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**AN AUTO-REGRESSIVE DISTRIBUTED LAG MODEL APPROACH TO EVALUATING THE IMPACT OF STOCK MARKET PERFORMANCE ON ECONOMIC GROWTH IN NIGERIA****\*Kingsley Nwagu**

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**Abstract**

This study examines the impact of stock market performance on economic growth in Nigeria between 1984 and 2019. Auto Regressive Distributed Lag and Bounds Test were adopted as the estimating techniques to verify the existence of long-run relationship between stock market and economic growth in Nigeria. Data used were extracted from the central bank of Nigeria statistical bulletin of 2019. The empirical results revealed that in the long-run, Nigerian economic growth responds positively to the impact of Nigerian stock market. The findings also showed that there is positive relationship between market capitalization and economic growth as well as the existence of a positive relationship between all share index and economic growth of Nigeria within the period under review. Market capitalization is highly significant and appears to be the major stock market indicator. Based on these findings government should address the shortage of investment assets through effective policy measures that enhance the performance of stock market in Nigeria and to restore confidence of the investors.

**Keywords:** Stock market, Economic growth, Stock valuation, All share index, Market capitalization

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**INTRODUCTION****Background of the study**

Primarily, a stock market is the place where companies can raise money to make their businesses bigger and better. Companies raise money by selling shares or stocks to investors. At the same time, the stock market gives investors an opportunity to invest in these companies and benefit from any profit they can make. A stock market can also be called a capital or securities market as it encompasses the stock exchange, the branches, and the stockbrokers. An organized securities market requires a securities exchange, a securities commission or other regulatory agency, and intermediaries such as dealers, brokers, securities analysts, etc. Virtually all costs are borne by those who benefit. The intermediaries receive their fees from the issuers or investors to whom they provide a service. The stock market is usually funded through fees paid by investors and issuers; even the expenses of the securities commission may be partially paid for by registration fees rather than being a major burden on the government budget. Companies which go public are subject to continuous cost of providing financial information, transferring shares, paying dividends, and other aspects of shareholder relations. The stock market is the aspect of the financial system which mobilizes and channels long term funds for economic growth. The stock market embraces trading in both new issues (primary) and old issues of stocks (secondary). Securities are primarily of 2 types: debt and equity. Debt securities include federal government development stock (GDS), industrial loans, preference stocks, bonds e.t.c, while equity securities mainly concern ordinary stocks which impose higher liabilities on the holders. Portfolio investment in the capital market is the acquisition of financial assets (which includes stock, bonds, deposits, and currencies) from one country to another country. It is a form of investment that attempts to achieve a mixture of income and capital growth, it deals with an institutional

arrangement involving the Securities and Exchange Commission (SEC), the Nigerian Stock Exchange (NSE), the operators, and the investors. Stock market is viewed as a medium to encourage saving, help channel savings into productive investment, and improve the efficiency and productivity of investment (Esoba, 2007). Faroq (2006) Opined that the emphasis on the growth of stock markets for domestic resource mobilization has also been strengthened by the need to attract foreign capital in non- debt creating forms. A viable equity market can serve to make the financial system more competitive and efficient. Without equity markets, companies have to rely on internal finance through retained earnings. Large and well established enterprises are in a privileged position because they can make investment from retained earnings and bank borrowings, while new companies do not have easy access to finance. Without being subjected to the scrutiny of the stock market, big firms get bigger, and for the emerging smaller companies, retained earnings and fresh cash injections from the controlling shareholders may not be able to keep pace with the needs for more equity financing which only an organized market place could provide. While closely held companies can camouflage poor investment decisions and low profitability, at least for a while, publicly held companies cannot afford this luxury. The availability of reliable information would help investors make comparison of the performance and long term prospects of companies; corporations to make better investment and strategic decisions; and provide better statistics for economic policy makers.

**Statement of the problem**

Mobilization of resources for national development has long been the central focus of development. To this end, various papers, research works, seminars, e.t.c. have been written and held to find the best way to mobilize resources for economic growth. It is now increasingly being recognized that the growth process of the Nigerian economy depends to a considerable extent on the impact of stock market. Whether this impact is positive or negative is a research problem to be resolved.

## Objectives of the study

The main objective of this study is to examine the role which the stock market plays in the growth process of the Nigerian economy.

However, the specific objectives include:

1. To examine if the market capitalization can lead to Nigeria's economic growth.
2. To determine the impact of All Share index on economic growth in Nigeria.

## Research questions

In the light of the research problems, the key questions this study attempts to answer are:

1. Does Stock Market capitalization lead to Nigeria's economic growth?
2. What is the impact of All Share index on economic growth in Nigeria?

## Hypothesis of the study

The hypotheses formulated in this study are:

- H<sub>01</sub>: Stock Market Capitalization has no significant on Nigeria's economic growth.  
 H<sub>02</sub>: All Share Index has no significant impact on Nigeria's economic growth.

## REVIEW OF RELATED LITERATURE

### Conceptual Framework

**Stock market:** Stock market is a place where shares of publicly listed companies are traded. The primary market is where companies float shares to the general public in an initial public offering (IPO) to raise capital. Once new securities have been sold in the primary market, they are traded in the secondary market where one investor buys shares from another investor at the prevailing market price or at whatever price both the buyer and seller agree upon. The secondary market or the stock exchanges are regulated by the regulatory authority. In India, the secondary and primary markets are governed by the Security and Exchange Board of India (SEBI). A stock exchange facilitates stock brokers to trade company stocks and other securities. A stock may be bought or sold only if it is listed on an exchange. Thus, it is the meeting place of the stock buyers and sellers. India's premier stock exchanges are the Bombay Stock Exchange and the National Stock Exchange.

**Basic concept of the stock market:** Investing in the stock market is among the most common ways investors attempt to grow their money, but it's also among the riskier investment options available. Understanding the basic concept of the stock market is a first step in becoming an informed investor. While the stock market is an extremely complex system, its basic traits are much simpler.

**Ownership:** The most basic concept of the stock market is the idea that each share of stock represents a small portion of ownership of a corporation. While most businesses are founded by small groups of people, when a company "goes

public" its owners decide to sell shares of stock and, in turn, receive cash from buyers. A company may have thousands of investors, but each one has the right to profit from the company's success and each runs the risk of losing money if the company performs poorly. Stockholders receive updates from the company and can vote for board members to influence the business's activities.

**Stock trading:** Trading is another key concept behind the stock market. Despite the name, trading refers to buying and selling shares of stock for cash, not actually trading them for other stocks. Stock trading takes place on open markets, in which anyone can participate. Most stock markets only allow brokers to place buy and sale orders, but anyone with access to a broker, including automated electronic brokers that operate online, can trade on the market. Since anyone can participate in stock trading, buyers and sellers are free to make transactions for any price they agree to.

**Supply and demand:** A stock's price depends on many factors, the most basic of which is supply and demand. When a particular company's stock is in high demand, prices for its stock will rise. When more people want to sell shares than there are buyers for those shares, prices for those shares will fall. Demand is dependent upon how likely other investors think the company's stock will rise in value. In a typical transaction, the seller thinks the stock is at its peak price, while the buyer expects it to rise in value at some point in the future.

**Stock Valuation:** The actual price of a stock is determined by market activity. When making the decision to buy or sell, the investor will often compare a stock's actual price to its fair value. For example, if a stock is trading at \$30 per share and its par value is \$35, to an investor, it may be worth purchasing. Conversely, if it trades at \$30 but its par value is \$25, to the investor, the stock would be considered overvalued and the investor would be wise to avoid it. What is a stock's fair value and how do you calculate it? Ideally, it would be based on some standardized formula. However, there are many ways to derive this figure. One method is to combine the value of a company's assets on its balance sheet, minus depreciation and liabilities. Another is to determine its intrinsic value, which is the net present value of a company's future earnings. We have briefly discussed two methods. There are a number of others. Because the methods yield a slightly different result, it's sometimes difficult to know if a stock is overvalued, undervalued, or valued at par. And even if it is overvalued, that doesn't mean investors will suddenly sell and the price will fall. Actually, a stock can remain overvalued for quite some time. This is also why it can be problematic to make buy/sell decisions based on where the price of the stock is in relation to some moving average. (<https://m.economictimes.com/definition/stock-market>).

### Theoretical and empirical review

**Stock Market and economic growth:** In recent times there has been growing concern on the role of stock market in economic growth. The stock market is in the focus of the economist and policy makers because of the perceived benefits it provides for the economy. The stock market provides the fulcrum for capital market activities and it is often cited as a barometer of business direction. An active stock market may be relied upon to measure changes in the general economic activities using the stock market index (Obadan, 1995). The

stock market is viewed as a complex institution imbedded with inherent mechanism through which long-term funds of the major sectors of the economy comprising households, firms, and government are mobilized, harnessed and made available to various sectors of the economy (Nyong, 1997). The development of the capital market, and apparently the stock market, provides opportunities for greater funds mobilization, improved efficiency in resource allocation and provision of relevant information for appraisal (Inanga and Emenuga, 1997). There is a boom in the developed and emerging stock market with a substantial part of the growth accounted for by the emerging market. The reasons adduced for this are that: one, investing firms enjoy lower cost of equity when the stock market functions efficiently; two, the opportunity to trade securities and also hedge allows for relative reduction in risk; three, the ability of the market to adjust share prices almost instantaneously imposes control on the investment behavior of firms; and lastly, countries that are desirous of foreign investment are able to secure it, through the stock exchange (Demirgüç-Kunt and Levine, 1996). Stock market contributes to economic growth through the specific services it performs either directly or indirectly. Notable among the functions of the stock market are mobilization of savings, creation of liquidity, risk diversification, improved dissemination and acquisition of information, and enhanced incentive for corporate control. Improving the efficiency and effectiveness of these functions, through prompt delivery of their services can augment the rate of economic growth. At any stage of a nation's development, both the government and the private sectors would require long-term capital. For instance, companies would need to build new factories, expand existing ones, or buy new machinery (Nyong, 1997). Government would also require funds for the provision of infrastructures. All these activities require long-term capital, which is provided by a well functioning stock market. Stock market may also affect economic activities through the creation of liquidity. Liquid equity market makes available savings for profitable investment that requires long term commitment of capital. Hitherto, investors are often reluctant to relinquish control of their savings for long periods. As asserted by Bencivenga, Smith and Starr (1996), without liquid capital market there would be no industrial revolution. This is because savers would be less willing to invest in large, long-term projects that characterized the early phase of industrial revolution. Closely related to liquidity is the function of risk diversification. Stock markets can affect economic growth when they are internationally integrated. This enables greater economic risk sharing. Because high return projects also tend to be comparatively risky, stock markets that facilitate risk diversification encourages a shift to higher-return projects (Obstfeld, 1994). The resultant effect is a boost in the economy leading to growth through the shifting of society's savings to higher-return investments. Accelerated economic growth may also result to acquire information about firms. Rewards often come to an investor able to trade on information, obtained by effective monitoring of firms for profit. Thus, improved information will improve resource allocation and promote economic growth.

### Empirical Review

Ovat (2012) investigates empirically into the relationship between stock markets in driving economic growth, with evidence from the Nigerian stock market. Utilizing several econometric techniques, such as unit root test, co-integration test and Granger causality test, he disaggregates stock market

development into two components: stock market size and stock market liquidity. His findings suggest the dominance of stock market liquidity over market size and he concludes that, while there is a two-way causation between stock market liquidity and economic growth, the strength of the causality comes more from stock market liquidity, and market size is found to have little or no effect on economic growth. Olowe, Matthew and Fasina (2011) analyzed the efficiency of capital market on the Nigerian economy between 1979 and 2008. The results indicated that the stock market indeed contributes to economic growth as all variable conformed to apriori expectation. The major findings revealed a negative relationship between market capitalization and gross domestic product as well as a negative relationship between turnover ratio and gross domestic product while a positive relationship was observed between all-share index and gross domestic product. Adefeso *et al.* (2013) examine the long-term and causal relationship between both stock market development and economic growth in Nigeria. The Vector Error Correction Model (VECM) and co-integration techniques of analysis were employed to analyze the data and draw policy inferences on annual data from 1980 to 2010. The study finds that there is a long-term relationship between stock market development as well as banking activity variables in Nigeria. They conclude that, economic growth granger causes both stock market development and banking activity in Nigeria. The study, therefore, strongly recommends that policy makers should lay emphasis on the economic growth through the appropriate regulatory and macroeconomic policies to remove all constraints to the acceleration of the sustainability of economic growth and development in Nigeria.

Owusu and Odhiambo (2014) employ the ARDL-bounds testing approach and multi-dimensional stock market development proxies to examine the relationship between stock market development and sustainable economic growth in Ghana. They find that stock market developments have no positive effect on economic growth both in the short- and long-term. However, they also find and conclude that an increase in credit to the private sector, rather than stock market development, is the driver of the real sector economic growth in Ghana. Osinubi and Amaghionyeodiwe (2003) examined the relationship between Nigeria stock market and economic growth during the period 1980 to 2000, using Ordinary least square regression. The results show that there is a positive relationship between the stock market development and economic growth. Adamu and Sanni (2005) examined the role of the stock market on Nigeria's economic growth, using Granger-causality test and regression analysis. They discovered a one-way causality between GDP growth and market turnover. They also observed a positive and significant relationship between GDP growth and market turnover ratios. Obamiro (2005) made an investigation on the role of the Nigeria stock market in the light of economic growth. He reported a significant positive effect of stock market on economic growth. Abu (2009) examines whether stock market development raises economic growth in Nigeria, by employing the Error Correction Approach. The econometric results indicate that stock market development raises economic growth. Ewah *et al.* (2009) appraised the impact of the capital market efficiency on economic growth of Nigeria using time series data from 1963 to 2004. They found that the capital market in Nigeria has potential of growth-inducing, but it has not contributed meaningfully because of low market capitalization, low absorptive capitalization, illiquidity,

misappropriation of funds among others. Antonios (2010) investigates the causal relationship between stock market development and economic growth for Germany for the period 1965-2007 using a Vector Error Correction Model (VECM) and the Johansen co-integration analysis based on the classical unit roots tests. The results of Granger causality tests indicated that there is a unidirectional causality between stock market development and economic growth with direction from stock market development to economic growth. Okonkwo et al. (2014) looked at determining the role and contributions of the stock market to economic growth in Nigeria from using data from 1981 to 2012 and the Johansen co-integration test to estimate the long-term equilibrium relationship among the variables. They conclude that, although the stock market size remains a very important indicator in measuring the stock market impact on economic growth, their study reveals that Nigeria's stock market size, with an average of 250 listed companies, exerts significant influence on economic growth and that economic growth and stock market capitalization have no causal relationship.

## RESEARCH METHODOLOGY

### Research design

According to Zikmund (1994), research design is the master plan specifying the method and procedures for collecting and analyzing the needed information. In this study therefore, a secondary research design or ex-post facto research design is employed. This design is suitable for this study since it deals with facts and matter that has already taken place and the data are readily available for use.

### Sources of data

The data used in this research are mainly secondary data. This is due to the nature of the study. The library research forms the bedrock for the review of related literature on the subject and also serves to provide theoretical framework that guided the collection and analysis of data. Specifically, data are obtained from the Central Bank of Nigeria (CBN) statistical bulletin 2019.

### Description of modeled variable

This study adopts gross domestic product (GDP) as a measure of economic growth in Nigeria and as the dependent variable, All Share Index and Market Capitalization as the independent variables used in evaluating the responsiveness of Nigerian economic growth to Nigerian stock market.

### Model specification

To examine the impact of stock market performance on economic growth in Nigeria over a 35 year period (1984-2019), this study adopts and modifies the empirical model used by Olowe, Matthew and Fasina (2011). The model was used to analyze the efficiency of capital market on the Nigerian economy for the period between 1979 and 2008. The model is specified as;

$$GDP_t = \beta_0 + \beta_1 MC_t + \beta_2 ASI_t + \beta_3 TR_t + e_t \quad \dots \dots \dots (1)$$

Where; GDP = Gross Domestic Product, MC = Market Capitalization of Nigerian stock market, TR = Turnover ratio, ASI = All-share index.

The econometric model for this paper differs from the adopted model in the sense that Turnover ratio was not included in the model, this was done to check for multicollinearity. Following both the theoretical and empirical literature earlier reviewed, it is pertinent to submit that the relationship between the Nigerian stock market and economic growth in Nigeria can best be mathematically represented as:

$$GDP_t = \beta_0 + \beta_1 ASI_t + \beta_2 MC_t + \mu_t \quad \dots \dots \dots (2)$$

Where:

GDP = Gross Domestic Product

ASI = All Share Index

MC = Market Capitalization

Gross Domestic Product is the total money of final goods and services produced within the geopolitical boundaries of a country during a specified period of time, usually a year minus investment in other countries. All Share Index measures the daily movement of stock prices; it also indicates investor's confidence in the economy by their buy/sale activities. The greater the activity in the stock market arising from large volumes of stock changing hands in the buy/sell transactions, the more positive the performance of the economy. Market Capitalization is the total value of all equity securities listed on the stock exchange. It is a product of the current quoted price of shares and the number of shares outstanding. The term is also used as a performance indicator of the capital market.

### Data estimation technique

Data was analyzed using both quantitative and qualitative approach. In the case of qualitative approach, descriptive statistics and correlation analysis are used to describe and compare variables numerically and to ascertain pattern in the data set. According to Saunder *et al.* (2007), every statistics to describe data usually summarizes the information in the data by disclosing the average indicators of the variables used in the study. For the quantitative analysis, Autoregressive Distributed Lag (ARDL) otherwise known as bounds test proposed by Pesaran, Shin and Smith (2001) to model equation (1) was used to analyze data. The ARDL approach is a valid asymptotic inference that examines the cointegration relationships among variables irrespective of the order on integration of data. The choice of the model is based on three major considerations: First, it yields a consistent estimate of the long-run coefficients regardless of whether the underlying regressors are stationary at I (0) or I (1) or a mixture of both. Two, it provides unbiased estimates of the long-run model as well as valid *t*-statistics even if some of the regressors are endogenous and third, it is highly friendly to small sample size (Yaaba, 2013).

Thus, the equation becomes:

$$\Delta GDP_t = \beta_0 + \sum_{i=1} \beta_1 \Delta GDP_{t-1} + \sum_{i=1} \beta_2 \Delta ASI_{t-1} + \sum_{i=1} \beta_3 \Delta MC_{t-1} + w_1 GDP_{t-1} + w_2 ASI_{t-1} + w_3 MC_{t-1} + \mu_t \quad \dots \dots \dots (3)$$

Where:

GDP = Gross Domestic Product

ASI = All Share Index

MC = Market Capitalization

$\mu$  = error term

*t* = Time dimension.

$\Delta$  = Change

$\sum$  = Summation

$p$  = Optimal lag  
 $\beta_0$  = Constant  
 $\beta_1$  to  $\beta_3$  = Coefficients of the short - run variables  
 $w_1$  to  $w_3$  = The coefficient of the long – run component

**DATA ANALYSIS AND INTERPRETATION OF RESULTS**

**Descriptive Statistic**

The descriptive statistics which generally explore the characteristics of the data include; the mean, median, maximum, minimum, standard deviation, skewness, kurtosis, Jarque-Bera, probability as well as number of observations per variable.

**Table 1. Descriptive Statistic**

	GDP	ASI	MKT-CAP
Mean	24418.41	207467.1	40411.68
Median	6897.500	186718.7	7212.600
Maximum	101598.1	609477.1	155092.7
Minimum	170.8000	1183.900	60.90000
Std. Dev.	31946.88	179457.8	52364.55
Observations	33	33	33

Source: Author’s analysis using e-view 9 output

The average gross domestic product within the study period was of N244.18 billion, a mean ass share index of N2.075 trillion, an average value of market capitalization of N400.11 billion with the standard deviations for gross domestic product, all share index and market capitalization computed at N319.47 billion, N1.796 trillion and N523.64 billion respectively. The deviations from the averages of these magnitudes signify that the gross domestic product of Nigeria is not fix or static, but varies year in year out. Same can also be said for both the all share index and market capitalization of the Nigerian stock market. Whilst the minimum gross domestic product within the study period stood at N170.8 billion, the maximum is N1.015 trillion. However, when the minimum all share index is found to be N1.183 trillion, the maximum stood at N6.093 trillion. For market capitalization, the minimum and maximum are N60.9 billion and N1.550 trillion respectively. The study period covers 35 years, hence the number of observation of 33.

**Correlation matrix**

**Table 2. Correlation matrix**

	GDP	ASI	MKT CAP
GDP	1.000000	0.644613	0.936452
ASI	0.644613	1.000000	0.653970
MKT CAP	0.936452	0.653970	1.000000

The correlation matrix for the variables is reported in Table 2 above in order to examine the correlation that exists among variables.

The results show that there is a positive relationship between all the three variables. However, gross domestic product is positively correlated with all share index at 64.5% and market capitalization at 93.62%, while market capitalization is positively correlated with all share index at 65.4%.

**Unit Root Test Results (Summary)**

The result in the table 3 below reveals that all the variables but gross domestic product were not stationary at levels; they were a mixture of I0 and I1. The economic implication of non-stationary time series is that of a persistent shock if there is a disturbance on such variable. The result shows that the variables are able to withstand shock to a good extent.

**Results of Auto Regressive Distributed Lag Model (ARDLM):**

From the results of the (ARDLM) above,  $R^2$  of 99.9939% as well as the adjusted  $R^2$  of 99.9894% is an indication that the model is fairly represented. That is the independent variables explained about 99% variations in the dependent variable while the remaining 1% may be explained by variables not included in the model. There exists a positive and significant relationship in terms of t-stat. and p-value between GDP, ASI and MKT CAP, such that a unit increase in ASI would bring about a 0.007065 increase in GDP, while a unit increase in MKT CAP would bring about a 0.077076 unit increase in GDP. In the same vein, a unit decrease in ASI would bring about a 0.007065 decrease in GDP, also a unit decrease in MKT CAP, would bring about a 0.077076 unit decrease in GDP. From the result above, the magnitude of the impact of MKT CAP on GDP is relatively higher than that of ASI. This confirms the study of Olowe, Matthew and Fasina (2011) who stated that there is a positive relationship between market capitalization, all-share index and gross domestic product. Durbin-Watson statistic of (1.74) suggests that the variables are completely free from negative autocorrelation however, since it’s close to the region of zero autocorrelation which is (2); we have no reason to panic.

**Cointegration and Long Run Diagnostic**

**Cointegrating Form of (ARDLM):** Results from Table 5 shows the short-run dynamics otherwise referred to as the error correction model (ECM) of the estimated ARDL equation. The table demonstrates the relationship among the three variables in the short-run. Just like in the long-run, ASI and MKT CAP yielded positive coefficients and statistically significant relationships with GDP. Inference can therefore be drawn that GDP in Nigeria is a function of the Nigerian stock market in the short-run just like in the long-run where both ASI and MKT CAP were both insignificant. Whilst in the short-run, a unit increase in ASI would bring about a 0.019538 increase in GDP, while a unit increase in MKT CAP would bring about a 0.077076 unit increase in GDP.

**Table 3. Unit root test results**

Variable	Levels				P-Values	1 <sup>st</sup> Difference				Order of Intergration	
	ADF Statistics	Critical Values				ADF Statistics	Critical Values				P Values
GDP	-4.280808	1%	5%	10%	0.000	-5.481977	-3.6701	-2.963972	-2.6210	0.0001	I(0)
ASI	-1.515354	-3.6537	-2.957110	-2.6174	0.5153	-5.481977	-3.6701	-2.963972	-2.6210	0.0001	I(1)
MKT CAP	-0.354873	-3.6537	-2.957110	-2.6174	0.9053	-5.839856	-3.6701	-2.963972	-2.6210	0.0000	I(1)

Source: Author’s analysis using e-view 9 output

Table 4. ARDL Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
GDP(-2)	1.348870	0.200074	6.741841	0.0000
ASI(-1)	0.007065	0.001400	5.045145	0.0001
MKT CAP(-4)	0.077076	0.010819	7.124405	0.0000
C	73.82913	115.1726	0.641030	0.5306
R-squared	0.999939	Mean dependent var		27758.38
Adjusted R-squared	0.999894	S.D. dependent var		32727.42
S.E. of regression	337.0046	Akaike info criterion		14.77992
Sum squared resid	1817154.	Schwarz criterion		15.39284
Log likelihood	-201.3088	Hannan-Quinn criter.		14.97188
F-statistic	22004.03	Durbin-Watson stat		1.738409
Prob(F-statistic)	0.000000			

N/B t-tabulated=2.05 at df = 27 and 95% confidence level

Source: Author's analysis using e-view 9 output

Table 5. Cointegration Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-2))	0.721445	0.111300	6.481967	0.0000
D(ASI(-2))	0.019538	0.003452	5.659579	0.0000
D(MKT CAP(-3))	0.077076	0.010819	7.124405	0.0000
CointEq(-1)	-0.250858	0.023025	-10.895074	0.0000
Cointeq = GDP - (0.0241*ASI + 0.8576*MKT CAP + 294.3064)				

Source: Author's analysis using e-view 9 output

Table 6. Long-Run coefficients results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ASI	0.024095	0.004592	5.246636	0.0001
MKT_CAP_	0.857615	0.039465	21.730767	0.0000
C	294.306416	460.676358	0.638857	0.5320

Source: Author's analysis using e-view 9 output

In the same vein, a unit decrease in ASI would bring about a 0.019538 decrease in GDP, also a unit decrease in MKT CAP, would bring about a 0.077076 unit decrease in GDP. Both ASI and MKT CAP in the short-run have statistically significant impact on GDP in Nigeria both in terms of the t-statistic and p-value within the study period. The negative and statistically significant coefficient of the error term further buttresses the cointegration among the variables in the long-run. More importantly, it shows that in case of distortions in the Nigerian economy that are capable of affecting GDP, equilibrium can be restored. Given the ECM of -0.25, it behoves that about 25 per cent of equilibrium can be restored on annual basis meaning that the restoration of equilibrium will take place in less than one year. In practical terms, equilibrium can be restored in about 2 month, 5 week and 1 day.

#### Long-Run Coefficients of the Estimated (ARDLM)

From the estimated long-run coefficients, both ASI and MKT CAP yield positive and significant relationship with GDP. The results imply that GDP of Nigeria is significantly positively influenced by both ASI and MKT CAP. However, the magnitude of the impact of MKT CAP on Nigeria's GDP is greater than that of ASI. By this result, the GDP of Nigeria within the study period was more of a function of MKT CAP than ASI.

#### Discussion of Findings

In the previous section, data were presented, analyzed and interpreted. These were done so as to reliably and accurately validate our hypotheses, and measure the correctness of the parameter estimates as well as the suitability and fitness of the estimated equation models, all in an attempt to solving the research problems and achieving the research objectives.

The main objective of this research is to evaluate the responsiveness of Nigerian economic growth to Nigerian stock market. From our correlation matrix, it was discovered that the relationships between gross domestic product, all share index and market capitalization were positive. From the estimated long-run coefficients, both ASI and MKT CAP yield positive and significant relationship with GDP. The results imply that GDP of Nigeria is significantly positively influenced by both ASI and MKT CAP. However, the magnitude of the impact of MKT CAP on Nigeria's GDP is greater than that of ASI. By this result, the GDP of Nigeria within the study period was more of a function of MKT CAP than ASI. These findings are in congruence with the empirical documentations of Olowe, Matthew and Fasina (2011), Obamiro (2005) and Abu (2009), but contrary to the empirical work of Owusu and Odhiambo (2014) which suggested a negative relationship between stock market and economic growth in Ghana. But in the short-run, just like in the long-run, ASI and MKT CAP yielded positive coefficients and statistically significant relationships with GDP. Inference can therefore be drawn that GDP in Nigeria is a function of the Nigerian stock market both in the short-run and in the long-run since ASI and MKT CAP were both insignificant. The major implication of these findings is that stock market is vital to economic growth of Nigeria and as such, all hands must be on deck to make the Nigerian stock market a force to be reckoned with. Thus, the economic potentials of the economy will be enhanced.

#### Summary

The research has attempted to evaluate the responsiveness of Nigerian economic growth to Nigerian stock market. It has been proven theoretically and scientifically in chapter four and the results were consistent with apriori expectation that Nigerian stock market has a positive relationship with Nigerian

economic growth. Empirically, all share index and market capitalization were used as independent variables to ascertain the level of dependency of Nigerian economic growth proxied by gross domestic product on Nigerian stock market. Theoretically, through various literature reviews and earlier works attempted to evaluate the responsiveness of Nigerian economic growth to Nigerian stock market, highlighting the definition, components of stock market, concepts associated with stock market.

### Conclusion

From the research conducted, the study examined the impact of stock market performance on economic growth in Nigeria from the period 1984 -2019. In this regard, this exercise has demonstrated that there is positive relationship between the Nigerian stock market and economic growth in Nigeria. Specifically, the study has established empirically, the link between the Nigerian stock market and economic growth. That the stock market promotes economic growth is not in doubt, it serves as an important mechanism for effective and efficient mobilization and allocation of savings, a crucial function, for an economy desirous of growth. The findings of this research shows a positive relationship between all share index and gross domestic product, as well as a positive relationship between market capitalization and gross domestic product. This suggests that for an economy to experience a significant economic growth, sound policies which would be recommended should be implemented in the Nigerian stock market to enhance economic growth in Nigeria.

### Recommendations

The stock market operates in a macro- economic environment, it is therefore necessary that the environment must be an enabling one in order to realize its full potentials. With the existence of a long run relationship between stock market and economic growth, it is pertinent to recommend that there should be sustained effort to stimulate productivity in the economy via the stock market.

1. The Nigerian Stock Exchange regulators should work at ensuring that the market capitalization is stable so as to have a resultant positive effect on economic growth.
2. The Nigerian Capital Market should strive as well, to build its investors confidence by enforcing integrity, as well as providing them with more products in the market which will aid in diversification of their portfolio investments, in case a certain product fails to perform they will still have another product to fall back on.
3. Given that the stock market operates in a macroeconomic environment, it is therefore necessary that the environment must be an enabling one in order to realize its full potentials.
4. The determination of stock prices should be deregulated. Market forces should be allowed to operate without any hindrance. Interference in security pricing is inimical to the growth of the market.
5. The stock market is known as a relatively cheap source of funds when, compared to the money market and other sources. The cost of raising funds in the Nigerian stock market is however regarded to be relatively high. However, the authorities concerned have been responsive towards a systematic downward review.

This should ensure enhancement of its competitiveness and improve the attractiveness as a major source of raising funds.

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