-4.621152	13.77352	-0.335510	0.7426
D(GDP(-1))	0.876195	0.129376	6.772465	0.0000
D(MCR(-1))	-12.91300	85.88596	-0.150351	0.8828
D(STR(-1))	631.7230	677.2959	0.932713	0.3680
D(TR(-1))	19.47077	135.8576	0.141317	0.8882
D(FD(-1))	134.2089	138.6637	0.967873	0.3508
D(FDI(-1))	0.466916	1.277153	0.365592	0.7205
D(FRX(-1))	12.33075	13.63317	0.904467	0.3822
ECT(-1)	-0.060042	0.066584	-0.901751	0.3836
R-squared	0.826381	Mean dependent var		1920.000
Adjusted R-squared	0.639406	S.D. dependent var		1398.422
S.E. of regression	839.7453	Akaike info criterion		16.60825
Sum squared resid	9167237.	Schwarz criterion		17.32193
Log likelihood	-217.5155	Hannan-Quinn criter.		16.82643
F-statistic	4.419742	Durbin-Watson stat		2.190566
Prob(F-statistic)	0.005495			

Source: author's computation (2016)