

The Growth Impact of the Capital Market in Nigeria

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Abstract

The study empirically investigated the impact of the capital market on economic growth in Nigeria. Time series data from 1981 to 2016 were obtained from the Central Bank of Nigeria Statistical Bulletin (CBN, 2017) and the Securities and Exchange Commission Statistical Bulletin (SEC, 2017). The study employed the Ordinary Least Square (OLS) technique to determine the estimates of the specified parameters. The regression result revealed that new issues and market capitalization have positive and significant impact on economic growth in Nigeria while all share index and stock market turnover have positive but insignificant impact on economic growth in Nigeria. The result further suggests that the value of transaction has a negative impact on economic growth in Nigeria. The study therefore concludes that the capital market has positive but insignificant impact on economic growth in Nigeria. The study recommends that the CBN should initiate policies that will inject more liquidity into the Nigerian capital market that are capable of spurring significant economic growth.

Keywords: Capital Market, Financial Markets, Economic Growth, OLS, ARCH Effect

INTRODUCTION

The role of the capital market in the growth of the economy can never be over emphasized in embracing capacity building opportunities in business, management, innovation and entrepreneurship. (Ndako, 2010) submits that the capital market is a complex institution imbued with inherent mechanism through which long-term funds of economic agents such as households, firms, and government at all levels are mobilized, harnessed and made available to various sectors of the economy. The capital market is the market where long term capital is raised for investment purposes and it aids capacity building opportunities in modern day dispensation by providing the platform for capital formation and allocation in the economy (Akinlo & Akinlo, 2007). The capital market also provides the fulcrum for stock market activities and it is often seen as a barometer of business and economic growth. This is because an active capital market might be relied upon to measure changes in the general level of economic activities (Obadan, 1998). The capital market embraces capacity building opportunities and contributes to economic growth through the transmission mechanisms of savings mobilization, liquidity creation, risk diversification, information dissemination and the provision of long-term, non-debt financial capital which enables companies to avoid over-reliance on debt financing. Similarly, Bensivenga,

Burce, and Ross (1996) assert that a well-developed stock market induces long run economic growth. McKinnon and Shaw (1973) submitted that financial liberalization and stock market development promote economic growth through their impact on the growth rate of savings, investment and economic growth.

The rise in the number of would-be and unlucky investors who are afraid of the capital market crash or have lost their hard earned savings to fraudsters and unproductive investments (which seems to make them lose confidence in the efficiency of the capital market, especially when it is highly speculative and illiquid) is a glaring indication that the nation still needs empirical studies that will focus on the capital market where long term funds can be raised for capacity building opportunities in business, management, innovation and entrepreneurship. Furthermore, most studies on the impact of financial market development on economic growth focused more attention on the long term growth-inducing impact of the capital market than the short term impact of the money market because of the huge benefits associated with the stock exchange through which the capital market operates. (Adigwe, Nwanna and Amala, 2015; Ogwumike and Salisu, 2012; Odeniran and Udejaja, 2010; Adegbite and Oke, 2008; Akinlo and Akinlo, 2007; Obamiro, 2005).

Over the years, the Nigerian financial market has been described as one of the high return-yielding financial markets in the world and has been enlisted among the best performing financial markets in the world which have attracted both local and foreign investors (Sanusi, 2010). More so, Investors in the Nigerian financial markets tilt their investment more towards the capital market segment of the financial markets than the money market segment because of the high return on investment and the long term capital that the capital market offers (Kyle, 2013). This makes the Nigerian capital market more pronounced than the money market and more attractive to foreign investors. This is evidenced in table 1 where Nigeria is ranked as the 6th best performing stock exchange in the world in the year 2013.

Table 1: List Of The Ten Best Performing Stock Exchanges In 2013

Country	Stock Exchange	Share Price rise (%)
Venezuela	Caracas	45.2
Japan	Jasdaq Index	41.1
Iceland	OMXL All Share	38.5
Zambia	Lusaka Stock Exchange	37.2
Ireland	Irish Stock Exchange	35.2
Nigeria	Nigerian Stock Exchange	34.9
Greece	Athens Stock Exchange	34.5
Argentina	Mercado de	33.9
USA	Nasdaq Index	33.7
Pakistan	Karachise	31.8

Source: Adapted from Kyle, 2013.

Huge long term funds can be raised at cheaper cost by quoted companies from the capital market either by the issue of debt instruments such as bonds, debentures or by the issue of equities such as shares for capacity building opportunities in business, management, innovation and entrepreneurship, which the money market and other sources of fund might not offer or provide. It is against this backdrop that the study sets out to empirically examine the impact of the capital market on economic growth in Nigeria. Although the study is predicated on and limited by the assumptions of capital market hypotheses such as capital asset pricing model (which shows the relationship between expected return on a security and its associated risk) and modern portfolio theory (which shows the relationship between expected return on a portfolio and the risk of a portfolio), its relevance and application in respect of capacity building opportunities in business, management, innovation and entrepreneurship is indispensable to both potential and prospective investors in the Nigerian capital market. More so, the risk of investing in capital market instruments is high due to low liquidity and long term maturity period associated with them.

LITERATURE REVIEW

The capital market is an engine of economic growth because of its ability to mobilize savings for productive investment in the real sector. A good number of studies have been conducted by finance and economic scholars to examine the impact of the capital market on economic growth. The theoretical framework on the impact of capital market on economic growth dates back to the work of Schumpeter in 1936, which explains why a well-developed financial system can facilitate technological innovation and economic growth through the provision of financial services and resources to investors. Levine and Zervos (1996) examines whether there is a strong empirical association between capital market and long-run economic growth. The study used pooled cross-country time series regression of forty-one countries from 1976 to 1993 to evaluate this association. They found that a strong correlation between stock market development and long-run economic growth exists.

Sumit and Hamid (2004) examined the relationship between the capital market and economic growth of twenty one emerging markets over twenty one years, using a dynamic panel method. The results of their study indicate that a positive relationship between several indicators of capital markets and economic growth exist both directly and indirectly. Osuala, Okereke and Nwansi (2013) examined the relationship between the capital market and economic growth in Nigeria using the General to specific Autoregressive Distributed Lag (ARDL) Bound testing approach on time series data covering the periods of 1981-2011. The study found a long-run co-integration between the capital market and economic growth. However, with regard to the relationship between GDP and capital market indicators, a unidirectional causality was established in the short-run. In the long-run, there was no relationship between economic growth and the capital market. Azarmi, Lazar and Jeyapaul (2005) examined the empirical association between stock market development and economic growth for a period of ten years during the Indian market liberalization era of 1981-2001. The study revealed among others that the Indian stock market development is not associated with economic growth of 1981 period.

Alajekwu and Achugbu (2012) investigated the role of the stock market on economic growth in Nigeria, using Ordinary Least Square (OLS) techniques on time series data of fifteen years. Their results show that market capitalization and value of traded securities ratios have a very weak and negative correlation with economic growth while stock turnover ratio has a very strong positive correlation with economic growth. Also, market capitalization has a strong and positive correlation with stock turnover ratio. This implies that liquidity has the propensity to spur economic growth in

Nigeria while market capitalization has the capacity to influence market liquidity. Nagayasu (2015) observed that, where the market is highly and unreasonably speculative, investors will be discouraged from parting with their scarce funds for fear of incurring financial losses. This suggests that investors might not be willing to invest in the capital market and also implies that companies will not be able to raise additional capital for expansion.

Though there are other scholars who share contrary views about the performance of the capital market and its attendant effects on economic growth and development of nations. For instance, Emenuga (1998) believed that the stock market is illiquid and blamed the ownership structure on the Nigeria stock market. He concluded that the stock market is small and has few listed companies, low market capitalization as well as low volume of transactions. Ariyo and Adelegan (2005) argued that the liberalization of capital market contributes to the growth of the Nigeria capital market, yet its impact at the macro-economy is quite negligible.

In another exposition, Gabriel (2002) as enunciated by Nyong (2003) lay emphasis on the Romanian capital market and concluded that the market is inefficient and hence it has not contributed to economic growth in Romania. Whichever school of thought, either for or against the capital market as a sine qua non for economic growth, all depends on the particular situation the nation is currently passing through and the prevailing economic challenges facing her. With financial liberalization, many of the East-Asian capital markets like Singapore, Hong Kong and Bangkok have developed over time until they are regarded as international centres in Asia. In contrast, the past years saw comparatively little change in the capital market of sub-Saharan Africa including Nigeria.

Nyong (1997) developed an aggregate index of capital market development and used it to determine its relationship with long run economic growth in Nigeria. The study employed a time series data from 1970 to 1994. For measures of capital market development the ratio of market capitalization to GDP (in percentage), the ratio of total value of transactions on the stock exchange to GDP (in percentage), the value of equities relative to GDP and listings used. The four measures were combined into one composite index of capital market using principal component analysis. A measure of financial market depth (which is the ratio of broad money to stock of money to GDP) was included and used as a control variable. The result of the study showed that capital market is negatively but significantly correlated with long run growth in Nigeria. The result also showed that a bi-directional relationship exists between the capital market and economic growth.

Market capitalization is the value of quoted companies' shares on the floor of the stock exchange. It reflects the prevailing market price of quoted securities and the size of companies' share capital. Ngerebo, Tamunominim and Torbira (2014) submit that market capitalization is the total value of a country's stock exchange and a good measure of the size of the capital market. The empirical studies of Sunday, Atim and Jude (2009), Kolapo and Adaramola (2012), Edame and Okoro (2013) and Ibadin et al. (2014) revealed that market capitalization exerts positive influence on economic growth in Nigeria. However, the empirical studies of Rabi, Awaisu, Usman, Fatima, Sabo and Tijani (2015) found that market capitalization has negative effect on economic growth in Nigeria. Stock market turnover is the ratio of market capitalization to gross domestic product. It is a measure of stock market liquidity. Kamal (2013) submits that with a liquid stock market, investors do not lose access to their savings during the duration of their investment, as they can easily, quickly and cheaply sell their stakes in companies they invested their savings.

The empirical study of Emmanuel and King (2014) revealed that stock market turnover exerts positive influence on economic growth. Adamu and Sanni (2005) investigated the roles of the capital market on economic growth in Nigeria, using the granger causality test and regression analysis. The study revealed that a positive and significant relationship exists between stock market turnover and economic growth in Nigeria. New issues are new securities that are registered, issued and sold in the stock market to the public for the first time. Malcolm and Jeffery (2007) maintained that shares predict stock market returns and observed that stock market returns tend to be high following low equity share years. The empirical studies of Ariyo and Adelegan (2005), Adegaju and Henry (2008), Ogboi and Oladipo (2012) revealed that new issues have negative impact on economic growth in Nigeria. The value of transaction is the overall value of a company (including its equity and debt). It is arrived at by multiplying the percentage return on an investment by the market capitalization of the firm. It is also what a would-be buyer pays to acquire a firm.

On the other hand, volume of transaction is the number of shares traded of a security or the number of shares traded on the entire market during a given trading day. Ekezie (2002) notes that the volume of transaction is used to measure the number of market moves in technical analysis and hence a measure of liquidity. High volume of stocks helps to reduce liquidity risk and boost economic growth. Stocks traded at fewer than 10,000 shares per day are considered a low-volume stock and are difficult to trade. Tetsuya and Ting (2016) observed that persistence of volatility is

not always removed by adding trading volumes or number of transactions. John, Okanta and Nkanma (2017) investigated the effect of volume of transaction and stock market turnover on daily stock market returns of the Nigerian Stock Exchange using the OLS technique. The study found that the volume of trade had a negative but significant impact on stock market returns as a result of illiquidity of low-volume stocks while stock market turnover had a positive and significant impact on stock market returns in Nigeria due to investors' anticipation of higher market illiquidity.

METHODOLOGY

This study focuses on the growth impact of capital market in Nigeria. The main focus of the study centres on the effectiveness of the capital market in stimulating the growth of the Nigerian economy between 1981 and 2016. Based on the background discussion of this study vis-à-vis the empirical studies that have been reviewed, we modelled the link between the capital market and growth on the Solow neoclassical theory. According to Solow (1956), the growth of an economy is influenced by the amount of human and physical capital inherent in it. Therefore, since the focus of this study is on the capital market, the empirical model is built on the model developed by Solow (1956) and is structured functionally as:

$$GDP = f(VTR, STO, NI, MCAP, ASI) \quad (1)$$

Where; GDP represents the real gross domestic product per capital and it is a proxy for economic growth. For the explanatory variables, VTR represents the value of transactions in the Nigerian stock exchange market, STO represents stock turnover, NI stands for new issues in the capital market, MCAP is market capitalisation while ASI stands for the all share index. Therefore, to conduct the estimation of this scientific enquiry, we specify equation (1) in an estimable form as:

$$GDP_t = \lambda_t + \beta_1 VTR_t + \beta_2 STO_t + \beta_3 NI_t + \beta_4 MCAP_t + \beta_5 ASI_t + \varepsilon_t \quad (2)$$

In equation (2), GDP is the proxy for economic growth, VTR is value of transaction, STO is the turnover of stocks, NI is new issues, $MCAP$ is market capitalisation, ASI is the all share index, ε is the residual term, λ is the intercept while β_1 , β_2 , β_3 , β_4 , and β_5 are the elasticities of value of transaction, stock turn over, new issues, market capitalisation, and all share index respectively. The study makes use of the ordinary least squares (OLS) technique to determine the estimates of the specified parameters. Furthermore, only secondary data sourced from Central Bank Statistical bulletins (CBN, 2017) and the Securities and Exchange Commission Statistical bulletins (SEC, 2017) are employed in this study. The various data covers between 1981 and 2016. The description and

priori expectations of the variables used are shown in tables 2a and 2b respectively.

Table 2a: Description of all variables

S/N	Variables	Symbol	Measurement of variable
1	Gross Domestic Product	GDP	GDP is a monetary measure of the market value of all final goods and services produced in a country for a period, usually a year.
2	Value of Transaction	VTR	VTR is the measure of the overall value of a company.
3	Stock Turnover	STO	STO is a measure of stock market liquidity.
4	New Issues	NI	NI is a measure of the additional shares issued to the public for subscription and the increase in a firm's capital.
5	Market Capitalization	MCAP	MCAP is a measure of the financial strength and size of quoted firms.
6	All Share Index	ASI	ASI shows the changing average value of share prices of all firms on a stock exchange and a measure of how well the exchange is performing.

Source: Authors, 2018

Table 2b: A Priori Expectation of dependent variables

Serial Number	Independent Variable	Expected Sign	Observed Sign	Remark
1	Value of transaction	+	-	Does not conform
2	Stock market turnover	+	+	Conform
3	New issues	+	+	Conform
4	Market capitalization	+	+	Conform
5	All share index	+	+	Conform

Source: Authors, 2018

EMPIRICAL RESULT

The empirical result of this study is presented chronologically starting with the pre-estimation tests. The pre-estimation result has the descriptive statistics of the variables, followed by the matrix of correlation, and then the unit root test using the Augmented Dickey-Fuller (ADF). Furthermore, we test for long-run relationship using Johansen cointegration. Then, we present the result of the Ordinary Least Squares and the Heteroscedasticity test for the appropriateness of the estimated model.

Pre-Estimation Tests**Table 3:** Descriptive Statistics of Variables

Variables	Descriptive	Measurement Unit	Mean	Max.	Min.
GDP	Real GDP per capita	₦ Billion	31,757.2	69,023.9	13,779.3
MCAP	Market Capitalisation	₦ Billion	4,135.1	19,077.4	5.0
VTR	Value of Transaction	₦ Million	339,472.9	2,350,876	215
STO	Stock Market Turnover	Percentage	6.1	34	0.3
NI	New Issues	₦ Million	478,589.3	2,084,323	11,934.4
ASI	All Share Index	Ratio	13,378.7	50,424.7	117.3

Source: Authors' Computation (2018)

Table 3 shows the descriptive statistics of the variables used in the study. The average value of the real GDP per-capita, market capitalisation and the value of transactions in the capital market is ₦31,757.2 billion, ₦4,135.1 million, ₦339,472.9 million in Nigeria respectively between 1981 and 2016. Also, the average of stock market turnover, new issues and the all share index in Nigeria is ₦ 6.1%, ₦ 478,589.3 million, and 13,378.7 respectively between 1981 and 2016. Furthermore, for the maximum values, real GDP per-capita, market capitalisation and value of transactions in stock market in Nigeria between 1981 and 2016 is ₦69,023.9 billion, ₦ 19,077.4 million and ₦ 2,350,876 million respectively. Also, the maximum value of stock market turnover, new issues and the all share index in Nigeria is ₦ 34%, ₦ 2,084,323 million, and 50,474.7 respectively between 1981 and 2016. Regarding their minimum values, real GDP per-capita, market capitalisation and value of transactions in stock market is ₦ 13,779.3 billion, ₦ 5.0 million and ₦215 million in Nigeria respectively. Also, the minimum value of stock market turnover, new issues and the all share index in Nigeria is 0.3%, ₦ 11,934.4 million, and 117.3 respectively between 1981 and 2016.

Table 4: Correlation Matrix of Regressors

	GDP	MCAP	VTR	STO	NI	ASI
GDP	1.00					
MCAP	0.517	1.00				
VTR	0.372	0.491	1.00			
STO	0.406	0.493	0.285	1.00		
NI	0.285	0.556	0.092	0.612	1.00	
ASI	0.553	0.489	0.507	0.099	0.712	1.00

Source: Authors' Computation (2018)

To determine the level of correlation among the series employed in this study, the matrix of correlation is presented in Table 4. As shown in Table 4, the real GDP, market capitalisation, value of transactions in stock market, stock market turnover, new issues and the all share index are not strongly correlated. This means that there is no perfect multicollinearity among the variables used in the study. The correlation analysis therefore suggests that we can proceed with our estimation.

Table 5: Unit Root Tests using the ADF

VARIABLES	AUGMENTED DICKEY-FULLER TEST STATISTICS	CRITICAL VALUES AT 1%	CRITICAL VALUES AT 5%	ORDER OF INTEGRATION
GDP	-4.192854	-3.639407	-2.951125	First Difference
MCAP	-5.726929	-3.639407	-2.951125	First Difference
ASI	-5.940941	-3.646342	-2.954021	First Difference
STO	-6.172726	-3.639407	-2.951125	First Difference
NI	5.242797	-3.724070	-2.986225	First Difference
VTR	3.993280	-3.724070	-2.986225	First Difference

Source: Authors' Compilation from Eviews 9.0

Table 5 shows the result of the stationarity test. Using the Augmented Dickey-Fuller (ADF) test, it is confirmed that all the variables are stationary only after first differencing each of the series. This means that the real GDP, market capitalisation, value of transactions in stock market, stock market turnover, new issues and

the all share index are stationary at first difference at both 1% level of significance and 5% level of

significance. Therefore, we can reject the null hypothesis of no stationarity and conclude that all the variables are stationary.

Table 6: Johansen Cointegration (Trace Test)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	Critical Value (0.05)	Prob.**
None *	0.849331	199.1869	125.6154	0.0000
At most 1 *	0.765964	134.8360	95.75366	0.0000
At most 2 *	0.560080	85.45845	69.81889	0.0017
At most 3 *	0.522770	57.53889	47.85613	0.0048
At most 4	0.323472	13.59363	15.49471	0.0683
At most 5	0.065604	2.307057	3.841466	0.1288

Trace test indicates 4 co-integrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level

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

In Table6, the result of the Johansen cointegration for trace test is presented. Table6 confirms that there are four cointegrating equation in the series using the trace test. This implies that the series co-integrate at 5% level of significance. We reject the null hypothesis of no co-integration and conclude that there is long-run relationship between the real GDP, market capitalisation, the value of transactions in stock market, stock market turnover, new issues and the all share index in Nigeria during the periods.

Table 7: Johansen Cointegration (Maximum Eigenvalue Test)

Hypothesis No. of CE(s)	Eigen value	Max-Eigen Statistic	Critical Value (0.05)	Prob.**
None *	0.849331	64.35089	46.23142	0.0002
At most 1 *	0.765964	49.37756	40.07757	0.0034
At most 2	0.560080	27.91956	33.87687	0.2172
At most 3	0.522770	25.15172	27.58434	0.0993
At most 4	0.323472	13.28658	14.26460	0.0709
At most 5	0.065604	2.307057	3.841466	0.1288

Max-eigenvalue test indicates 2 cointegrating eqn(s) at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values

In Table 7, the result of the Johansen cointegration for trace test is presented. Table 7 confirms that there are four cointegrating equation in the series using the trace test. This implies that at 5% level of significance, the series cointegrate. We therefore reject the null hypothesis of no co-integration and conclude that there is long-run relationship between the real GDP, market capitalisation, value of transactions in stock market, stock market turnover, new issues and the all share index in Nigeria between 1981 and 2016. Therefore, having confirmed that there is long-run relationship between the variables from the two tests, we proceed to estimate data using the ordinary least squares technique.

Table 8: Result of the Long Run Model

Dependent Variable: GDP			Included observations: 45 after adjustments	
Variable	Coefficient	Std. Error	t-Statistic	Prob.
Constant	8.3278	0.1425	58.430	0.0001
VTR	-0.001801	0.002608	-0.690552	0.4953
NI	0.007744	0.002149	3.604195	0.0012
MCAP	2.300462	0.236501	9.727087	0.0000
ASI	0.271775	0.192795	1.409653	0.1693
STO	0.124464	0.0314059	3.963	0.0004
R-squared	0.9639	F-statistic 288.29		
Adj. R-squared	0.9564	Prob(F-statistic) 0.0000		
Log likelihood	31.707	Durbin-Watson stat 1.6639		

Source: Authors' Computation (2018)

The empirical result of the study presented in Table 8 shows that the value of transactions in the Nigerian capital market has a negative and insignificant impact on economic growth. The main intuition that can be drawn from this is that the value of transactions does not enhance economic growth over the period covered by the study. This is explained by the fact that increases in the value of transaction in the capital market means that more money is taken out of circulation and invested into the capital market. Since it is a withdrawal to the system, it has negative implications for growth in the country. Furthermore, the result suggests that the value of transaction in the Nigeria capital market is not high enough to spur economic growth in the country.

Regarding all the other indicators of capital market, the result confirms that they all positively and significantly enhanced economic growth in the Nigeria. The result further showed that increase in the new issues in the capital market by about 10% causes the real GDP to rise by about 0.7% while keeping all the other explanatory variables constant. Since new issues are stocks that are registered and offered for the first time to the public in the capital market, they contribute in boosting the level of transaction in the economy and hence, spur economic growth. The transaction cost incurred in the process of acquiring the newly offered stocks goes into the circulation and makes growth to rise significantly.

For stock turnover to increase by 10%, the result shows that the real GDP increases by about 12.4% while others are held constant. Intuitively, increases in the stock market turnover make more money available to both economic agents and investors operating in the Nigerian capital market and this have a positive implication for growth. For instance, as stocks are turned over, new profit margins are recorded by investors and stock broking agents also get remuneration. This boosts the money income in circulation and significantly expand the real output. The coefficient of stock market turnover is positive and has significant impact on economic growth in Nigeria. This corroborates the study of Rabiou et al. (2015), Michael and Ebibai (2014) who found that stock market turnover significantly influences and contributes to economic growth in Nigeria.

Also, a 10% increase in market capitalisation causes the real GDP to rise by about 23% while keeping every other variable constant. The coefficient of market capitalization is positive, implying that a large financial market size with easy access of raising funds through the buying and selling of stocks has the potential of enhancing economic growth in Nigeria. The result of the study is in support of the findings of Kolapo and Adaramola (2012), Edame and Okoro (2013) who found that market capitalization has positive impact on economic growth in Nigeria. Lastly, though the all share index is insignificant, but increases of 10% in it makes the real GDP to rise by about 27% while holding other explanatory variables constant. Again, market capitalisation and the all share index provide an indicator of performance of the capital market and therefore make the market attractive to the public. This explains why both positively enhanced economic growth in the country.

In respect of how fit the model is, the R-squared value suggests that about 96% of the variation in the real GDP is explained by market capitalisation, value of transactions in stock market, stock market turnover, new issues and all share index. Also, the adjusted R-squared value implies that after removing the effect of insignificant explanatory variables, the model still explained about 95.6% of the variation in the real GDP. This means that model is a good fit. The probability of the F-statistic is significant at 1% and it thus shows that the explanatory variables linearly explained changes in the real GDP, implying that the model is well specified. Lastly, the Durbin Watson statistic of 1.66 suggests that there is no autocorrelation of the residuals in the model estimated model. Hence, the model is not spurious.

Residual Diagnostics Test

To examine the efficiency of the estimated model, we use the Breusch-Godfrey Heteroscedasticity test. This is presented in Table 9.

Table 9: Breusch-Pagan-Godfrey Heteroscedasticity Test

Observation included: 37	Dependent Variable: RESID^2	H ₀ : No ARCH effect
F-statistic 3.002731		Prob. F(6,29) 0.3729
Obs* 7.664829	R-squared	Prob. Chi-Squared (6) 0.1392
Scaled explained SS 4.118034		Prob. Chi-Squared (6) 0.3008

Source: Authors' Computation (2018)

As suggested in Gujarati and Porter (2009), it is necessary to conduct the heteroskedasticity test since the Autoregressive Conditional Heteroskedasticity (ARCH) may have an autoregressive structure. And for the fact that heteroskedasticity may be observed over different periods. Therefore, the hypotheses to be tested include:

H₀: There is no ARCH effect

H₁: There is ARCH effect

Evidence from the table above, the Probability Chi-Squared values of observed R-squared is 13.9% while the probability of the explained sum of squares is 30%. Since both probabilities are not significant at 5% levels, we accept the null hypothesis that there is no ARCH effect in the model. Hence, we conclude that there is no heteroscedasticity problem in the model and the variance of the residual term is homoscedastic.

CONCLUSION AND RECOMMENDATION

This study has focuses research effort on the growth impact of the capital market in Nigeria over the period of 1981 to 2016. The study makes use of secondary data that were sourced from the statistical bulletins of the Nigeria Securities and Exchange Commission (SEC, 2017) and the Central Bank of Nigeria statistical bulletins (CBN, 2017). The variables include the real GDP, market capitalisation, value of transactions in stock market, total value of listed securities, stock market turnover, new issues and the all share index. The unit root test confirmed that all the regressors are stationary at first difference while the Johansen co-integration test confirmed that there is a long-run relationship between the capital market indicators and economic growth in Nigeria between 1981 and 2016. In the empirical result, it was found that new issues, market capitalisation, and stock turnover positively and significantly enhanced economic growth while the all share index also has a positive but insignificant impact on growth. However, the value of transactions in the

capital market had negative impacts on economic growth over the period covered by the study.

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