

STOCK MARKET ENHANCEMENT AND NIGERIAN ECONOMY (1999-2019)

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ABSTRACT

Stock market plays a prominent role in economic growth of a nation. It serves as a means of raising capital by firms. This work investigated the role of stock market development in economic growth of Nigeria, using a 21 years' time series data, from 1999-2019. The aim of this research is to determine the extent to which the stock market development has impacted on the economic growth of Nigeria. Looking at the extent to which all share index, Market capitalization and total new issue have impacted on economic of Nigeria. The study employed unit root test to determine the stationarity of the variables, co-integration approach was used to determine the long run relationship of the variables and the significance of the relationship. The study is ex-post facto design where variable are obtained from CBN statistical bulletin and world performance indicators. GDP was used as proxy for economic growth while other explanatory variables are market capitalization, total new issues and all share index. Based on the analysis, it was found that all share index and total new issues have positive but statistically insignificant effect on economic growth while market capitalization has a negative and statistically significant effect on economic growth in Nigeria. The work concluded that since some variables are positive but insignificant or negative and significant effect on economic growth, it is assumed that investors lack confidence in the market and the market is undercapitalized. The researcher, therefore recommend that, policies should be fine-tuned gearing towards solving the problems of unpaid dividends, delay in dividend payment and transfer of stock. Also enabling investable environment and confidence should be created for prospective investors.

KEYWORDS: Share Index, Economic Growth, Market Capitalization, Total New Issues.

1.1 INTRODUCTION

1.2 BACKGROUND OF THE STUDY

Stock market is one of the important parts of the financial system. It serves as a platform for firms to raise capital by issuing shares and creating an avenue in which the shares are to be traded. The market provides a direct form of finance to potential investors for economic purposes. It is expected that every active stock market will facilitate the availability of long term capital which enhances the efficiency of capital formation and allocation of resources. Mobilization of long term capital and allocation certainly helps in economic growth and development. Livine (1991) stated that stock markets contributed to economic growth by making the ownership of firms tradable and enabling investors to diversify away unsystematic risk. The development of stock market is regarded as a key and important vehicle in accelerating growth of economy.

In a developing economy like Nigeria, the development and growth of stock market has been on the increase. Despite the nature of the market size and illegal nature of the stock market, the market has continued to exist. According to Ogunleye (2015), stock market development is important because financial. The background should be able to capture, also very current issues on the topic especially considering that the topic revolves around a dynamic area. Intermediation supports the investment process by mobilizing households and foreign savings for investment process by firms. He maintained that for sustainable growth and developments, funds must be effectively mobilized and allocated to enable business and economy harness their human material and management resources for optimal output. Pandy (1992) noted that even in less developed countries, capital market is able to mobilize savings and able to allocate funds more efficiently. Mohammed (2014) opined that without a liquid stock market, many profit long-term investments would not be undertaken because savers would be reluctant to tie up their investment for long period of time. Also, a liquid equity market allows savers to sell their shares easily, thereby permitting funds to raise equity capital on favourable items. It can be noted that both stock market development and bond market development have links to economic growth through variety of sub-connection (Pradhan et al 2018 and Bui et al 2018).

In a less developed country like Nigeria, stock market plays a vital role in inducing economic growth by channeling investment where it is needed. Mobilization of such resources to various sectors certainly help in economic growth and stock market development has assumed developmental role in Nigeria and the world at large because of the impact it has exerted on the economy.

1.3 Objective of the study

The main objective of the study is to determine the extent to which the stock market development has impacted on the economic growth of Nigeria. Other specific objectives are to:

- Examine the extent to which all share index has impacted on economic growth of Nigeria
- Assess the effect of market capitalization on Nigeria economic growth.
- Determine the extent to which total new issues have affected economic growth in Nigeria.

2.0 CONCEPTUAL LITERATURE

2.1 Economic Growth

Economic growth is the increase in the amount of goods and services produced in an economy over time. It could be seen as a sustained and positive change in the level of aggregate goods and services produced by a country within a given period of time. Jhingan (1997) described economic growth as a process whereby the real per capita income of a country increases over a long period of time. It is measured by the increase in the amount of goods and services produced in a country. In other words, economic growth is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another. Conventionally, it is measured as the percentage rate of increase in real gross domestic product. Shittu (2012), stated that the rate of economic growth refers to the geometric annual rate of growth in GDP between first and last year over a period of time.

According to Uwakaeme (2017), economic growth measures three things; firstly, it implies an increase in the total physical or real output in the economy, secondly, the composition and quality of the goods and services produced due to growth should satisfy consumer's want because in the ultimate analysis, satisfaction of the human want is the end of all economic activities, thirdly, economic growth should be achieved within the framework of economic freedom Ochejele (2007) further explained economic growth. Using characteristics, he maintained that the main characteristics of economic growth are increasing rate of growth of per capita income or output, increasing rate of productivity, increasing rate of structural transformation, international flows of labour goods and capital.

2.2 MARKET CAPITALIZATION

Market Capitalization is the aggregate valuation of the company based on its current share price and the total number of outstanding stocks. It is calculated by multiplying the current market price of the company's share by the total outstanding shares of the company. It is one of the most important characteristics that help the investors determine the returns and the risk in the share as well as allowing them to choose the stock that can meet their risk and diversification criterion. According to Investopedia (2020), market capitalization referred to the total dollar market value of a company's outstanding share of stock commonly referred to as "Market cap"; and it is calculated by multiplying the total number of a company's outstanding shares by the current market prices of one share.

Market Capitalization is used by the investment community in ranking the size of companies as opposed to sales or total asset figures. It is used in ranking the relative size of stock exchange being a measure of the sum of the market exchange. Market capitalization is used to help inform decision about which stock to invest in, because it gives investors information about the relative size of one company versus another. It measures what a company is worth on the open market, as well as the market's perception of its future prospects, because it reflects what investors are willing to pay for its stock. The general conception is that a higher stock price indicates a larger company. However, this might misrepresent the actual worth of company.

2.3 TOTAL NEW ISSUE

New issues are a stock or bond that is being sold to investors for the first time. This new issue can be an initial public offering (IPO) of a company or it can be a new issue floated by an organization that has floated many such issues in the past. Initial public offering is the process by which a private company can go public by sale of its stock to the public. It could be a new, young company or an old company which decides to be listed on an exchange and hence goes public. The market that deals with these new issues is called primary market, as opposed to the secondary market that deals with existing shares and bonds.

New issues are distributed through the primary market, which is a market where companies raise long term equity capital. In this market, the security is issued directly by the company to the investors, as opposed to secondary market where trading takes place between investors. Companies tap into the idea of new issues when they want to start business or expand an existing business or for any other activity that requires large sums of money. Securities offered in an initial public offering (IPO) are often, but not always, those of the young, small companies seeking outside equity capital and a public market for their stock. Investors purchasing stock on IPO must be prepared to accept very large risk for the possibility of large gains.

2.4 ALL SHARE INDEX

All share indexes is a series of numbers which shows the changing average value of the share prices of all companies on stock exchange. It is used to measure how well a market is performing. All share indexes is a quick measure to judge the overall direction of the market and the scope of its movements. Nigeria stock exchange index is a total picture of the behaviour of the common share quoted on the Nigerian stock exchange. It is calculated on a daily basis, showing how the prices have moved. A market index is a statistical parameter to reflect the composite value of market characteristics. It represents the overall price performance of the market with one statistics –the index value.

2.5 THEORETICAL FRAMEWORK

Stock market development and economic growth has been supported by some theories. These theories explain the connection between development of stock market and economic growth having divergent postulations. The theoretical contribution can be divided into two major views; the Supply Leading View (finance led-economic growth) and demanded view.

The supplied view argues that stock market development is necessary for the achievement of growth and development of the economy. The theory states that economic growth requires huge long-term resources which are only obtainable from the stock market. This theory was traced to the work of Schumpeter in 1912. The opposing view which is the Demand view maintained that it is the level of development in the economy that determines the depth of development in the stock market. This view opined that stock market development follows economic growth and demand of the real sector. It is assumed that creation of more credit than required in the economy would retard long-term growth of

the economy. According to Durusu-Ciftci(2017), there are theoretical studies that examine the role of financial development on economic growth by clustering financial development into various sub categories such as banking sector development, stock market development and bond market development. The theoretical studies reveal that all these financial activities have significant contribution to the economy. The research is therefore anchored on the supply leading view.

2.6 Empirical Review

Various studies have been done in this field by using different variables, methodology, and time span. Some of these works are reviewed in this sector. Araonye, Ajayi and Aruwaji (2018) examined the impact of the Nigeria stock market development on the nation's economic growth from 1985-2014. The variables used were Gross domestic product, market capitalization and market turnover ratio. The study utilized Johansson cointegration test to further establish a long run relationship between stock market development and economic growth in Nigeria. It was found that stock market has impacted insignificantly on the economic growth.

Pradham et al (2019) investigated whether Granger Causal relationship exist between bond market development, stock market development, economic growth and two other macro-economic variables namely inflation rate and real interest rate. Panel data set of the G20 countries for the period 1991-2016 was used. Auto-regression model was used for the analysis. The result show that bond market development, stock market development, inflation rate and real interest rate drives economic growth in the long run.

Kapaya (2020) studied the impact of stock market development and economic growth in Tanzania, using ARDL and Bound testing approach. The sample covered quarterly time series data from 2001 quarter to 2019 quarter 2 in Tanzania. The result stated that stock market development has both negative and positive causality for both short-run dynamics and long-run relationship with economic growth. In a similar view, Ezeibekwe (2019) studied stock market development and economic growth: Empirical evidence from Nigeria. The paper seeks to identify the correlation between stock market development and long run economic growth in Nigeria using the vector Error correction modeling. The result maintained that stock market development does not contribute significantly to long-run relationship to economic growth in Nigeria.

Bist (2018) investigated the long-run association between financial development and economic growth. He studied 16 selected low income countries for the period of 20 years from 1995 to 2014 using panel co-integration analysis. The paper confirmed that finance development has a positive and significant impact on economic growth. Similarly, Beck and Levine (2001) analysed the impact of stock markets and banks on economic growth using a panel data set for 40 countries over the period of 1976-1998. The result supported the view that stock market and Banks positively influence economic growth. Amtiran et al (2017) examined the relationship between macroeconomic factors and stock returns in the Indonesian capital market. Secondary data was used under this study from the

period of 2009 to 2014. A total sample to 80 companies listed in the Indonesian stock exchange were used and data were analysed employing the OLS regression techniques. The result show that exchange rate, and interest rate have a positive relationship with stock returns, inflation has negative correlation with stock returns.

Dokmen and Bayramonglo (2015) studied the linkages between market capitalization and economic growth using annual data of 8 emerging countries for the period of 1991-2012. The work adopted the use of panel vector auto regression model. The result shows a positive and significant response to a market capitalization rate stock. The study concluded that the performance of emerging market stock market has significantly contributed to the growth of the economy.

Ananwude and Osakwe (2017) investigated the long run relationship between stock market development and economic growth in Nigeria from 1981 to 2015. Market capitalization ratio and turnover ratio were used to measure the depth of development of Nigerians stock market, whereas growth rate of real gross domestic product where used to capture economic growth. Auto Regression Distributive Lag (ARDL) was used for the analysis. The funding shows that the depth of development in Nigeria's stock market has positive but significant relationship with economic growth both in short run and long run. Koth and Sahu (2016) explained the long run and short run nexus between Indian stock market and selected macroeconomic indicators employing monthly data from July 2001 to July 2015. Johnson's Co-integration analysis and Granger causality text were applied and the study shows that inflation and money supply shows a positive and significant relationship with stock returns whereas interest rate showed negative and insignificant relationship.

Anigbogu and Nduka (2014) examined the long-run and casual relationship between stock market performance and economic growth in Nigeria for the period from 1987Q1 to 2014 Q2. The study employed the Augmented Dickey fuller test for unit root, the Johnson (1995) maximum likelihood countegration technique and vector Error correction model frame work was used to capture long-run and short-run relationship between Nigeria stock market and economic growth. The study further employed Granger causality test. The result of the cointegration test confirmed that there exist a long-run relationship between stock market performance and economic growth, while the causality test result suggested that stock market performance causes growth with feedback.

3.0 METHODOLOGY

3.1 Research Design

This study employed ex-post facto research design. Kerlinger's (1973) defined ex post facto research as one in which both the independent variable(s) and the dependent variable(s) have already occurred and the researcher has no control over them.

3.2 Model Specification and Justification

A number of studies have been conducted in Nigeria on the effect of stock market on economic growth in Nigeria. However, this study has adopted and modified the models of Araonye, Ajayi and Aruwaji (2018) which also investigated the linkage between stock market and economic growth. The model stated thus:

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

Has been modified to

$$GDPR = F(ASI, MCP, TNI) \text{ ----- 1}$$

Where

RGDP = Real Gross Domestic Product, LAB = Labour, CAP= Capital, MCP = Market capitalization, TURN = Turnover Ratio, GDPR = Gross Domestic Product Growth Rate, ASI = All Share Index, TNT = Total New Issue.

The mathematically expressed equation 1 can be expressed explicitly in an econometric (linear equation) form as:

$$GDPG = \beta_0 + \beta_1 ASI + \beta_2 MCP + \beta_3 TNT + \mu \text{ -----2}$$

Equation 2 can further be transformed to a linear- Log model as stated below:

$$GDPGR = \beta_0 + \beta_1 \ln ASI + \beta_2 \ln MCP + \beta_3 \ln TNT + \mu$$

According to Wooldridge (2013), taking the log of a variable often narrows its range especially large monetary values. This justifies the transformation of the level-level model in equation 1 into a level-log model in equation 2 restated below:

$$GDPGR = \beta_0 + \beta_1 \ln ALSI + \beta_2 \ln MCP + \beta_3 \ln TNT + \mu$$

LnASI = Natural Log of ASI, LnMCP = Natural Log of MCP, LnTNT = Natural Log of TNT, β_0 [is the intercept, $\beta_1 - \beta_3$ are coefficients of the independent variables, and μ is the error term representing the unobserved factors that influence the dependent variable other than the independent variables

GDPR is not logged because it is already in percentage.

3.3 Method of Data Analysis

The study employed views 10.0 as the econometric statistical package for conducting the necessary tests on the data. Unit Root Test was used to determine the stationarity of the series. Usually, when the time series are stationary in their level then they are said to be integrated at level, denoted as $I(0)$, and when the time series are stationary in their first differences, then they are said to be integrated of order one, denoted as $I(1)$. In some rare cases, the series could be stationary in their second different, in which case they are said to be integrated of order two denoted as $I(2)$. The Co-integration test was conducted to ascertain that a long run relationship exists between the independent and the dependent variables while the Ordinary least square (OLS) regression was used to estimate the long run coefficients. The Error Correction Model Test was conducted to establish the short run dynamics and estimate the adjustment coefficient – which is the speed at which short run perturbations are adjusted in order for equilibrium to be attained in the long run.

4.0 DATA PRESENTATION AND ANALYSIS

4.1 Data Presentation

| Year | GDPG | ASI | MCP (B'N) | TNI (B'N) |
|------|-------|----------|-----------|-----------|
| 1999 | 0.58 | 5264.192 | 300 | 11.93 |
| 2000 | 5.02 | 6701.175 | 472.3 | 17.59 |
| 2001 | 5.92 | 10185.08 | 662.5 | 33.57 |
| 2002 | 15.33 | 11631.87 | 764.9 | 60.73 |
| 2003 | 7.35 | 15559.9 | 1,359.30 | 128.8 |
| 2004 | 9.25 | 24738.65 | 2,112.50 | 207.17 |
| 2005 | 6.44 | 22876.72 | 2,900.06 | 591.01 |
| 2006 | 6.06 | 28101.58 | 5,120.90 | 733.7 |
| 2007 | 6.59 | 48773.31 | 13,181.69 | 1,943.24 |
| 2008 | 6.76 | 50424.7 | 9,562.97 | 2,073.00 |
| 2009 | 8.04 | 23091.55 | 7,030.84 | 1,127.42 |
| 2010 | 8.01 | 24775.51 | 9,918.21 | 1,584.89 |
| 2011 | 5.31 | 23393.65 | 10,275.34 | 2,084.32 |
| 2012 | 4.23 | 23432.62 | 14,800.94 | 755.21 |
| 2013 | 6.67 | 36207.08 | 19,077.42 | 1,334.57 |
| 2014 | 6.31 | 39409.82 | 16,875.10 | 1,533.28 |
| 2015 | 2.65 | 30867.2 | 17,003.39 | 1,209.68 |
| 2016 | -1.62 | 26624.08 | 16,185.73 | 1,482.59 |
| 2017 | 0.81 | 32161.11 | 21,128.90 | 1,983.15 |
| 2018 | 1.92 | 37186.11 | 21,904.04 | 1,331.06 |
| 2019 | 2.21 | 29060.3 | 25,890.22 | 952.68 |

Source: CBN Statistical Bulletin, 2019, and World Development Indicator (WDI) 2019

4.1.1 Descriptive Statistics

The summary of the descriptive statistics of the variables used in the study is presented in Table 4.1. It consists of measures of the central tendency including the mean and the median as well as measure of dispersion; for instance, minimum, maximum, and standard deviation, for both the dependent and the independent variables. It is clear in Table 4.1 that the number of observations is 21 for each variable

in accordance with the time scope of the study. The table equally shows that the average growth of the Nigerian economy was 5.42% , with a maximum growth rate of 15.3 % and minimum growth rate of -1.6% respectively within the period. The deviation of growth from the mean was 3.6% showing the economy during the period was volatile.

Table 2 Descriptive Statistics

| | GDPG | ASI | MCP | TNI |
|--------------|-----------|----------|----------|-----------|
| Mean | 5.420952 | 26212.68 | 10310.82 | 1008.552 |
| Median | 6.060000 | 24775.51 | 9918.210 | 1127.420 |
| Maximum | 15.33000 | 50424.70 | 25890.22 | 2084.320 |
| Minimum | -1.620000 | 5264.192 | 300.0000 | 11.93000 |
| Std. Dev. | 3.629380 | 12251.24 | 8196.645 | 733.7742 |
| Skewness | 0.450228 | 0.152448 | 0.242309 | -0.043196 |
| Kurtosis | 4.159702 | 2.613036 | 1.782855 | 1.677386 |
| Jarque-Bera | 1.886263 | 0.212365 | 1.501761 | 1.537176 |
| Probability | 0.389406 | 0.899261 | 0.471951 | 0.463667 |
| Sum | 113.8400 | 550466.2 | 216527.3 | 21179.59 |
| Sum Sq. Dev. | 263.4480 | 3.00E+09 | 1.34E+09 | 1076849 |
| Observations | 21 | 21 | 21 | 21 |

Source: Output from Eviews 10.0

4.2 Data Analysis

It is customary in any analysis of time series data to commence with the unit root test to ensure that the series are stationary as non-stationary variables will produce spurious results. It is equally a vital step to take because the result of the unit root tests determines the type of cointegration test to conduct what econometric tool to use for regression analysis.

4.2.1 Result of Unit Root Tests

The result of the Augmented Dickey Fuller unit root tests to investigate the stationarity of the variables is presented in Table 4.2.

Table 4.3: Results of the Unit root tests

Null Hypothesis: Variable has a unit root

| Variab le | TEST CONDUCTED | Mackinon non Critical Value at 5% probability level | Level Test Stat | Mackinon non Critical Value at 5% probability level | 1st Differen ce Test Stat | Order of Integrati on |
|----------------------|---------------------------|--|--------------------------------|--|---|--------------------------------------|
| GDPG | ADF | -3.020686 | - 2.5486 90 | -3.052169 | - 6.58381 0 | I(1) |
| LNASI | ADF | -3.020686 | - 2.8429 91 | -3.040391 | - 3.67919 1 | I(1) |
| LNMCPI | ADF | -3.020686 | - 2.4419 38 | -3.029970 | - 3.61146 9 | I(1) |
| LNTNI | ADF | -3.020686 | - 2.9873 34 | -3.673616 | - 5.30109 1 | I(1) |

Source: Eviews 10.0 Output extract on Excel

Augmented Dickey Fuller tests indicate that gross domestic product growth rate (GDPG) which is the dependent variable, and all the independent variables were stationary at first difference I(1) at 5% level of significance as indicated in Table 4.2 above.

4.2.2 Result of Normality test

Normality test was conducted in order to make certain that the data set was normally distributed and was good enough for analysis. The Jarque-Bera Normality test which requires that for a series to be normally distributed, the histogram should be Bell-shaped was used. The result of the test is presented

in Figure 1. From the figure it can be seen that the data distribution follows a bell shape as required. The null hypothesis for Jarque- Bera test is

H_0 : Data follow a normal distribution at .05 level of significance. From Figure 3, it can be seen that the P-value is 0.262562, which is greater than 0.05. The Null hypothesis of normal distribution can therefore not be rejected. Thus, the data for the study is normally distributed.

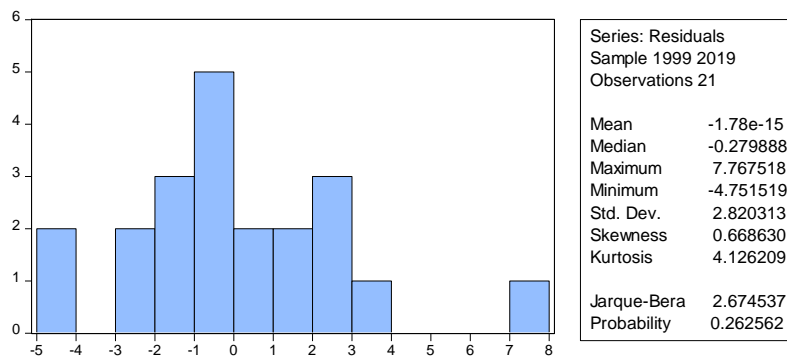


Figure 1 Jarque – Bera Normality Test

Source; Output from Eviews 10.0

4.3 COINTEGRATION TESTS

All the variables were subjected to Engle - Granger Cointegration test and to further confirm the validity of the test, the variables were also subjected to Johanson Cointegration test. In Engle-Granger test, regression was carried on the variables at level and the residuals subjected to the unit root test according to procedure. The result of the unit root test, table 4.3 below showed that the residuals were integrated at level, I (0). This signified cointegration. This was confirmed by carrying out Johanson cointegration test (table 4.4) and the statement that trace test indicates 3 cointegrating equations at 0.05 % level implied there is cointegration. The two results simply imply that a long run relationship exists between the explained variable and the explanatory variables, in other words equilibrium is attained at a long run.

Table 4.3 Result of Engle-Granger Cointegration Test

Null Hypothesis: RESID01 has a unit root
 Exogenous: Constant, Linear Trend
 Lag Length: 0 (Automatic - based on SIC, maxlag=4)

| | t-Statistic | Prob.* |
|--|-------------|----------|
| Augmented Dickey-Fuller test statistic | - | 3.864462 |
| Test critical values: | - | 0.0341 |
| 1% level | 4.498307 | |
| 5% level | 3.658446 | |
| 10% level | 3.268973 | |

*MacKinnon (1996) one-sided p-values.

Source: Output from Eviews 10.0

Table 4.4 Result of Johansen Cointegration Test

Date: 08/28/20 Time: 15:59
 Sample (adjusted): 2001 2019
 Included observations: 19 after adjustments
 Trend assumption: Linear deterministic trend
 Series: GDPG LNASI LMCP LNTNI
 Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

| Hypothesized | Trace | 0.05 |
|--------------|-------|------|
| | | |

| No. of CE(s) | Eigenvalue | Statistic | Critical Value | Prob.** |
|--------------|------------|-----------|----------------|---------|
| None * | 0.733266 | 55.33960 | 47.85613 | 0.0085 |
| At most 1 | * 0.523661 | 30.23103 | 29.79707 | 0.0446 |
| At most 2 | * 0.500579 | 16.14015 | 15.49471 | 0.0399 |
| At most 3 | 0.143735 | 2.948326 | 3.841466 | 0.0860 |

Trace test indicates 3 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Source: Output from Eviews 10.0

The Error Correction Model (ECM)

The Error correction model was conducted to ascertain the short run effect of the independent variables on the dependent variable. Though there is a long run relationship between the variables, in a short term, there is an error and usually, the purpose of the ECM test is to calculate the speed of adjustment of the short term distortions so as to attain equilibrium in a long run. The ECM test in Table 4.5 below shows the coefficient of ECM is -0.78. This implies that the speed of adjustment is high, 78% and the coefficient has the right sign and is significant (P = 0.0048). The implication is that 78% of the errors in the short run are adjusted in each period – which is one year since the study is using annual data.

Table 4.5 Result of Error Correction Model

Dependent Variable:

D(GDPG)

Method: Least Squares

Date: 08/28/20 Time: 16:02

Sample (adjusted): 2000 2019

Included observations: 20 after adjustments

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---------------------|-------------|-----------------------|-------------|---------|
| D(LNASI) | 4.963747 | 3.344462 | 1.48416 | 90.1585 |
| D(LMCP) | 3.629734 | 3.027011 | 1.19911 | 50.2491 |
| D(LNTNI) | 0.492799 | 1.663172 | 0.29630 | 10.7711 |
| ECM(-1) | 0.788738 | 0.238638 | 3.30516 | 90.0048 |
| C | 0.311705 | 0.846761 | 0.36811 | 40.7179 |
| Adjusted R-squared | 0.326231 | S.D. dependent var | 3.551190 | |
| S.E. of regression | 2.914939 | Akaike info criterion | 5.189893 | |
| Sum squared residue | 127.4530 | Schwarz criterion | 5.438826 | |
| Log likelihood | 46.89893 | Hannan-Quinn criter. | 5.238487 | |

| | | | |
|-------------------|--------|-------------|--------|
| | 3.2998 | Durbin- | 1.9835 |
| F-statistic | 94 | Watson stat | 84 |
| Prob(F-statistic) | 0.0396 | | |
| | 37 | | |

Source: Output from Reviews 10.0

4.4 Regression Analysis

To investigate the long run relationship between the variables, OLS regression was conducted on the level values of the variables. This was done in order to ascertain the actual long run effect of each of the independent variables on the dependent variable. Table 4.6 shows the details of the regression analysis.

Table 4.6 Result of Ordinary least Squares (OLS) Regression Analysis

Dependent Variable: GDPG
 Method: Least Squares
 Date: 08/28/20 Time: 15:54
 Sample: 1999 2019
 Included observations: 21

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|----------|-------------|------------|-------------|--------|
| LNASI | 5.13093 | 53.191379 | 1.607748 | 0.1263 |
| LNMCPC | 4.23322 | 01.468537 | 2.882610 | 0.0103 |
| LNTNI | 1.32316 | 11.606131 | 0.823819 | 0.4215 |
| C | 17.7926 | 825.69567 | 0.692439 | 0.4980 |

| | | | |
|--------------------|---------|-----------------------|--------|
| | 0.39614 | Mean | 5.4209 |
| R-squared | 9 | dependent var | 52 |
| Adjusted R-squared | 0.28958 | S.D. dependent var | 3.6293 |
| S.E. of regression | 3.05905 | Akaike info criterion | 5.2437 |
| Sum squared resid | 159.083 | Schwarz criterion | 5.4426 |
| | - | | 92 |
| | 51.0592 | Hannan-Quinn criter. | 5.2869 |
| Log likelihood | 3.71754 | Durbin-Watson stat | 1.4969 |
| F-statistic | 0.03191 | | 84 |
| Prob(F-statistic) | 3 | | |

Source: Output from Eviews 10.0

4.5 Interpretation and Discussion of Findings

From table 4.6 and following the coefficients of the variables, the regression equation becomes $GDPG = 5.130935 * LNASI - 4.233220 * LNMCP + 1.323161 * LNTNI - 17.79268$

It can be seen from the table that the values of R², adjusted R², and the F-statistic are of 0.396 0.289, and 3.717 respectively. Generally, the coefficient of determination R² measures the explanatory power of the multiple regression model. The coefficient of determination R² = .396 and adjusted R² = 0.289 indicates that the variables in the equation namely, All share index, market capitalization, and Total new issue are useful and are responsible for 29% of the changes on the GDP -the dependent variable; and about 71% of the relationship is explained by factors other than the explanatory variables imputed in the model. This goes to show the reality that economic growth is dependent on many other factors other than the stock market, and that there are still many other components of the stock market not factored into the present model. The F-statistic value of 3.72 at 5% level of significance shows a good fit and that the explanatory variables are important determinants of the GDP growth rate in Nigeria. The overall P-value (F-probability) of 0.03 is an indication that the overall model is statistically significant.

The OLS regression (Table 4.6) also shows that All share Index (ASI) has a positive though insignificant effect on economic growth. The coefficient of LnASI of 5.130935 and probability of

0.1263 show that the null hypothesis of insignificant effect of ASI on economic growth is accepted and the alternative of significant effect rejected.

Equally, the coefficient of LnTNI of 1.323161 and the corresponding probability of 0.4215 is an indication that TNI has a positive but insignificant effect on economic growth in Nigeria. Therefore, the null hypothesis of insignificant effect of TNI on economic growth cannot be rejected.

However, Market capitalization (MCP) has an inverse and a statistically significant effect on economic growth. In a linear– log model as is the case with this study, $\Delta y = (\beta/100) \% \Delta x$
Where β is the coefficient of the variable involved x.

From the coefficient of LnMCP of -4.2, it shows that an increase in market capitalization of 1 unit will lead to a decrease in economic growth of 0.04% (4.2/100). Its P-value of 0.0103 shows that its effect is statistically significant at .05 level of significance. This result is consistent with studies by Owusel (2016); and Alajekwu and Achugbu (2011) which showed that stock market capitalization has an inverse effect on economic growth in Nigeria, and also Azarna, Lazar and Jayapaul (2005) and Chepkoech, J. (2014) whose studies showed a negative effect of stock market capitalization on economic growth in India and Kenya respectively. However, Ananwude and Osakwe (2017); Adeyemi (2015) showed that market capitalization has a positive and significant effect on economic growth in Nigeria while Nasir, Mohammed and Najebo(2016) found similar results in Saudi Arabia. It has to be emphasized here that market capitalization itself depends on many elements including the inflation rates, exchange rates, interest rates and on stock costs at the time records are being readied. Theoretically, it is expected that the stock market in general should have a positive effect on economic growth by making available information about possible investments, enhancing liquidity, minimizing intertemporal risk, mobilising as well as pooling savings and easing the exchange of goods and services. This notwithstanding, the negative effect of some components of stock market on economic growth may result from increased volatility.

5.0 SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of Findings

The following are the findings made:

1. All share index and total new issue have positive but statistically insignificant effect on economic growth within the period under study while market capitalization has a negative and statistically significant effect in economic growth in Nigeria.
2. The coefficient of determination and the adjusted R2 indicate that all share index market capitalization and total new issue are useful and responsible for a change in Gross Domestic Product (GDP)
3. Engle Granger cointegration test and unit root test confirm that a long run relationship exists between variables under study and equilibrium attained at a long run

4. F-statistic value shows that the explanatory variables are important determination of the GDP growth rate in Nigeria.

5.2 CONCLUSION

This research examined the extent to which the stock market development has impacted on economic growth in Nigeria between the periods of 1999-2019. Among the variables used, all share indexes and total new issue have a positive but insignificant effects to economic growth and market capitalization has a negative effect on economic growth. This situation may not be surprising because the market has been facing a lot of challenges in its development. Also, the findings may be as a result of low market capitalization and liquidity misappropriation. The stock market needs great confidence in the system in terms of transparency and accountability for investors to believe in them again. And they should as well increase capitalization for further growth and development of the market.

5.3 RECOMMENDATION

Based on the findings of the study, the research therefore, recommends that:

Efforts should be made by both the government and policy makers to instill confidence in the market so that prospective investors will have confidence to invest.

Policy maker should fine-tune policies that is geared towards solving the problem of unpaid dividend, delay in dividend payments and transfer of stocks

The government should create an enabling investable environment that will increase the volume of transaction and number of stocks traded

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