

Research article

CAPITAL MARKET AND ECONOMIC GROWTH IN NIGERIA: AN EMPIRICAL ANALYSIS

***MAMUDU, Zebedee Udo**

Department of Economics,
Ambrose Alli University, Ekpoma,
Edo State, Nigeria.

E-mail: mamuduzebedee@yahoo.com

&

****GAYOVWI, Goodnews Oghenekaro**

Economics Department,
College of Education, Mosogar,
Sapele, Delta State, Nigeria.

E-mail: goodnewst@yahoo.com



OPEN ACCESS

This work is licensed under a [Creative Commons Attribution-Noncommercial 4.0 International License](https://creativecommons.org/licenses/by-nc/4.0/).

ABSTRACT

This paper examined the impact of capital market on economic growth in Nigeria with the application of the Phillips-Perron test statistics, the Johansen Cointegration techniques, Pairwise Granger Causality techniques and the Error Correction Methodology on a log linear multiple regression framework. Annual time series data used were obtained from secondary sources, mainly from the CBN Statistical Bulletin (2019) from 1985 to 2019 on capital market variables (Market Capitalization (MCAP), Total Value of Transaction Traded (TVT) and All Share Index (ASI) were used as explanatory variables while Economic growth in Nigeria the dependent variable was proxy as real gross domestic product (RGDP). The Phillips-Perron test statistics results showed that all the selected economic and capital market variables (InRGDP, InMCAP, InTVT and InASI) were stationary at first difference. In other words, they were found to be stationary at order one $I(1)$, while the Johansen unrestricted cointegration rank test results showed that there exists at least four and one cointegrating equations respectively as both the Trace and Max-Eigen statistics revealed long run relationship between InRGDP, InMCAP, InTVT and InASI. The empirical results showed that the entire explanatory variables of the economic and capital market met their expected signs except the all share index with a negative sign. The results also revealed that the log of market capitalization (InMCAP) and the log of total value of transaction traded (InTVT) had positive impact on the log of real gross domestic product (InRGDP) in Nigeria. This means that 1 per cent increase in InMCAP and InTVT raised real gross domestic product in Nigeria by

0.410963 and 0.381902 per cent respectively. The error correction mechanism (ECM) results which was -0.605132 was statistically significant and had the appropriate negative sign. It suggested however, that there was a high adjustment process in the practice of the Nigerian capital market since the speed of adjustment is 60.5 per cent approximately. The Diagnostic and stability tests confirmed the robustness of the model over time. Finally, the results of the Pairwise Granger Causality test between market capitalization and real gross domestic product, total value of transaction traded and real gross domestic Product in Nigeria exhibited unidirectional causation while there is evidence of no causation between all share index and real gross domestic product in Nigeria. The study therefore recommended, that Securities and Exchange Commission (SEC) should deepening policies towards improvement in the market capitalization, value of transaction traded and all share index of the Nigerian capital market by encouraging more foreign investors to participate in the market as well as maintaining or improving the state of the art technology like upgrade on automated trading and settlement practices, and electronic clearance in the market. Also, SEC should make policy that will bring improvement and encourage more participation in the capital market, as well as easing restrictions on entry into stock market to ensure more companies are listed in the market and thereby increases market capitalization and all share index. **Copyright © IJEBF, all rights reserved.**

Keywords: Real Gross Domestic Product, Capital Market, Stock Exchange, Market Capitalization, Value of Transaction Traded and All Share Index.

1.0 Introduction

1.1 Background to the Study

The capital market is a network of financial institutions and infrastructure that interact to mobilize and allocate long-term funds in the economy. The market affords business firms and governments the opportunity to sell stocks and bonds, to raise long-term funds from the savings of other economic agents. The capital market is a highly specialized and organized financial market and indeed an essential agent of economic growth because of its ability to facilitate and mobilize saving and investment. The sourcing of long-term finance through the capital market is essential for self-sustained economic growth, which is consistent with external adjustment and rapid economic growth (Echekoba, Ezu & Egbunike, 2013). Njogo and Ogunlowore (2014) added that a well-developed capital market portrays one of the common features of a modern economy and it is reputed to perform some necessary functions, which promote economic growth in any nation.

The Nigerian Capital Market (NCM) first came into existence in 1960 following the establishment of the Lagos Stock Exchange, but became operational in 1961 (Ezeoha, Ebele & Okereke-Onyuike, 2009). In 1977, following the recommendations of the Government Financial System Review Committee of 1976, the Lagos Stock Exchange was reorganized and renamed the Nigerian Stock Exchange (Donwa & James, 2010). According to Ogboi and Oladipo (2012) the Nigerian Stock Exchange (NSE) is a place where stocks, shares, bonds and other securities are officially listed and traded. At present, there are fourteen (14) established functional branches of the Nigerian Stock Exchange in different parts of the country, with the Lagos branch as its head office. The NSE is a self-regulatory organization (SRO), making and enforcing rules for its members. The membership includes financial institutions, stockbrokers and individual Nigerians of high integrity who have contributed to the development of the stock market and the Nigerian economy in general. The management, staff and members of the NSE as well as stockbrokers are subject to a stringent regime of codes of conduct, which calls for a high degree of integrity, discipline, sacrifice and

high sense of patriotism. Dealing with members of the stock exchange are the stock broking firms licensed by the exchange to buy and sell shares on behalf of the investing public (Imimole & Mamudu, 2018).

The Securities and Exchange Commission (SEC) was established in 1979 through the SEC Act 1979, to regulate the capital market, but it commenced actual operation in 1980. It took over regulatory functions from Capital Issues Commission, which was established in 1973. Since then, various forms of financial instruments have been issued in the capital market by new and existing business to finance product development, new projects or general business expansion. The capital market, no doubt, is pivotal to the level of growth and development of the economy (Echekoba, Ezu & Egbunike, 2013). Umar (2018) critically reviewed the performance of the Nigerian Capital Market and Nigeria economic growth and the study reported that the stock exchange is a market through which stocks/share and bonds are bought/sold. A company must be listed in the stock exchange before it will be allowed to trade in the market and certain listening requirements are to be met. One of many reasons for poor performance of the markets is because many companies are not quoted on the stock exchange market. For more than 40 years of operation the market have make some successful achievement but also have some shortcomings due to reasons such as ignorance on the part of the market, inadequate facilities; low level of technology etc.

Uduk (2019) analysis on capital market as a strategies to achieve double digit growth for Nigeria reported that economic growth rate is the rate at which a nation's Gross Domestic Product (GDP) changes or grows from one year to another while the GDP is the market value of all the goods and services produced in a country in a particular period. However, double-digit growth is not as common as high GDP growth rate. We may have double-digit growth over a specific period or recorded annually. He added that in Nigeria, the last time we experienced double-digit growth was in 2002 and during the post-war period of 1969-1975 while the Nigerian economy continued to improve in 2018 following the recovery from the recession of 2016-2017 as the Gross Domestic Product (GDP) expanded for the sixth consecutive quarter to 1.81% in Q3 2018. He concluded that more pressing for Nigeria is to have an efficient capital market capable of sustaining and improving the recent positive growth to a level beyond the population growth rate of 2.6% so that the growth can translate to improved welfare for the citizenry.

Economic growth driven by market forces has become the main economic pursuit of modern states and of the aspiring emerging countries. It is regarded as one of the ultimate economic measure of countries competitiveness and economic performance. Capital markets are viewed as the sine qua non for economic development. The usefulness of capital markets is pretty much established. There is no advanced economy that has achieved a remarkable economic development without the establishment and the development of capital markets. Thus, an emerging economy, which aspires to emulate the achievements of advanced economies must establish and develop its capital markets. The main role of capital markets is to make funds available for investors undertaking long-term projects at a competitive cost of capital (Ouandlous, 2010).

Chinwuba and Amos (2011) noted that capital market is one of the major institutions that acts in propelling a prostrate economy for growth and development. Furthermore, the primary aim of the Nigeria capital market (NCM) is to mobilize long-term funds. The NSE is the centre point of the capital market while the Securities and Exchange Commission (SEC) serves as the apex regulatory body. It provides a mechanism for mobilizing private and public savings and makes such funds available for productive purposes. The capital market also provides a means for trading

in existing securities (SEC, 2012). The sourcing of long-term finance through the capital market is essential for self-sustained economic growth, which is consistent with external adjustment and rapid economic growth (Iyoha, 2004).

The current study will empirically fill some important gaps in previous studies on the subject matter. The specific objectives of the study is to examine the impact of market capitalization on Real gross Domestic Product (RGDP), to ascertain the effect of value of transaction traded on RGDP and to determine the relationship between all share index and economic growth in Nigeria from 1985 to 2019.

2.0 Review of Related Literature

2.1 Conceptual Issues

Capital market is an integral part of the financial system that provides an efficient delivery mechanism for mobilization and allocation, management and distribution of long-term funds. It is a network of financial institutions and infrastructure that interact to mobilize and allocate long-term funds for the economy (Israel, 2015). Supporting this, Gbosi (2009) submitted that capital market is that part of the financial markets which specializes on the mobilization of long-term funds for the purpose of rapid growth and economic development. According to Najeb (2013) capital market refers to market for financial instruments of long-term investment tools with maturities of a year and sometimes exceeds a year in everywhere company's shares are traded.

Sunday, Atim and Jude (2009) observed that the Nigerian stock exchange is the very centre point of the Nigerian capital market where both individuals and institutional participants trade and liquidates their investments. Peter and Lyndon (2015) opined that the Nigerian stock exchange is the hub where every activities of the capital market revolves. Okosodo and Mamudu (2017) reported that At present, there are fourteen (14) established functional branches of the Nigerian Stock Exchange in different parts of the country, with the Lagos branch as its head office The following are the branches and their dates of establishment: Lagos 1961, Kaduna 1978, Port Harcourt 1980, Kano 1989, Onitsha 1990, Ibadan 1990, Abuja 1999, Yola 2002, Benin 2005, Uyo 2007, Ilorin 2008, Abeokuta 2008, Owerri 2009 and Bauchi 2009 (Imimole & Mamudu, 2018).

The Capital market is one of the major pillars of long-term economic growth and development. The market serves a broad range of clientele, including different levels of government, corporate bodies and individuals. The growth of the capital market has become one of the barometers for measuring the overall economic growth of a nation (Acha & Akpan, 2019). Although interest in identifying a formal link between financial system and economic growth is fundamental, the basic intuition behind this relation is relatively easy to surmise. This is because of the fact that the main goal of the capital market is the channeling of funds from the surplus sector to the deficit sector of the economy. It plays a major role in human capital investments which is an essential element of economic growth and development. From this point of view, one should expect that as the capital market develops and deepens, then efficient allocation of the financial resources for the investment is facilitated and thus the frontier of production possibilities is increased (Adamu and Sanni, 2005).

The capital market is an essential agent for economic growth because of its ability to facilitate and mobilize savings and investment. However economic growth relates to increases over time in a country's real output of goods and services or more appropriately real output per capita (usually measured with GNP/GDP). It has been argued that

the yardstick of measuring economic growth, as well as development is inadequate because the widely accepted national income indicators – GNP, GDP and NNI tend to be inappropriate due to the differing of computation and parameters used. Consequently, it is difficult to make any generalization from comparing the per capita income figure, as it being a basis for classifying a country as developed or underdeveloped may be misleading (Taiwo, Alaka & Afieroho, 2016).

Specifically, capital market is usually made up of a system of institutions, individuals and instruments that interact in a process that pools medium and long-term funds or resources from the surplus part of an economy and such funds are purveyed through intermediaries into the productive sectors of the economy under a regulatory framework. Therefore, the market hugs together the primary market (i.e., market for new issues) and secondary (secondary securities) market, whether such securities are raised in a market that is organized such as the stock exchange or not. It involves consortium underwriting, syndicated credits and project finances. It involves formal stock exchanges and the unlisted securities market. Therefore, it is the mechanism whereby economic units eager to invest their excess funds interact in a straight line or through financial/monetary intermediaries with those who wish to obtain funds for their business (Inimino, Bosco & Abuo, 2018).

The Nigerian capital market has since been the meeting point for buyers and sellers of shares, bonds stocks and for the exchange of other intrinsic commodities for the purposes of raising capital for the running the business operations, project expansion, modernization and business transformation by companies, government and its parastatals which in turn reduces the level of such economic unit's dependency upon banks for financing of capital projects as well as long-term financing (Abina & Lenea, 2019). Capital market is a market where buyers and sellers come together for the purpose of trading on financial securities such as bonds, stocks, to mention but few. It is a market which helps in channeling funds from the surplus economic units to the deficit economic units for the purposes of investment into productive use. It is a medium through which institutional investors raise investable funds.

Kolapo and Adaramola (2012) opined that the performance of the stock market is an impetus for economic growth and development. Popoola, Ejemeyovwi, Alege, Adu and Ademola (2017) revealed that the best variables to capture the stock market performance on economic growth in Nigeria are Real Gross Domestic Product (Y) for economic growth while Market Capitalization (MCP), All Share Index (ASI) and Value of transaction (VTR) traded on the stock market measures the stock market performance. Real Gross Domestic Product is the monetary value of aggregate economic activities within a period of time. It is an index of economic growth in a country, it could also be used to measure economic performance in an economy.

John, (2002) made a clarification that market capitalization is the value of a company's issued shares. He added that market capitalization is the share price times the number of shares issued. According to Solomon (2011) market capitalization is the current stock price per share multiplied by the total number of outstanding shares. Market capitalization is only a temporary metric based on the current stock market, for example, if 5,000,000 shares are issued and the market price per shares is N10, the company capitalization is N50,000,000. Okoye and Nwisienyi (2013) stated that market capitalization is the worth of a company as determined by the market forces i.e the demand for and supply of its securities. The market capitalization of a company can therefore be said to be its value as perceived by the market (investors). It is a function of a company's share price and its outstanding share (paid-up capital) at a given

date and would rise under the following circumstances: Outstanding shares increases but share price remain unchanged, share price increases but outstanding share remain unchanged, both outstanding shares and share price increases and a drop in share price but an increase in outstanding shares which is significant enough to off-set the decline in share price (Osisanwo & Atanda, 2012 and Owolabi & Ajayi, 2012).

In view of the importance of market capitalization in assessing the size and performance of a company, the Securities and Exchange Commission Quarterly, will on regular basis, feature the top 50 quoted companies ranked by market capitalization. In the past, it had featured only the top 20 quoted companies. The assessment indicators which includes outstanding shares, equity price, turnover earnings and dividend per share, dividend yield, net worth and debt equity ratio are to enable us to evaluate how the companies are faring measured by other criteria. It should be noted that any company ranked with market capitalization as at the end of every quarter, usually has the highest level of contribution to the Nigerian Stock Exchange (SEC, 2009).

Market Capitalization (MCP) is the total market value of the issued share capital of all the companies quoted on the stock exchange. Capitalization also refers to the act of converting net retained profit or reserve into issued capital while All Share Index (ASI) is the statistical data computed annually to measure the changes in the value of commodities and securities. The index is derived from the price of all or some market constituents, usually expressed in percentage change from base period. Indices are important performance of an economy or a financial market. Value of transaction (VTR) is the total value of transactions traded on the stock market exchange divided by the GDP. It measures the organized trading of firm equity as a share of national output and therefore should positively reflect liquidity on an economic wide basis. The total value of transaction complements the market capitalization ratio (Popoola, Ejemeyovwi, Alege, Adu & Ademola, 2017).

According to Adeusi, Sulaiman and Azeez (2013) market capitalization is the current stock price per share multiplied by the total number of outstanding shares. The Nigerian stock market offers array of financial instruments to meet long term financing needs of the public and private sectors. These instruments comprise shares, stocks, equity, bonds, debts and financial derivatives. Securities or shares are instruments traded in the Stock Exchange market. Equities represent ownership stake in a company which issued them while bonds are debt instruments which the principal and interest are usually payable to the holder at a pre-specific periods (Ezeoha, Ebele & Okereke-Onyuike, 2009). The activities of the Nigerian Stock Exchange are carried out through the primary and secondary markets.

The primary market is where new securities (shares, stocks, bonds, and derivatives) are either bought or sold. It is a market for securities that are being traded for the first time (Osho, 2014). The secondary market is where securities are converted into cash. That is, old or existing securities are sold in this market. It is a market, or an arrangement whereby already issued securities, shares, bonds or debentures and other long-term securities are purchased and sold by large and small investors through the help of individual stockbrokers. The secondary market provides the mechanism for the mobilization of liquidity of the securities listed at the exchange. This enables investors to convert their security holdings into cash or buy more securities for investment purposes or for speculative reasons (Okosodo & Mamudu, 2017).

Moreover, the function of the capital market in the growth and development of Nigeria has continued to attract the attention of policy makers. This is derived from the recognition that a deeper, broader and better performing capital market offers long-term finance, which is necessary for achieving economic growth and development. The market offers services that are important to a contemporary economy mostly by contributing to the formation of capital through financial intermediation, counseling services and enhancement of skills to make decisions. Furthermore, the capital market makes possible portfolio diversification that permits savers efficient capital to make the most of returns on their assets and decrease risk or danger. Therefore, a well-organized capital market optimizes the quantity of savings that funds investment at whatever level of savings. Capital market is made up of all the institutions that are involved in the supply of and demand for long-term capital and claims on capital (Inimino, Bosco & Abuo, 2018).

2.2 Theoretical Literature

2.2.1 Endogenous Growth Theory

The exogenous growth theory, also known as the neo-classical growth theory, was first devised by Robert Solow in 1956. The centre piece of the standard neoclassical growth model developed by Solow is an aggregate production function of the form:

$$Y_t = f(K_t, L_t, A_t) \quad (2.1)$$

According to Solow (1956) Y represent output, K equals capital, L is labour and A is an index of technology or efficiency while t represents time trend. Solow posits that f has the usual neoclassical properties; in particular, it is characterized by constant returns to scale, decreasing returns to each input, and a positive and constant elasticity of substitution. The fundamental dynamic equation of the model relates the evolution of the capital stock to a constant rate of saving and a constant rate of depreciation. Labour and the level of technology grow at exogenous exponential rates. This model assumes that countries use their resources efficiently and that there are diminishing returns to capital as labour increases. From these two premises, the neo-classical model makes three important predictions; first, increasing capital relative to labour creates economic growth, since people can be more productive given more capital. Second, poor countries with less capital per person will grow faster because each investment in capital will produce a higher return than rich countries with ample capital. Third, because of diminishing returns to capital, economies will eventually reach a point at which no new increase in capital will create economic growth. This point is called a steady state. If there were no technological progress, growth in this model would eventually come to a halt. However, the formulation of the model is chosen so as to allow increases in efficiency to offset the diminishing returns to capital. In endogenous growth theory, the growth rate depended on one variable: the rate of return on capital (Gillman, Harris & Matyas, 2002).

Endogenous growth theories describe economic growth which is generated by factors within the production process such as economies of scale, increasing return or induced technological changes, government policies, political stability, market distortions, human capital etc., can significantly affect economic growth as opposed to exogenous factors such as increase in population. When endogenous growth models are set within a monetary exchange framework of Lucas (1988), Lucas and Stokey (1987), McCallum and Good friend (1987), the inflation rate (tax) lowers both the return on all capital and growth rate. According to Gokal and Hamif (2004) a rise in inflation reduces

the marginal values of today. It is a widely used growth model in providing a systematic investigation of the government policies and programmes.

2.2.2 Efficient Market Hypothesis

The Efficient Market Hypothesis (EMH) is an investment theory which states that share prices fully reveal all available information regarding all stocks in the market. This implies that it is near impossible to overrun the market consistently under a risk-adjusted criterion. This is because market prices are expected to react to new information only. It is often in an unbiased fashion and thus provides unbiased estimates of underlying values (Enoruwa, Ezuem and Nwani (2019). Although there is considerable empirical proof in favour of the efficient market hypothesis, but several authors questioned if it is the best model for analysis? Chen (2018) in support of the theory opines that stocks and financial market securities always trade at their fair value, thus implying that investors can never buy stocks at undervalued prices or sell at an overrated price.

Efficient Market Hypothesis (EMH) was developed by Fama (1965) in an attempt to provide a framework for examining the efficiency of the capital market. Now, it remains one of the theoretical exploits of capital market economic growth association. The EMH was founded on the supposition that prices of securities in financial or monetary markets completely mirror all available information, because in a well-organized market, prospects or opportunities for all unexploited profit are eradicated or eliminated. An essential factor in this way of thinking is that not everybody in a financial or monetary market must be properly informed about a security or have rational or sensible expectations for its price to be driven to the position at which the well-organized markets state or condition holds. Financial markets are structured so that numerous participants can play. As long as a small number of participants keep opening their eyes for unexploited profit prospects, they will eliminate the profit opportunities that appear, because they make profits in so doing (Obiakor, 2016).

The EMH makes sense, because it does not require all and sundry in a market to be cognizant of what is happening to every security. In a well-organized market, all prices are always correct or accurate and reproduce market fundamentals (items that have a direct impact on future income streams of the securities). The evidence on the EMH is fairly mixed. Early evidence on the analysis of investment performance and mutual funds, whether stock prices reflect publicly available information, the random-walk behaviour of stock prices, and the success of so-called technical analysis was quite favourable to the EMH. However, in recent years, evidence or proof on the small-firm effect, market overreaction, excessive volatility, means reversion, and new information is not always incorporated into stock prices, suggesting that the hypothesis may not always be entirely correct. The proof seems to suggest that the efficient markets hypothesis may be a sensible point to start evaluating behaviour in monetary or financial markets but may not be generalized to all behaviour in financial market.

The EMH indicates that hot tips, investment advisors' published recommendations, and technical analysis cannot help an advisor out-perform the market. The explanation for investors is to pursue to buy-and-hold strategy-purchase stocks and hold them for long periods of time. Empirical evidence generally supports these implications of the efficient markets' hypothesis in the stock market. According to Okpoto (2015) previous test of the EMH have relied on long range dependence of equity returns. It revealed that previous information has been found to be in

improving predictive correctness. This report seems not to support the EMH in majority of the developing nations. Given the fact that the regulatory and institutional arrangements in the market are immature, the equity price definitely would tend to exhibit long range dependence. In a state of affairs where the market is highly and unreasonably speculative, investors will be disheartened. This has a negative effect on economic growth of any country, meaning that investors will refuse to invest in financial assets. Okpoto (2015) concluded that the implication of this is that companies cannot raise extra or additional capital for development. Therefore, efficient capital market is needed to achieve sustainable or adequate economic growth. In addition, the EMH is significant to this study because it links capital market and economic growth. It makes known the association between effectiveness of the capital market and economic growth in Nigeria. Hence, it offers a structure for investigating capital market efficiency (Obiakor, 2016).

2.2.3 Theory of Portfolio Behaviour

The portfolio theory postulates that stock exchange leads to capital formation. Under this theory the transmission channel show that investment in Equity, Government Stocks/Securities Debt/Bonds and Industrial Loan affect Market Capitalization and Value of Transaction Traded in the capital market which in turn serve as a major option to finance infrastructural development for Private individuals, companies and government at all levels in both developed and developing economics (Imimole & Mamudu, 2018).

Portfolio approach postulates that changes in stock prices influence the value of stock transaction in the stock exchange through portfolio adjustments (inflows/outflows of foreign capital). The approach believes that an inflow in foreign capital rises as upward trend in stock prices is recorded. However, a decrease in the stock prices would induce a reduction in domestic investment leading to a fall in the value of transaction traded and share index, causing capital outflow and low foreign direct investment. Okosodo and Mamudu (2017) noted that stock market serves as a veritable tool to channel investments from the investors who have surplus funds to the investors who have deficit funds. This is achieved due to the different types of security instruments (equity, debt, hybrid, insurance and derivative) that are traded in the capital markets which are generally subscribed by both parties as investment in stock.

Osamuwonyi (2002) reported that application of portfolio approach in capital market should take into cognizance management constraints and realities to ascertain the level of security investment return. Cochrane (2002) asserted that investors care about three attributes of their portfolio choice. These are Higher Average Return (HAR), low standard deviation of overall risk, Acceptance of portfolio with little low returns or a little higher standard deviation of return if the portfolio does not do poorly in recession.

In another similar study, Brandt (1999) presented a clever way to estimate a market-timing portfolio rule without solving the model. The calculation is clever in the sense that, it does not require a specifying statistical model for stock returns. The estimate market-timing shows the optimal allocation to stock forecast returns. Similar relation was shown by Campbell and Vicera (1999) who estimated the variation in expected return of stockholders. The optimal allocation to stock was seen as a function of expected return on stock Alajekwu and Achugbu (2012) revealed that market capitalization has a positive impact on growth and development of Nigerian economy. Okoye and Nwisienyi (2013) also concluded in their study that Nigeria's economic growth is directly affected by the movement of the capital market's share index, market value and market capitalization.

The literature of portfolio behaviour has generated a lot of interest among economists and financial analysts over time. In the empirical evidence available from different studies on asset choice among investors or fund managers, expected returns, market conditions and level of economic activities have been used in analyzing the behaviour of asset choices among investors (Freund, 1956; Tobin, 1958; Ajayi, 1978 and Enoma & Ofanson, 2009). Freund (1956) as cited by Enoma and Ofanson (2009) showed that if an investor is consistent in his preference, it will be possible to construct a utility function to describe his preference in a choice involving risk. In particular, Freund assertion is that since expected returns on investment are uncertain, the expected utility depends not only on expected benefit but also on expected variance of returns. The works of Tobin and Markowitz (1952) centered fundamentally on the mean variance trade off of return. Following their assertion, it is assumed that securities utility function is approximated by a simple quadratic function of the form below:

$$U(R) = (1 + a)^R + aR^2 \quad (2.2)$$

Where R = Rate of return on the portfolio, U(R) = Utility of the total return (income), $(1+a)^R$ shows the discount rate of risk and a represents the fraction between zero and minus.

2.3 Empirical Literature

Kolapo and Adaramola (2012) examined the impact of the Nigerian capital market on its economic growth from the period of 1990-2010 using Johansen co-integration and Granger causality tests on economic growth proxied by Gross Domestic Product (GDP) and capital market variables Market Capitalization (MCAP), Total New Issues (TNI), Value of Transactions (VLT), and Total Listed Equities and Government Stocks (LEGS). Their results showed that the Nigerian capital market and economic growth are co-integrated. This implies that a long run relationship exists between capital market and economic growth in Nigeria. The causality test results revealed a bidirectional causation between the GDP and the value of transactions (VLT) and a unidirectional causality from Market capitalization to the GDP and not vice versa. The standard error test results revealed that the activities in the capital market impacts positively on the economic growth of the country. They recommended therefore that the regulatory authority should initiate policies that would encourage more companies to access the market and also be more proactive in their surveillance role in order to check sharp practices which undermine market integrity and erode investors' confidence.

Atoyebi, Ishola, Kadiri, Adekunjo and Ogundeji (2013) evaluated the impact of capital market on economic growth in Nigeria using the Vector Auto Regression technique on annual data from 1981 to 2010 and the results of the empirical investigation revealed that market index and market capitalization were statistically significant at 10%, and an increase in the coefficient value market index and market capitalization brought about 33.7 and 44.8 percentage increase in real GDP while the Johanson co-integration revealed the existence of long run relationship between stock market and real GDP. The study recommended that there is need to restore confidence to the market by regulatory authorities through ensuring transparency and fair trading transaction and dealing in the stock exchange in order to address the reported case of abuse and sharp practices by some companies in the market. Edame and Okoro (2013) discuss the impact of capital market on economic growth in Nigeria. The ordinary least square (OLS) regression technique was used in the study. From the findings, it was obtained that capital market has positive and significant impact on economic growth in Nigeria.

Yadirichukwu and Chigbu (2014) empirical investigation on the impact of capital market on economic growth in Nigeria covering 1985-2012 using multivariate co-integration and error correction methodology. Their finding reported that two of the stock market variables (new issues (TONIS) and value of transaction (VALTRAN) exhibited positive and statistically significant relationship with economic growth, while two of the stock market variables (Market capitalization (MKTCAP) and Total listing (TOLIST) exhibited inverse and statistically significant relationship with economic growth in Nigeria. This stimulate dialogue on the implication for policy simulation. They recommended that the relevant regulatory agencies should focus on enhancing efficiency and transparency of market to improve investor's confidence. They added that policy institutions should be active in making systemic checks and appropriate policy innovations to ensure capital market led economic growth. Joshua (2014) examines the impact of capital market on economic growth in Nigeria. The study reveals that the Nigerian capital market is significant to economic development as value of transaction traded on the Nigerian Stock Exchange affects gross domestic product positively.

Nosakhare and Samson (2015) analyzed the impact of capital market development on economic growth in Nigeria using the Vector Error Correction (VEC) granger causality and the Vector Error Correction Mechanism (VECM) were analyzed between the periods of 1981 to 2013. The VEC causality test indicated a bidirectional causality between economic growth and capital market development in Nigeria. The Forecast Error Variance Decomposition further indicated that the predominant variations in the innovations of the variables are the shocks of themselves relative to shocks in all other variables in the VEC Model. The VEC estimation revealed that the speed of adjustment of the market relative to the economy is slow and unimpressive, considering the speed of turnover ratio and market liquidity and the ability of the market to respond to the unexpected changes are weak. They recommended that an improved macroeconomic environment as well as instituting reform policies should be embarked to expand the size, scope and network externalities of the Nigerian capital market both within and outside the country.

Duke and Nkamare (2015) investigated capital market and economic growth in Nigeria from 1986 to 2005 using OLS estimation technique. The finding suggested that there was a direct perfect association among the variables. The result also showed that none of the variables individually predicted GDP. Okpoto (2015) studied the impact of capital market on economic growth in Nigeria for the period 1980 to 2013. The researcher applied the ADF, co-integration, and the Error Correction Mechanism technique (ECM), the unit root test results showed that the variables were stationary at various levels. The result revealed that the variables were cointegrated. The parsimonious results showed that total value of transaction, market capitalization and total holdings of development stock impacted on economic growth but not meaningfully. Abu and Aguda (2015) examined the Nigerian capital market as a catalyst for sustainable economic development. The study revealed that the Nigerian capital market is significant to economic development as value of transaction traded on the Nigerian Stock Exchange affects gross domestic product positively.

Taiwo, Alaka and Afieroho (2016) evaluated the relationship between capital market and economic Growth in Nigeria using Vector Error Correction techniques on an annual time series data spanning from 1981 to 2014. The results of the normalized cointegrated series revealed that market capitalization rate, total value of listed securities, labor force participation rate, accumulated savings and capital formation are significant macroeconomic determinants factors of economic growth in Nigeria. They therefore recommended that for the capital market to realizes its full

potentials, its environment must be enabled to promote and encourage investment opportunities for both local and international investors, since the stock market operates in a macroeconomic environment. Consequently, an improvement in the Nigerian trading system with the aim of increasing the ease with which investors can purchase and sell shares, could guarantee the stock market liquidity.

Yusuf and Aminu (2016) studied the impact of capital market on economic growth in Nigeria from 2005 to 2014. OLS econometrics technique was employed as the main analytical technique. The findings suggested that, capital market performance indicators impacted insignificantly on GDP. Obiakor (2016) used OLS techniques to examine capital market and economic growth in Nigeria from 1985 to 2015. Analysis was anchored on relevant manifold regression model whose coefficients were estimated via the ordinary least squares (OLS) techniques. Results revealed that in specifics, market indices had heterogeneous effects on growth of the economy but on aggregate, capital market development significantly induced growth of the economy.

Similarly, Odo, Anoke, Onyeisi and Chukwu (2017) investigated the impact of capital market on economic growth in Nigeria from 1986 to 2016. They employed Auto Regressive Distributed Lag bound testing and VAR Granger causality econometric tools of estimation to test the variables in the model. The result of the estimation revealed a stable long run association between the explained and explanatory variables as supported by the greater bound value of 10.58. The finding of the ARDL revealed that market capitalization has positive significant association with economic growth; also, stock traded total value indicated a negative insignificant link with economic growth, all in the short run. The findings further showed that market capitalization and stock traded total value percent of GDP exhibited a negative insignificant link with economic growth in the long run within the period of the study. Findings of VAR Granger test revealed that, causality was seen from MCAPGDP to GGDP.

Muritala and Ogunji (2017) critically studied the association between the capital market and economic growth in Nigeria (1980-2015). Unit root, Co-integration and ECM methods of econometrics were employed. The finding showed that total new issue, market capitalization, and total listing positively impact on the economy. Meanwhile, the value of the transaction has impacted on real gross domestic product negatively.

Furthermore, Araoye, Ajayi and Aruwaji (2018) examined the impact of stock market development on economic growth in Nigeria from 1985 to 2014 using the Johansson's co integration and the error correction model on economic growth proxy by the Real Gross Domestic Product (RGDP) and Labour (LAB), Capital (CAP), Market Capitalization (MCAP) and Turnover Ratio (TURN) as proxy for stock market development in terms of size and liquidity. The results of the Johansson co integration test established the existence of a long run relationship between stock market development and economic growth in Nigeria. The empirical results revealed that the stock market is significant in determining economic growth in Nigeria using the error correction model. They recommended that policy makers should ensure improvement in the market capitalization, by encouraging foreign direct investment participation in the market. Small and medium entrepreneurs should be encouraged to access the market for investible funds given their close affinity with the grass root funds mobilization ability.

Inimino, Bosco and Abuo (2018) explicitly examined capital market and economic growth in Nigeria from 1986 to 2016 using the Augmented Dickey-Fuller test and Autoregressive Distributed Lag model as analytical tools. The ADF unit test results revealed stationarity of the variables at order zero and one, which satisfied the requirement

to employ the ARDL Bounds testing approach. The ARDL Bounds test revealed the existence of long run relationship among the variables. Moreover, the results revealed that market capitalization had positive and significant effects on economic growth both in the short and long run. Number of deals also had a positive and significant effect on economic growth in the long run but negative and insignificant effect on economic growth in the short run, while the volume of transaction had negative and significant effect on economic growth in both the long run and the short run. The study concluded that capital market has impacted on economic growth in Nigeria and recommended among others that there should be improvement in the moribund market capitalization, by encouraging more foreign investors to participate in the market, maintain state of the art technology like automated trading and settlement practices, electronic fund clearance and eliminate physical transfer of shares. Also, regulatory authorities should restore confidence to the market by ensuring transparency and fair trading dealings and transactions in the market to enhance economic growth.

Recently, Enoruwa, Ezuem and Nwani (2019) examined the impact of capital market on the economic growth of Nigeria using data from 1985 to 2015 extracted from the Central Bank of Nigeria Bulletin with the application of the linear regression method of econometric analysis to capture the capital market variable, market capitalization, all share index, trade volume and trade value while GDP at current basic price was used as proxy for the Nigerian economy. Their major findings revealed that all the predictors exhibit a significant relationship with economic growth in Nigeria at 5% level of significance and show a high degree of correlation with the dependent variable except number of deals and value of deals which displayed a fair correlation with the dependent variable. The study recommended that the capital market will need to embrace innovation and adopt fairness in information management in order to attract investors and the confidence of the investing public.

Abina and Lemea (2019) examined capital market and performance of Nigeria economy from 1985 to 2017 using the Johansen Co-integration, Error correction and Granger Causality methodology. The results of the Johansen Co-integration test revealed that there was a long run positive relationship among the variables, while the results of the Granger Causality test showed two significant unidirectional causalities flowing from gross domestic product to total market capitalization and to total value of new issues respectively. Thus, the study posits that capital market is a strong driver of economic growth in Nigeria for both public and private entities for medium and long-term investment. As such, a sound institutional framework for the regulation of the actors in the market so as to inspire investors' confidence and for the sustainability needs to be emphasized.

Acha and Akpan (2019) examined capital market performance and economic growth in Nigeria for the period 1987-2014, using the Augmented Dickey Fuller test, Johansen co-integration, Granger causality test and Vector Autoregressive (VAR) model on economic growth proxied by gross domestic product (GDP) while capital market performance was measured by market capitalization, total new issues, volume of transaction and listed equities. The results of the Johansen co-integration test were showed that the variable were cointegrated with at least one co-integrating vector, while the results of the Granger causality test showed that the causality between economic growth and capital market runs unilaterally from the capital market performance indicators to the GDP. From the results, it was inferred that the movement of stock prices in the Nigeria Stock Exchange reflect the macroeconomic conditions of the country and can therefore be used to predict the future path of economic growth. The study shows that the capital market performance has positively and significantly impacted on the Nigerian economy within the period. The

study, therefore, recommends among others that the financial and monetary authorities should ensure free flow of information in the market. This is necessary in order to attract more investors and increase new issues which will automatically increase the quantum of market capitalization that will result in improving the performance of the Nigerian capital market and by extension the economy.

Finally, Ogbebor, Okolie and Siyanbola (2020) analyzed the impact of market opening on economic growth in Nigeria using a robust set of econometric approach involving unit root test, co-integration, vector error correction model and granger causality. They reported that there is evidence that current value of economic growth responds to disequilibrium from past values of real gross domestic product, stock market development, foreign direct investment, trade openness, inflation and banking sector development in the long run. The result also showed that past values of real gross domestic product, foreign direct investment and trade openness promotes economic growth in the short run. The study, therefore concluded that there are bi-directional causalities both in the short term and the long term between the dependent and explanatory variables. Based on the findings, they recommended that policy makers in Nigeria should pay more attention to factors that can boost stock market development, foreign direct investment, trade openness, inflation and banking sector development in order to impact economic growth more positively in line with theoretical evidence that market opening positively impacts economic growth especially in frontier and emerging markets such as Nigeria.

3.0 Research Methods

3.1 Theoretical Framework

The Theory of Portfolio Behaviour and Endogenous Growth Theory

The portfolio theory postulates that stock exchange leads to capital formation. Under this theory the transmission channel show that investment in Equity, Government Stocks/Securities Debt/Bonds and Industrial Loan affect Market Capitalization and Value of Transaction Traded in the capital market which in turn serve as a major option to finance infrastructural development for Private individuals, companies and government at all levels in both developed and developing economics

An endogenous model of economic growth appears to be the most suitable theoretical framework for this study. Endogenous growth theory describes economic growth which is generated by factors within the production process such as economies of scale, increasing return or induced technological changes, government policies, political stability, market distortions, human capital etc., can significantly affect economic growth. The framework of this study assumes a standard neoclassical production function which premise on changes in quantities of factors of production account for growth. The neo-classical model is based on the Cobb-Douglas production function and is given as:

$$Y = f(A_t, K_t, L_t) \tag{3.1}$$

The neoclassical growth theory states that the changes in quantities of factor inputs in production (capital and labour) account for growth of output (Solow 1957). Where: Y = Aggregate real output, K = Capital, L = Labour force, A = Level of technology and t = time dimension.

3.2 Model Specification

This study adapted the model of Briggs (2015). The specification by Briggs (2015) is presented as follows:

$$\text{GDP} = f(\text{MCAP}, \text{TNI}, \text{VLS}, \text{LEGS}, \text{INF}) \quad (3.2)$$

$$\text{GDP} = \alpha + \beta_1\text{MCAP}_1 + \beta_2\text{TNI}_2 + \beta_3\text{VLS}_3 + \beta_4\text{LEGS}_4 + \beta_5\text{INF}_5 + \varepsilon \quad (3.3)$$

Where: GDP = Gross Domestic Product, MCAP = Market Capitalization, TNI = Total Number of New Issue, VLS = Value of transactions, LEGS = Listed Equities and Government Securities and INF = Inflation using consumer price index as a control variable while ε = Error term.

The current study modified equation 3.2 by removing Total New Issue, Listed Equities and Government Securities and Inflation, and thereafter include All Share Index. The reason for this modification is because all share index measures the prices of all the listed shares in the Nigerian capital market including new issues and existing shares, equities, bonds, government securities, ordinary shares and fixed interest stock. The log linear form of the current specification is presented thus:

$$\text{InRGDP}_t = f(\text{InMCAP}_t, \text{InTVT}_t, \text{ASI}_t) \quad (3.4)$$

Equation 3.4 is expressed more specifically as equation 3.5

$$\text{InRGDP}_t = \beta_0 + \beta_1\text{InMCAP}_t + \beta_2\text{InTVT}_t + \beta_3\text{ASI}_t + U_t \quad (3.5)$$

(Apriori expectation $\beta_1, \beta_2, \beta_3 > 0$)

Where InRGDP = Log of Real Gross Domestic Product, InMCAP = Log of Market Capitalization, InTVT = Log of Total Value of Transaction Traded and InASI = Log of All Share Index, U_t = Error Term, β_0 = Intercept, β_1 – β_3 = Coefficient of the independent variables and t is the time trend.

The error correction specification of equations 3.5 is presented as equations 3.6:

$$\Delta\text{InRGDP}_t = \beta_0 + \beta_1\Delta\text{InMCAP}_t + \beta_2\Delta\text{InTVT}_t + \beta_3\Delta\text{ASI}_t + \beta_4\text{ECM}_{t-1} + U_t \quad (3.6)$$

The ECM in equations 3.6 is the error correction term and the coefficient (β_4) attached to it indicates the speed of adjustment to longrun equilibrium whenever disequilibrium occurs.

3.3 Method of Data Analysis

This study used the Phillips-Perron test statistics, Johansen Cointegration techniques, Pairwise Granger Causality techniques and the Error Correction Methodology on the log linear modeling specification because log linear modeling is superior and more effective to linear form and gives more favorable results (Asaolu & Ogunmuyiwa, 2011). These methods used in analyzing the data collected for this research are basically descriptive and statistical in nature. The Phillips-Perron test statistics was used to determine the stationarity status of the variable. Statistical theory requires that variables be stationary before application of standard econometric techniques. This was done in order to avoid spurious (misleading) results.

The Johansen cointegration test was also employed to determines the existence or otherwise of a long run relationship among the variables in the models. The error correction model was thereafter estimated to determine the speed of adjustment to long run equilibrium. Diagnostic and stability tests were also conducted to confirm the robustness of the models. Finally, the Pairwise Granger Causality techniques was conducted to determine the direction of causality between capital market and economic growth in Nigeria.

4.0 Data Presentation, Analysis and Discussion of Results

The economic and capital market data used in this study are presented in appendix A at different time trend. The analysis and discussion of results started with the unit root test results, the Johansen cointegration test results, the error correction results (shortrun) and the Granger Causality Tests results.

4.1. Unit Root Test Results

Prior to the estimation of ECM, a unit root test was conducted on the selected economic and capital market indicators (log of real gross domestic product (InRGDP), log of market capitalization (InMCAP), log of total value of transaction traded (InTVT) and log of all share index (InASI), were examined using the Phillips-Perron test statistics to determine their stationarity status. Statistical theory requires that variables be stationary before application of standard econometric techniques. This was done in order to avoid spurious (misleading) results. The results of the Phillips-Perron unit root test are displayed in Table 4.1.

Table 4.1: Unit Root Test Results

Variable	Level	First Difference	Order of Integration
InRGDP	0.946048 (0.9949)	-3.394249 (0.0315)	1(1)
InMCAP	2.739947 (1.0000)	-5.660856 (0.0000)	1(1)
InTVT	-2.312395 (0.1742)	-9.058475 (0.0000)	1(1)
InASI	-1.570874 (0.4859)	-7.464123 (0.0000)	1(1)
5% C.V	5% = -2.954021	5% = -2.957110	

Source: Author Regression Output from EViews 9.

Note: i. Pro-value are reported in parenthesis,
 ii. The Philips-Perron statistics are compared to 5 per cent critical value (C.V).

The Phillips-Perron test results in Table 4.1 showed that all the selected economic and capital market variables (InRGDP, InMCAP, InTVT and InASI) were integrated at first difference. In other words, they were found to be stationary at 1(1). This implies that the hypothesis of non-stationarity is rejected for all the variables at their first difference. This justified the need to test for co-integration.

4.2 Cointegration Test using the Johansen Methodology

The results of the Unrestricted Cointegration Rank test for the model is presented in Table 4.2. Starting with the null hypothesis that there are no cointegrating vector ($r = 0$) in the model, the results show that there exists at least four and one cointegrating equations respectively as both the Trace and Max-Eigen statistics reject the null of $r = 0$ as against the alternative of $r = 1$ at 5 per cent level of significance which shows that there is a longrun relationship between log of market capitalization (InMCAP), log of total value of transaction traded (InTVT), log of all share index (InASI) and log of real gross domestic Product (InRGDP) in Nigeria (see the table below).

Table 4.2: Unrestricted Cointegration Rank Test result for model.

Hypothesised No. of CE(s)	Trace Stat.	Critical Value (0.05)	Prob**	Hypothesised No. of CE(s)	Max-Eigen Stat.	Critical Value (0.05)	Prob**
None *	44.10068	40.17493	0.0192	None *	54.87983	47.85613	0.0095
At most 1 *	24.98367	24.27596	0.0407	At most 1	10.56619	17.79730	0.4273
At most 2 *	14.41748	12.32090	0.0220	At most 2	8.678693	11.22480	0.1356
At most 3 *	5.738789	4.129906	0.0197	At most 3	5.738789	6.129906	0.1097

Source: Author Regression Output from EViews 9.

Note: i. r represents number of cointegrating vectors. ii. Both Trace and Max Eigenvalue tests indicates 4 and 1 cointegrating equations respectively at the 0.05 level. iii. *denotes rejection of the hypothesis at the 0.05 level and IV.

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

4.3 Short-run Error Correction Representation

The results of the short-run error correction representation for the model is reported in Table 4.3.

Table 4.3: Short-run Error Correction Representation for the Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.590715	0.286803	5.546368	0.0000
D(InMCAP)	0.410963	0.115319	3.563706	0.0023
D(InTVT)	0.381902	0.106253	3.594270	0.0021
D(InASI)	-0.465271	0.110314	-4.217697	0.0000
ECM(-1)	-0.605132	0.102457	-5.906204	0.0000

Source: Author Regression Output from EViews 9.

Dependent Variable: D(InRGDP)

Method: Least Squares

Date: 09/17/20 Time: 20:47

Sample (adjusted): 1987 2019

Included observations: 33 after adjustments

The short run error correction results presented in Table 4.3 showed that the entire explanatory variables of the economic and capital market in Nigeria met their expected signs except the all share index (InASI) with a negative sign. The empirical results also revealed that log of market capitalization (InMCAP) has direct and significant impact on the log of real gross domestic product (InRGDP) in Nigeria for the sample period. This means that 1 per cent increase in the log of market capitalization raised real gross domestic product in Nigeria by 0.410963 per cent. This result is consistent with previous empirical studies of Muritala and Ogunji (2017); Taiwo, Alaka and Afieroho (2016).

The short run results further revealed that the log of total value of transaction traded (InTVT) had positive and significant effect on the log of real gross domestic product (InRGDP) in Nigeria. A unit change in the log of total value of transaction traded (InTVT) increased real gross domestic product in Nigeria by 0.381902 per cent. This finding supports the findings of Joshua (2014); Yadirichukwu and Chigbu (2014).

The results also revealed that the log of all share index (InASI) had negative and significant relationship with the log of real gross domestic product (InRGDP) in Nigeria. Thus, 1 per cent change in the log of all share index

(InASI) reduced real gross domestic product in Nigeria by -0.465271 per cent. This is consistent with the work of Echekeba and Ubesie (2018).

Finally, the error correction mechanism (ECM) which is -0.605132 is statistically significant and has the appropriate negative sign. It suggests however, that there is a high adjustment process in the practice of the capital market on economic growth in Nigeria. It is also a confirmation that indeed log of market capitalization (InMCAP), log of total value of transaction traded (InTVT), log of all share index (InASI) and log of real gross domestic Product (InRGDP) in Nigeria are cointegrated.

4.4 Diagnostic Test Results

To confirm the robustness of the model, a diagnostic test was performed as shown in Table 4.4.

Table 4.4: Key Regression and Diagnostic Statistics for Model

R-squared	0.706772	Mean dependent var	137.1510
Adjusted R-squared	-0.605117	S.D. dependent var	143.8566
S.E. of regression	147.7679	Akaike info criterion	17.57306
Sum squared resid	6113.902	Schwarz criterion	17.79980
Log likelihood	-284.9555	Hannan-Quinn criter.	17.64935
F-statistic	180.2096	Durbin-Watson stat	1.973624
Prob(F-statistic)	0.000010		

Source: Author Regression Output from EViews 9.

The coefficient of determination R^2 indicates that 70.7 per cent of the total variation of real gross domestic product in Nigeria is jointly explained by market capitalization, total value of transaction traded and all share index of the Nigerian capital market. The Akaike information criterion, Schwarz criterion and Hannan-Quinn criterion showed that the model is correctly specified. F statistic measuring the joint significant of all regressors in the model is statistically significant at the 5 per cent level. The Durbin-Watson statistic of 1.973624 approximately 2 revealed the absence of autocorrelation among the explanatory variables.

4.5. Stability Test Results

Stability test was performed for the model on the impact of capital market on economic growth in Nigeria using cumulative sum (CUSUM) and cumulative sum of square (CUSUM Q) of recursive residuals as shown in figures 4.1 and 4.2. The existence of parameter instability is established for the model if the cumulative sum and cumulative sum of square of the residuals goes outside the area between the critical (straight bounded upper and lower) lines.

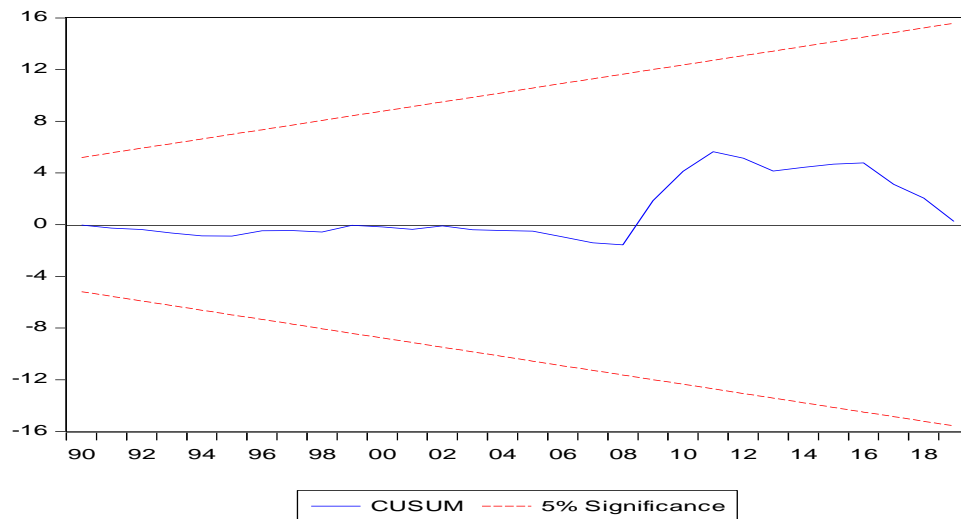


Fig.4.1 Plot of Cumulative Sum of Recursive Residuals

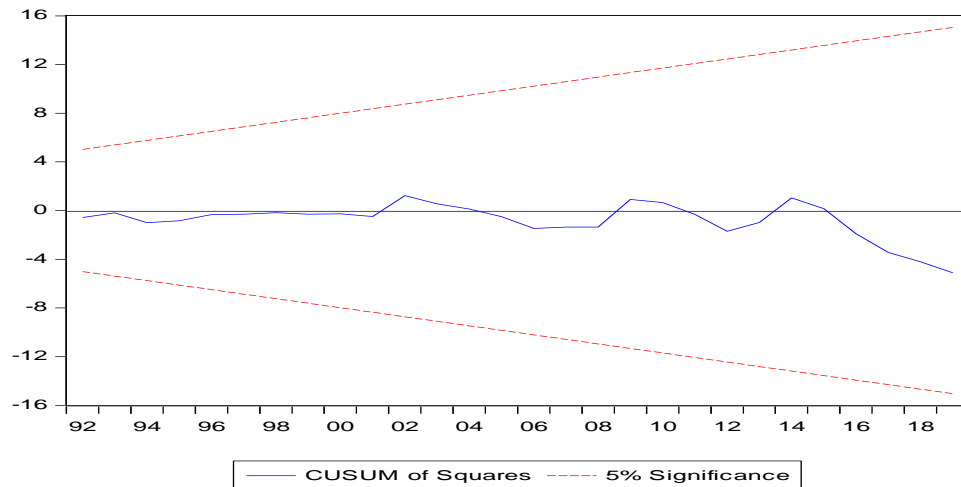


Fig.4.2 Plot of Cumulative Sum of Square of Recursive Residuals

From figure 4.1 and 4.2, it was observed that the model at 5 per cent level of significance, CUSUM and CUSUM Q were both stable. In conclusion, at 5 per cent critical value both CUSUM and CUSUM Q explain the stability of the model overtime.

4.6. Granger Causality Test Results

The Pairwise Granger Causality test was employed to examine the existence of causal relationships between capital market and economic growth in Nigeria, and the results of these estimations are reported in Table 4.5.

Table 4.5: Pairwise Granger Causality Test Results for the Model

Null Hypothesis:	F-Statistic	Prob.	Decision
MCAP does not Granger Cause RGDP	0.21840	0.8052	Accept
RGDP does not Granger Cause MCAP	9.31941	0.0008	Reject
TVT does not Granger Cause RGDP	1.28692	0.2925	Accept
RGDP does not Granger Cause TVT	3.75715	0.0363	Reject
ASI does not Granger Cause RGDP	1.72548	0.1972	Accept
RGDP does not Granger Cause ASI	1.67232	0.2067	Accept

Source: Author Regression Output from EViews 9.

Regarding the causality between market capitalization (MCAP) and real gross domestic Product (RGDP); total value of transaction traded (TVT) and real gross domestic Product (RGDP) in Nigeria exhibited unidirectional causation as their pro-values are less than 0.05 ($P < 0.05$). Thus, the null hypothesis of no causation was rejected as the feedback causation phenomenon was evident. These findings is in agreement with the works of Abina and Lemea (2019). Also, the test for the null hypothesis of no causation between all share index (ASI) and real gross domestic Product (RGDP) were accepted as the pro-values were greater than 0.05 ($P > 0.05$). This implies no evidence of causation between ALSI and RGDP during the period.

5.0 Concluding Remarks

The empirical investigation on the impact of capital market on economic growth in Nigeria was examined with the application of the Phillips-Perron test statistics, Johansen Cointegration techniques, Pairwise Granger Causality test and the error correction methodology on a multiple regression framework. The results from the Phillips-Perron test statistics confirms the stationarity of the selected economic and capital market variables (Real Gross Domestic Product (RGDP), Market Capitalization (MCAP), Total Value of Transaction Traded (TVT) and All Share Index (ASI) were stationary at first difference 1(1) respectively. The Johansen cointegration test results indicated a long run relationship between RGDP, MCP, TVT, ASI and real gross domestic product in Nigeria while the results of the error correction model showed a high adjustment process in the Nigerian capital market since the speed of adjustment to long run equilibrium was above 50 per cent.

In reviewing the contributions of capital market on economic growth in Nigeria from 1985 to 2019, one can deduce from the findings that the direct and significant relationship of MCAP and TVT on real gross domestic product in Nigeria is as a result of the internationalization of the capital market (stock exchange) to the outside world that leads to increase in market capitalization and thereby cause economic growth in Nigeria.

The negative relationship between all share index on real gross domestic product in Nigeria is traceable to the shortcomings experienced in the Nigerian capital market such as inadequate facilities; low level of technology, many companies not quoted on the capital market etc. while the significant impact of all share index on the other hand confirmed some of the achievements in the capital market.

The causality between market capitalization, total value of transaction traded and real gross domestic Product in Nigeria exhibited unidirectional causation while there is evidence of no causation between all share index and real

gross domestic product in Nigeria during the period. This also confirmed the short run results of the inverse and significant relationship between all share index and real gross domestic product in Nigeria.

Conclusively, the cointegration between real gross domestic product, market capitalization, total value of transaction traded and all share index showcase the capacity of the Nigerian capital market on a long term prospect to sustainable growth and development in Nigeria.

5.1 Recommendations

Based on the empirical findings of the study, the following recommendations were made:

- a) Securities and Exchange Commission (SEC) should deepening policies towards improvement in market capitalization, value of transaction traded and all share index of the Nigerian Stock Exchange by encouraging more foreign investors to participate in the market as well as maintaining or improving state of the art technology like upgrade on automated trading and settlement practices, electronic clearance and eliminate physical transfer of shares.
- b) Also, regulatory authorities should restore confidence to the capital market by ensuring transparency and fair trading dealings and transactions in the market to enhance the total value of transaction traded and thereby strengthen economic growth in Nigeria.
- c) The Securities and Exchange Commission (SEC) should encourage the Nigerian Stock Exchange (NSE) to open more branches in all parts of the states Nigeria particularly in the rural areas in order to encourage rural companies to have access and be enlisted in the capital market.
- d) Policy makers should ensure improvement in the market capitalization, by encouraging foreign direct investment participation in the market. Small and medium entrepreneurs should be encouraged to access the market for investible funds given their close affinity with the grass root funds mobilization ability.
- e) The regulators of the Nigerian stock exchange (Security and Exchange Commission) should make policy that will bring improvement and encourage more participation in the stock market, as well as easing restrictions on entry into stock market to ensure more companies are listed in the market and thereby increases market capitalization and all share index.

REFERENCES

- Abina, A.P. and Lemea, G.M. (2019). Capital Market and Performance of Nigeria Economy (1985-2017). *International Journal of Innovative Finance and Economics Research*, 7(2): 51-66.
- Abu, I.N. and Aguda, N.A. (2015). Nigerian Capital Market: A Catalyst for Sustainable Economic Development. *Research Journal of Finance and Accounting*, (6)3. Available online at www.iiste.org
- Acha, I.A. and Akpan, S.O. (2019). Capital Market Performance and Economic Growth in Nigeria. *Noble International Journal of Economics and Financial Research*, 4(2): 10-18. Available online at <http://napublisher.org/?ic=journals&id=2>
- Adamu, J.A. and Sanni, I. (2005). Stock market development and Nigerian economic growth. *Journal of Economic and Allied Fields*, 2(2): 116-132.
- Adeusi, S.O.; Sulaiman, L.A. and Azeez, B.A. (2013). Impact of Capital Market Development on the Nigerian Economy: A Post-SAP Analysis *Journal of Economics and Behavioral Studies*, (5)1.
- Ajayi, I.S. (1978). *A Portfolio Approach to Money Supply Determination in Nigeria*. Ibadan University Press.

- Alajekwu, U.B. and Achugbu, A.A. (2012). The Role of Stock Market Development on Economic Growth in Nigeria: A Time Series Analysis. *Africa Research Review and International Multidisciplinary Journal*, Ethiopia, (6)1.
- Araoye, F.E.; Ajayi, E.O. and Aruwaji, A.M. (2018). The Impact of Stock Market Development on Economic Growth in Nigeria. *Journal of Business and African Economy*, 4(1): 1-15. Available online at www.iiardpub.org
- Asaolu, T. and Ogunmuyiwa, M. (2011). An econometric analysis of the impact of macroeconomic variables on stock market movement in Nigeria. *Asian Journal of Business Management*, 3(1).
- Atoyebe, K.O.; Ishola, S.A.; Kadiri, K.I.; Adekunjo, F.O. and Ogundeji, M.O. (2013). Capital Market and Economic Growth in Nigeria an Empirical Analysis. *Journal of Humanities and Social Science*, 6(6): 60-68. Available online at www.Iosrjournals.Org
- Brandt, M.W. (1999). Estimating Portfolio and Consumption Choice: a Conditional Euler Equation Approach. *Journal of Finance*.
- Briggs, A.P. (2015). Capital Market and Economic Growth in Nigeria. *Research Journal of Finance and Accounting*, 6(9): 82-93. Available online at www.iiste.org
- Campbell, J.Y. and Vicera L. M. (1999). By Force of Habit: A Consumption Based Explanation of Aggregate Stock Market Behaviour. *Journal of Political Economy*, (107)2.
- CBN, (2019). Central Bank of Nigeria Statistical Bulletin Volume 30, December.
- Chen, J. (2018). Efficient Market Hypothesis. Retrieved online on the 10th of September, 2020 at <https://www.investopedia.com/terms/e/efficientmarkethypothesis>.
- Chinwuba, O. and Amos, O.A. (2011). Stimulating Economic Development through the Capital Market: The Nigerian Experience. *JORIND*, (9)2. Available online at www.transcampus.org
- Cochrane, J.H. (2002). Portfolio Advice for a Multi-Factor World Economic Perspective, Federal Reserve Bank of Chicago.
- Donwa, P. and James, O. (2010). An Empirical Analysis of the Impact of the Nigerian Capital Market on Her Socio-economic Development. *Journal of social science*, (24)2.
- Duke, S.B. and Nkamare, S.E. (2015). Impact of Capital Market on the Development of the Nigerian Economy. *Archives' of Business Research*, 3(4): 124-151.
- Echekoba, F.N.; Ezu, G.K. and Egbunike, C.F. (2013). The Impact of Capital Market on the Growth of the Nigerian Economy Under Democratic Rule. *Arabian Journal of Business and Management Review*, 3(2): 53-62.
- Edame, G.E. and Okoro, U. (2013). The Impact of Capital Market on Economic Growth in Nigeria. *Journal of Poverty, Investment and Development - An Open Access International Journal*, (1)1.
- Enoma, A.I. and Ofanson, E.J. (2009). Asset Choice of Deposit Money Bank in Nigeria: An Empirical Analysis. *The Nigerian Journal of Economics and Management Studies*, (4): 17-30.
- Enoruwa, K.O.; Ezuem, M.D. and Nwani, O.C. (2019). Capital Market Performance Indicators and Economic Growth in Nigeria. *International Journal of Research and Innovation in Social Science*, 3(2): 435-444. Available online at www.rsisinternational.org
- Ezeoha, A.; Ebele, O. and Okereke-Onyuike, N. (2009). Stock market development and private investment growth in Nigeria. *Journal of Sustainable Development in Africa*, 11(2): 20-35.
- Freund, R.J. (1956). The Introduction of Risk into Programming Model. *Econometrical*.
- Gbosi, A.N. (2009). *Global Economic Meltdown and the Nigerian Financial System*, Harvey Publications Company. Port Harcourt.
- Gillman, M.; Harris, M. and Matyas, L. (2002). Inflation and growth: Some theory and evidence. *Journal of Political Economy*, 75(1): 796-810.
- Imimole, B. and Mamudu, Z.U. (2018). An Examination of Stock Exchange and Capital Formation in Nigeria. *The Nigerian Journal of Economic and Management Studies*, 7(1): 20-55.
- Inimino, E.E.; Bosco, I.E. and Abuo, M.A. (2018). Capital Market and Economic Growth in Nigeria: An Autoregressive Distributed Lag (ARDL) Bounds Testing Approach. *International Journal of Research and Innovation in Social Science*, 2(4): 87-96. Available online at www.rsisinternational.org

- Israel, E.K. (2015). Capital Market and the Performance of the Manufacturing Industries in Nigeria 1970-2012. *European Journal of Business and Management*, 7(13): 11-22. Available online at www.iiste.org
- Iyoha, M.A. (2004). *Macroeconomics: Theory and Policy*. Mindex publishing Revised Edition, Benin City, Nigeria.
- John, B. (2002). *An Oxford Dictionary of Economics*, published by Oxford University Press.
- Joshua, A. (2014). The Impact of Capital Market on Economic Growth of Nigeria (1980-2009). Retrieved online on 9th September, 2020 at www.project.com/project
- Kolapo, F.T. and Adaramola, A.O. (2012). The Impact of the Nigerian Capital Market on Economic Growth (1990-2010). *International Journal of Developing Societies*, 1(1): 11–19.
- Muritala, T.A. and Ogunji, M. (2017). Does the Capital Market Spur Economic Growth? Evidence from Nigeria. *Journal of Corporate Finance Research*, 11(1): 90-99.
- Najeb, M.H. (2013). The Impact of Stock Market Performance upon Economic Growth. *International Journal of Economics and Financial Issues*, 3(4): 788-798.
- Njogo, B.O. and Ogunlowore, A.J. (2014). Impact of Nigerian Financial Markets on the Economic Growth. *International Journal of Financial Markets*, 1(3):77-82.
- Nosakhare, L.A. and Samson, E.E. (2015). Capital Market Development and Economic Growth in Nigeria. *Benin Journal of Social Sciences*, 22(1): 111-139.
- Obiakor, R.T. (2016) Does Capital Market Development Spur Economic Growth? A Look at Africa's Largest Economy. *The International Journal of Social Sciences and Humanities Invention*, 3(7): 2397-2406.
- Odo, S.I.; Anoke, C.I.; Onyeisi, O.S. and Chukwu, B.C. (2017). Capital Market Indicators and Economic Growth in Nigeria: An Autoregressive Distributed Lag (ARDL) Model. *Asian Journal of Economics, Business and Accounting*, 2(3): 1-16.
- Ogbebor, P.I.; Okolie, O.R. and Siyanbola, T.T. (2020). Market opening and Economic Growth in Nigeria. *Journal of Economics and International Finance*, 12(1): 20-28. Available online at <http://www.academicjournals.org/JEIF>
- Ogboi, C. and Oladipo, S.O. (2012). Stock Market and Economic Growth: The Nigerian Experience. *Research Journal of Finance and Accounting*, (3)4. Available online at www.iiste.org
- Okosodo, L.A. and Mamudu, Z.U. (2017). Empirical Investigation of the Impact of Foreign Investment on Stock Market Development in Nigeria. *The Nigerian Journal of Business and Management Sciences*, 1(2): 79-93.
- Okoye, V.O. and Nwisienyi, K.J. (2013). The capital market contributions towards economic growth and development; the Nigerian experience, *Global Advanced Research Journal of Management and Business Studies*, (2)2. Available online at <http://garj.org/garjmbbs/index.htm>
- Okpoto, S.I. (2015). Capital Market and Nigeria's Economic Growth (1980-2013). *Journal of Policy and Development Studies*, 9(4): 98-112.
- Osamuwonyi, O.I. (2000). Portfolio Theory and Optimal Deployment of International Reserves in a Developing Country. *The Nigerian Economic and financial Review*, (7)2.
- Osho, A. E. (2014). The Role of Stock Market on Nigeria's Economic Development, *International Journal of Scientific and Research Publications*, (4): 4. Available online at www.ijsrp.org
- Osisanwo, B. G. and Atanda, A. A. (2012). Determinants of Stock Market Returns in Nigeria: A Time Series Analysis. *African Journal of Scientific Research* (9)1.
- Ouandlous, A. (2010). Capital Markets and Economic Development: A Framework for Newly Liberalized Economies. *Journal of Business & Economics Research*, 8(6): 9-16.
- Owolabi, A. and Ajayi, N.O. (2012). Econometrics Analysis of Impact of Capital Market on Economic Growth in Nigeria (1971-2010). *Asian Economic and Financial Review*, (3)1.
- Peter, E.A. and Lyndon, M.E. (2015). Determinants of stock market development in Nigeria: A Cointegration Approach, *Advances in Research*, (3)4. Available online at www.sciencedomain.org

- Popoola, O.R.; Ejemeyovwi, O.J.; Alege, O.P; Adu, O. and Ademola. O.A. (2017). Stock Market and Economic Growth in Nigeria. *International Journal of English Literature and Social Sciences*, 2(6): 97-105 Available online at www.ijels.com
- SEC, (2009). Market Capitalization as a measure of Performance of Leading Companies on the Nigerian stock Exchange. Issue in capital Market Development, (2)1.
- SEC, (2012). A Quarterly magazine of the security and exchange commission of Nigeria, January-March.
- Solomon, E. (2011). The 2008 Stock Market Crash: Lesson and Outlook for the Future. The Nigerian Stock Market Annual (NSMA) 2011 Edition.
- Solow, R.M. (1956). A Contribution to the Theory of Economic Growth. *Quarterly Journal of Economics*, 70(1): 65-94.
- Taiwo, J.N.; Alaka, A. and Afieroho, E. (2016). Capital Market and Economic Growth in Nigeria. *Account and Financial Management Journal*, 1(8): 497-525.
- Tobin, J. (1958). Liquidity Preference as a behaviour toward Risk. *The Review of Economic Studies*, (26)1.
- Tobin, J. and Markowitz P.C. (1952). Economic Models of Portfolio Choice. *The America Economic Review*, (58)1.
- Uduk, M. (2019). Strategies to Achieve Double Digit Growth for Nigeria: The Capital Market Option. Securities and Exchange Commission Nigeria, An Address Delivered at the Chartered Institute of Stockbrokers Interactive Forum at the Civic Centre, Victoria Island, Lagos on Sunday, February 10 : 1-7.
- Umar, L.A. (2018). Impact of Capital Market on Nigeria's Economic Growth. *International Journal of Innovative Research and Creative Technology*, 4(1): 29-36. Available online at www.ijirct.org
- Yadirichukwu, E. and Chigbu, E.E. (2014). The impact of capital market on economic growth: the Nigerian Perspective. *International Journal of Development and Sustainability*, 3(4): 838-864.
- Yusuf, M.B. and Aminu, A. (2016). An Empirical Analysis on Impact of Capital Market Performance Indicators on Economic Growth: The Nigerian Perspective. [Proceedings of ISER 27th International Conference, Riyadh, Saudi Arabia.](#)

Appendix

Appendix A: Selected Capital Market and Macroeconomic Variables for the Regression Analysis

YEAR	RGDP	MCAP	TVT	ASI
1986	15,237.99	6.80	497.90	163.80
1987	15,263.93	8.20	382.40	190.90
1988	16,215.37	10.00	850.30	233.60
1989	17,294.68	12.80	610.30	325.30
1990	19,305.63	16.30	225.40	513.80
1991	19,199.06	23.10	242.10	783.00
1992	19,620.19	31.20	491.70	1,107.60
1993	19,927.99	47.50	804.40	1,543.80
1994	19,979.12	66.30	985.90	2,205.00
1995	20,353.20	180.40	1,838.80	5,092.20
1996	21,177.92	285.80	6,979.60	6,992.10
1997	21,789.10	281.90	10,330.50	6,440.50
1998	22,332.87	262.60	13,571.10	5,672.70
1999	22,449.41	300.00	14,072.00	5,266.40
2000	23,688.28	472.30	28,153.10	8,111.00
2001	25,267.54	662.50	57,683.80	10,963.10
2002	28,957.71	764.90	59,406.70	12,137.70
2003	31,709.45	1,359.30	120,402.60	20,128.94
2004	35,020.55	2,112.50	225,820.00	23,844.50
2005	37,474.95	2,900.06	262,935.80	24,085.80
2006	39,995.50	5,120.90	470,253.40	33,189.30
2007	42,922.41	13,181.69	1,076,020.40	57,990.20
2008	46,012.52	9,562.97	1,679,143.70	31,450.78
2009	49,856.10	7,030.84	685,717.29	20,827.17
2010	54,612.26	9,918.21	799,910.95	24,770.52
2011	57,511.04	10,275.34	638,925.70	20,730.63
2012	59,929.89	14,800.94	808,994.18	28,078.81
2013	63,218.72	19,077.42	2,350,875.70	41,329.19
2014	67,152.79	16,875.10	1,338,600.65	34,657.15
2015	69,023.93	17,003.39	978,047.07	28,642.25
2016	67,931.24	16,185.73	620,018.05	26,874.62
2017	68,490.98	21,128.90	1,078,491.84	38,243.19
2018	69,799.94	21,904.04	1,284,976.28	31,430.50
2019	71,387.83	25,890.22	64,177.33	26,842.07

Source: Central Bank of Nigeria Statistical Bulletin (2019).