STOCK MARKET PERFORMANCE AND ECONOMIC GROWTH IN NIGERIA

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A PROJECT WORK SUBMITTED TO THE DEPARTMENT OF BANKING AND FINANCE FACULTY OF MANAGEMENT SCIENCES, IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF BACHELOR OF SCIENCE (B.Sc.) DEGREE IN UNIVERSITY OF BENIN, BENIN CITY NIGERIA.

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DECLARATION

I, Imafidon Amenawon Magdalene hereby declare that this project work was purely undertaken by me in the Department of Banking and Finance, Faculty of Management Sciences, University of Benin, under the supervision of Dr. J. Obayagbona. The research work has not been previously submitted for the award of a degree elsewhere. All ideas and views are products of my personal research and where the views of others have been used and expressed they were duly acknowledgement.

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Imafidon Amenawon Magdalene **Date**

CERTIFICATION

This is to certify that this project work was carried out by **Imafidon Amenawon Magdalene** with matriculation number **MGS1807875** in the Department of Banking and Finance, Faculty of Management Sciences, University of Benin, Benin City, Edo State, Nigeria, in partial fulfilment of the requirements for the award of B.Sc Degree.

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DEDICATION

This work is dedicated to Almighty God.

ACKNOWLEGDEMENT

All thanks to almighty God whose very present help in times of need has seen me throughout my academic adventure as a student of the University of Benin, Benin City, Edo State. Nigeria.

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ABSTRACT

This study examined the impact of stock market development on economic growth in Nigeria for the period 1985 to 2022. The specific objectives of the study were to find out whether all share index (ASI), market capitalization (MCAP), value of stock traded (VST) and volume of transactions (VOT) have significant impact on economic growth in Nigeria. The ordinary least square technique was employed for the analysis of data and the outcome revealed that, all share index (ASI), market capitalization (MCAP), value of stock traded (VST) have significant impact on economic growth; while volume of transactions (VOT) has a weak inverse relationship with economic growth. The study recommends among others that, the government and regulators must continuously collaborate with joint policy decisions that will continue to strengthen the market, instill market discipline by punishing offenders and put in place workable and transparent rules and regulations that will safeguard investors' funds. Doing these will certainly attract more investors into the Nigerian market and will in turn ushers in more fund to boost economic activities.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

A stock market is a planned, organized and organised financial market where bonds, notes, shares, which are typically referred to as securities are purchased and sold at prices normally determined by mechanisms of demand and supply for such securities (Gupta, 2019). Stock markets play key roles as economic institutions that increase the efficiency in long-term capital formation and allocation. Stock markets assist both firms and governments to raise long-term capital enabling them to finance new projects as well as expanding other operations (Olweny & Kimani, 2011). As economies develop, additional funds become necessary in meeting the quick expansion process; and thus stock markets serve as effective means in mobilising and allocating seemingly surplus funds among competing uses; which are critical to the growth and efficiency of an economy (Anokye, 2016). Fink, Haiss, and Vuksic (2019), Yartey (2018), Naceur and

Ghazouani (2017), and Beck and Levine (2014) all believe that stock market development is an important variable identified by most empirical economic growth literature that correlates positively with the growth performances of several countries. In a broader sense, Esso (2010) argues that an efficient financial system, as well as a well-integrated banking sector and a well-developed stock market, provides superior financial services. This enables an economy to increase its economic growth rate in the majority of cases.

A well-functioning financial market is critical for economic growth and development as well as the promotion of global financial integration (Iyola, 2014). Individuals, businesses, and governments can use the market to sell shares, stocks, and bonds in order to raise long-term and short-term cash from the surplus sector of the economy and shift them to the deficit sector. Long-term funding sourced through the stock market is critical for self-sustaining economic growth that is consistent with external adjustment and rapid economic growth (Iyoha, 2014).

Ndako (2010) has suggested that funds must be successfully mobilized from the surplus sector and distributed to the deficit sector of the economy in order for enterprises and economies to harness their human, material, and management resources for optimal output. As a result, the financial market is a type of economic organization that encourages efficiency in capital formation and allocation. According to Ekundayo (2022), a country requires a lot of local and foreign investments to achieve sustainable economic growth and development, and the financial market provides a route through which that is made feasible.

In principle, a well-developed stock market would boost saving (by expanding the range of financial instruments available to savers for portfolio diversification) and efficiently distribute capital to productive investments. All things being equal, it eventually leads to an increase in a country's rates of economic growth. Stock markets are major sources of investment capital at low costs (Anokye, 2016). According to Adjasi and Biekpe (2016), a highly established stock market also provides liquidity, which lowers the cost of foreign capital, which is crucial for development. Hence, the presence of stock markets mitigates principal-agent problems and minimizes information asymmetry, thereby boosting effective resource allocation and economic progress.

Previous research has underlined the importance of the stock market in supporting economic growth in developing countries such as Nigeria (Yartey & Adjasi, 2017; Adeoye, 2015; Okoye, Modebe,Taiwo, & Okorie, 2016; Onuora, 2019). Despite the large number of intermediaries in Nigeria, the Nigerian stock market is still developing; however it still plays an active role in the financial intermediation process in Nigeria. It is against this introductory background that this study seeks to examine the relationship between stock market development and economic growth in Nigeria.

1.2 Statement of the Research Problem

The performance of the stock market is frequently regarded as an important or good barometer for gauging a country's economic strength and development. Thus, an economy with an active stock market may have its essential stock market index utilized as a reference in measuring

changes in the general level of economic activity within the concerned economy on a regular basis. There are several channels via which the effects of the stock market are transferred to the economy. These channels include, among others, stock market liquidity, real market capitalization, the value exchanged, and the turnover of stocks in the market. Despite the well-known and widely acknowledged truth that the stock market promotes economic growth, the Nigerian stock market has yet to fully realize the benefits it has to offer to the nation's economy (Ajayi, Alaketu & Agun, 2020).

The contribution of stock market to economic growth has been viewed to have been enormous and the Nigerian economy is not excluded. Nonetheless, there is an abundance of contributions in the literature on the impact of stock market development on economic growth (Duke & Nkamare, 2015; Alshammary, 2014; Alghamedi, 2012; Pan & Mishra, 2016; Obiakor, 2016; Adan, 2014). As a result, this study will add to the current body of literature on this topic in the Nigerian setting. Taking into account the literature's mixed findings on the impact of stock market development on economic growth, whereby Schumpter (1911), Bagehort (1873), and Hicks (1969) as corroborated by the findings of Obiakor (2016), Nguyen and Pham (2014), and Ake and Jin (2010), Ogboi and Oladipo (2012), Sule and Momo (2009), Abayomi (2011), Ajayi, Alaketu and Agun (2020), Adesanya, Adediji and Okenna (2020), Dada (2021) posited that the stock market has a positive impact on economic growth while Robinson (1952) and Lucas (1988) as substantiated by the discoveries of Amu, Nwezeaku and Akujobi (2015), Alghamedi (2012), Odia (2010) and Owusu (2016) posited

that stock market development has no impact on economic growth. In light of these disagreements, it is critical to perform a study to ascertain the true facts. Therefore, this study will employ the Auto Regressive Distributed Lag modeling technique and the Engle Granger Causality test to investigate the impact of stock market development on the economic growth of Nigeria.

1.3 Research Questions

The study will address the following questions:

i. What is the relationship between all share index and economic growth in Nigeria?
ii. What is the association between market capitalization and economic growth in Nigeria?
iii. What is the impact of total value of stocks traded on economic growth in Nigeria?
iv. What is the relationship between market turnover and economic growth in Nigeria?
v. What is the influence of volume of transactions on economic growth in Nigeria?

1.4 Objectives of the Study

The broad objective of this study is to examine the relationship between stock market development and economic growth in Nigeria. The specific objectives are to:

i. establish the relationship between all share index and economic growth in Nigeria.
ii. examine the association between market capitalization and economic growth in Nigeria.
iii. find out the impact of total value of stocks traded on economic growth in Nigeria.
iv. ascertain the relationship between market turnover and economic growth in Nigeria.

v. evaluate the influence of volume of transactions on economic growth in Nigeria.

1.5 Research Hypotheses

The following hypotheses, stated in their null form will be tested in this study,

H_{01}: There is no significant relationship between all share index and economic growth in Nigeria.

H_{02}: There is no significant association between market capitalization and economic growth in Nigeria.

H_{03}: There is no significant impact of total value of stocks traded on economic growth in Nigeria.

H_{04}: There is no significant relationship between market turnover and economic growth in Nigeria.

H_{05}: There is no significant influence of volume of transactions on economic growth in Nigeria.

1.6 Scope of the Study

The study focuses on the stock market and its impact on Nigeria's economic growth. The Nigerian economy is a vast one with many diversified and sometimes complex components. The analysis is limited on the stock market and its activities, as well as their impact on Nigerian economic growth. This is guided by the stock market's relevance to the country's economic growth because it offers long-term money for investment. It will cover a period of 38 years (1985-2022). The selection of the study period, 1985-2020, is predicated on the

market's outstanding developmental changes as well as improvement in the market's policy framework. This is in terms of its operating activities, an increase in the number of publicly traded firms and securities, and an increase in market capitalization. Although the number of new offerings and the volume of transactions have all increased significantly during the research period, there have been reports of a decline in some years as a result of the global financial crisis.

1.7 Significance of the Study

It is a well-known reality that for any meaningful economic transition to occur in a country, the stock market must be fully operational. It is also a well-known truth that the economic strength of any country is evaluated by how active and effective the stock market is (Adamu, 2008).

The study will be extremely useful to regulatory bodies such as the Central Bank of Nigeria (CBN), Nigerian Exchange Limited (NGX), and the Security Exchange Commission (SEC) in developing sound financial policies and reforms that will improve stock market performance. This would strengthen public enterprises by ensuring that corporate governance standards in Nigerian public companies are consistent with worldwide best practices through improved financial disclosure and adoption of International Financial Reporting Standards.

Also, the government will benefit from the findings of this study as the study may serve as a guide towards the regulation of the stock market for improved economic growth and development.

Finally, future research may wish to share this experience by extrapolating some of the data as well as the statistical inferences made by this study.

1.8 Limitations of the Study

When conducting management sciences research, the data that one encounter is almost always non-experimental in nature, meaning that it is not under the control of the researcher. Consequently, a lack of control may provide particular challenges in determining the precise impact of stock market on the economic growth of Nigeria. This constraint will be minimized to the greatest extent possible by adhering as closely as possible to the data from the Nigerian Exchange Limited FactBook and Central Bank of Nigeria Statistical Bulletin and by employing appropriate statistical tools such as descriptive statistics, Pearson correlation, and Ordinary Least Square (OLS) techniques.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines relevant literature on the subject of stock market development and economic growth in Nigeria. First, the conceptual issues are examined such as; the concept of stock market and stock market development as well as economic growth. Theories related to the study will be reviewed in the theoretical review section while the empirical review shall present previous studies conducted on the subject matter and their findings which will create a gap in literature review that the study will attempt to fill.

2.2 Conceptual Review

2.2.1 Concept of Economic Growth

Economic growth is the increase in a country's output (goods and services) from one period to the next. Economic growth is the continuous improvement in the capacity to meet demand for goods and services as a result of increased production scale and improved productivity (innovations in products and processes), which is typically measured over a specific time period (Olowofeso, Adeleke & Udoji, 2015). The gross domestic product, which can be nominal or real, is widely used to measure economic growth. The nominal GDP is the monetary value of goods and services produced in a given period, whereas the real GDP is the monetary value of goods and services after adjusting for inflation. Olowofeso, Adeleke, and Udoji (2015) observe the existence of

divergent conceptions of economic growth and methods of measuring it, but the primary definition is in terms of growth in the economy's long-run productive capacity, typically measured by real GDP growth (GDP).

Economic growth is defined as a consistent increase in the size of a country's economy, macroeconomic indices, particularly GDP per capita, which benefits the social-economic sector (Smith, 2014). It is also defined as an increase in the country's output, which leads to an increase in national income. It entails an increase in national output, which reduces unemployment and, as a result, improves a country's citizens' living conditions (Ufoeze, 2018). Furthermore, economic growth ensures the equitable distribution of national resources, thereby closing the wealth distribution gap (Roihjert & hlander, 2016).

Economic growth is defined by Dandana and Nwele (2011) as the increase in the inflation-adjusted market value of an economy's commodities and services over time. It is commonly expressed as the percentage rate of increase in real GDP (GDP). The rise in the GDP-to-population ratio is more significant (GDP per capital which is also called per capital income). Intensive growth is defined as an increase in growth brought about by more efficient use of inputs (such as physical capital, population, or territory).

A country's GDP is frequently used to measure its economic growth because it measures the total change in the country's productivity and is one of the primary variables examined by investors, particularly foreign investors. GDP is the total value of all goods and services produced in a given economy each year (Sax, 2014). Furthermore, GDP is

influenced by market fundamentals, and changes in GDP indicate a change in actual economic growth, which may have an immediate impact on the residential real estate market. Furthermore, increased economic certainty as a result of an increase in real GDP results in high company confidence (Mauck & Price, 2017). Gross domestic product (GDP), which can be nominal or real, is widely used to measure economic growth. The nominal GDP is the monetary value of goods and services produced in a given period, whereas the real GDP is the monetary value of goods and services after inflation has been deducted. According to Olowofeso, Adeleke, and Udoji (2015), there are various concepts of economic growth and methods of measuring it, but the primary definition is growth in the economy's long-run productive capacity, which is often measured by real GDP growth (GDP).

2.2.2 Concept of Stock Market

The stock market is an exchange system that deals in long-term securities (Jhingan, 2004). It provides businesses with fixed and working capital, as well as medium and long-term financing to federal, state, and local governments. As a result, the stock market includes the institutions and mechanisms that pool and make medium- and long-term funds available to corporate entities and governments. According to Donwa and Odia (2010), this is made possible by some critical roles played, such as channeling resources, promoting reforms to modernize the financial sectors, financial intermediation capacity to link the deficit to surplus sector of the economy, and a veritable tool in the mobilization

and allocation of savings among competitive uses that are critical to the economy's growth and efficiency. Stock exchanges, in general, serve as both a primary and secondary market. It serves as a primary market because it allows governments, business corporations or companies, municipalities, and other incorporated bodies to raise capital by channeling the financial savings of investors and potential investors into productive economic ventures. Similarly, it is a secondary market in the sense that investors can exchange their securities for cash. According to (Kapila, 2002), this reduces investment risk and aids in the preservation of liquidity.

Similarly, Caporale, Howells, and Soliman (2004) contend that the establishment of stock markets, as well as their efficient and effective management, are required if an economy is to maximize capital allocation efficiency. In contrast to banks, which only lend to well-established and relatively safe borrowers, stock markets in their most extreme form can finance risky, productive, and innovative investment projects (Caporale, et al., 2004).

Fundamentally, stock markets can provide mechanisms for the liquid trading and pricing of a wide variety of financial instruments, allowing risk to be spread between capital raisers and investors and matching capital raisers' maturity preferences. This is typically a long-term endeavor, whereas the interests of investors are usually more immediate. In another sense, it encourages investment, which lowers the cost of capital and contributes to long-term economic growth (Caporale, et al., 2004; Kapila, 2002).

In general, stock markets are said to be developing or developing when the average performance of some of the exchange's key efficiency measures shows some promising trends. According to Demirgüç-Kunt and Maksimovic (1996), stock market development occurs when a stock exchange is observed to be liquid and to have well-functioning stocks. Levine and Zervos (1996) also state that stock exchanges capable of influencing growth by effectively improving liquidity, risk diversification, the acquisition of information about firms, the improvement of corporate governance, and the mobilization of savings point to developed stock markets, and thus stock market development.

2.2.2.1 Overview of Nigerian Exchange Limited (NGX)

It started operations as the Lagos Stock Exchange in June 1961, with 19 listed securities, ten of which were industrial loans, six of which were federal government bonds, and three of which were equities (Osaze, 2011). The National Provident Fund, a compulsory contributory savings scheme, was established in 1961 to provide some protection to contributors in the event of temporary unemployment, invalidity, or old age. Surplus funds were required by the Fund's Act to be invested solely in Nigerian securities approved by the Trustee Investment Acts of 1957 and 1962. Furthermore, investment was limited to securities issued or created by the federal government (Osaze, 2011). The rapid growth of the Nigerian stock market highlighted the importance of establishing a high-level institution to monitor activity, prompting the formation of the Capital Issues Committee concurrently with the passage of the Trustee Investment Act and the

Exchange Control Act. Furthermore, the Capital Issue Committee was given the authority to use sale or subscription offers to determine the timing and price of new security issues (Osaze, 2011).

The exchange was renamed the Nigerian Stock Exchange in 1977, and branch exchanges were suggested. As a result, six new trading floors were established across the country between 1978 and 2002. The Capital Issues Commission was replaced in 1978 by the Securities and Exchange Commission, whose mandate was expanded to include the establishment of multiple exchanges across the country as well as the approval of securities allotments (Osaze, 2011).

However, the NGX introduced the Second-Tier Securities Market (SSM) in 1985 to provide a framework for the listing of small and medium-sized Nigerian companies on the Exchange in order for them to raise capital. It began operations with one equity in 1985, grew to twenty-three in 1993, and then dropped to sixteen in 2005. Following the implementation of the Structural Adjustment Programme in 1986 and subsequent stock market deregulation in January 1993, the determination of prices for new issues of securities, which had previously been vested in the Securities and Exchange Commission of Nigeria, was now transferred as one of the roles of issuing houses (Olowe, 2004). The number of listed securities, market capitalization, and the all-share index all increased as a result of market transactions. The improved performance was largely attributed to the establishment of the second-tier securities market (SSM) in 1985, as well as a

liberalization policy in 1986 that resulted in interest rate deregulation in 1987, as well as the privatization of some government-owned companies in 1991. (Babalola & Adegbite, 1999).

The Nigerian Enterprises Promotion Decree 34 was passed in 1987 to allow public companies listed on the NGSE to issue non-voting paid-up equity shares to Nigerian citizens and non-citizens, as well as residents and non-residents (Osaze, 2011). The Privatisation and Commercialization decree 25 of the following year began the process of increasing the number of companies listed on the NGSE by allowing for the privatization of some partially government-owned companies as well as the sale of some fully government-owned companies. The Companies and Allied Matters Act (CAMA) of 1990 governs legal issues such as insider trading, acquisitions and mergers, reconstructions, unit trusts, securities registration and allotment, prospectus preparation, and public invitations to offers (Osaze, 2011).

The Central Securities Clearing System (CSCS) was established in 1992 in response to the Inter-ministerial Committee on the Nigerian Stock Exchange's 1991 recommendation for the establishment of an official central clearing and depository for the exchange. It was tasked with implementing a computerized stock exchange management system centered on the immobilization of share certificates in a Central Depository (Osaze, 2011). When the Nigerian stock market was officially deregulated in 1993, the issuing house was given responsibility for the timing, pricing, and allotment of stock issues. The Chartered

Institute of Stockbrokers, which was established in 1992, was tasked with inspecting stockbrokers, licensing stockbrokers and dealers, and monitoring stockbrokers' conduct (Osaze, 2011).

The Nigerian Minister of Finance established the Nigerian Investment and Securities Tribunal in 2002 to ensure transparency and to resolve market participants' disputes in a flexible, timely, and effective manner (Osaze, 2011). Furthermore, in 2003, the SEC introduced the Code of Corporate Governance as a persuasive tool to encourage listed companies to follow international best practices in financial reporting, such as investor protection, accountability, transparency, accuracy, and appropriate disclosure.

The exchange was renamed the Nigerian Exchange or Nigerian Exchange Limited (NGX) in 2021. The exchange plays numerous roles in the country's economic development. According to Muhtar (2009), the roles include: providing opportunities for companies to raise funds for expansion of operations, resulting in increased production, employment, and economic growth; creating opportunities for the government to finance projects; promoting capital formation by providing a platform for savings to be efficiently mobilised for productive investments; and encouraging inflow of foreign capital when foreign companies or investors invest in dome.

2.2.2.2 Structure of the Nigerian Stock market

The operations of the stock market are divided into three broad categories: primary, secondary, and derivatives markets (Taiwo, Alaka & Afieroho, 2016).

The primary market is in charge of issuing new shares through the stock exchange or through private placement. Their operations are carried out using the following methods: subscription offer, sale offer, right issue, private placement, and listing by introduction (Taiwo, Alaka & Afieroho, 2016).

The secondary market also known as the stock market serves as a forum for stock market activities (trading in stocks and shares, bonds, debentures, and other long-term securities) and is usually open to all types of investors – small and large, government institutions or individuals. Development banks, private firms, the treasury, and the CBN are major participants in the Nigerian stock market, while commercial and merchant banks, individuals, states, and local governments are minor participants (Taiwo, Alaka & Afieroho, 2016).

This market is made up of the organized stock exchange and the over-the-counter (OTC) market. So far, SEC has registered two OTC exchanges in Nigeria, namely; Financial Market Dealer Quotation (FMDQ) in November, 2012 and National Association of Securities Dealers (NASD) in December, 2012. Secondary market transactions are conducted by licensed stock brokers on the NGX's current has thirteen (13) trading floors in the following states: Lagos, Kaduna, Benin, Port Harcourt, Kano, Onitsha, Ibadan, Yola, Uyo, Ibadan, Owerri, Illorin, Abeokuta and Abuja.

The Derivatives Market: This is a market that trades on the right to title on the underlying security or on the basis of future title to the security rather than the issued securities. The

derivatives market in Nigeria is still in its infancy, with right offer issue options currently being the only derivative actively traded on the NGX. Nigeria, like many other countries, has a formal stock market, as evidenced by the presence of a stock exchange and an active new issue market (Taiwo, Alaka & Afieroho, 2016).

According to Okereke (2000), the Nigerian exchange limited constituencies can be broadly classified into four categories: fund providers (individuals, unit trusts, pension trusts, insurance companies); fund users (companies, government at all levels, etc); intermediaries (stock broking firms, issuing houses, registrars, auditing firms); and regulators (SEC, NGX, CBN).

The Nigerian exchange limted provides a variety of financial instruments to meet the public and private sectors' long-term financing needs. Shares, stocks, equity, bonds, debts, and financial derivatives are examples of these instruments. Securities, also known as shares, are financial instruments that are traded on the NGX. Equities represent a stake in the company that issued them, whereas bonds are debt instruments in which the principal and interest are usually payable to the holder at pre-determined intervals (Ezeoha, Ebele & Okereke-Onyuike, 2009).

Furthermore, the NSE has upgraded its stock market in order to internationalize its operations. One such development, which has increased the appeal of the NGX internationally, is the establishment of the Central Security Clearing System Limited (CSCS), which began operations in April 1997. The CSCS operates an automated

clearing and settlement system, which handles stock ownership transfers from one shareholder to another as well as sales proceeds transfers from the buying shareholder to the selling shareholder. The automated CSCS now transfers shares on a T + 3 (trading day + three working days) time frame, while transactions are executed on the basis of delivery versus payment (Taiwo, Alaka & Afieroho, 2016).

2.2.2.3 Functions of the NGX

The NGX was set up to perform a number of functions. Again, these functions have been identified and stated by Anyanwu (1993) as follows: to promote appropriate machinery top facilitate further offerings of stock and shares to the general public; to promote increasing participation by the public in the private sector of the economy; to encourage the investments of savings as soon as it is clear that the stocks and shares are readily available; to provide a central meeting place for members to buy and sell existing stocks and shares and for granting quotations to new ones; to provide the machinery for mobilizing private and public savings and making these available for productive investments through stocks and shares; provide opportunities for raising new capital; to facilitate dealings in government activities and hence enhance foreign investment in Nigerian manufacturing since government goes into joint venture with foreign investors; to reduce the risk of liquidity by facilitating the purchase and sale of securities; to protect the public from shady deals and practices in quoted securities so as to ensure fair trading

through its rules, regulations and operational codes; and to provide opportunities for continued operation and attraction of foreign capital for the nation's developments.

2.2.2.4 Stock Market Development Indicators

Stock market indicators are components or measures that show how the market's activities have increased or expanded. Increases in size and improvements in stock market elements such as market capitalization, total value of traded transactions, all share index, turnover ratio, market capitalization, ratio number of deals, total listed equity volume of transaction, total new issues, total listing, market share index, listed securities can all be seen as indicators (Eneisik, Ogbonnaya & Onuoha, 2021).

2.2.2.4.1 Market Capitalization and All Share Index

Morrel (2007) opines that market capitalization is calculated by multiplying the market share price per share by the number of shares outstanding. Changes in share price and number of shares issued cause market capitalization to fluctuate. Investors use a company's market capitalization to determine the value of its shares. Domestic market shares, shares of foreign companies solely listed on stock exchanges, ordinary and preferred shares of domestic companies, and shares without voting rights are all included in the market cap value, according to Muchaonyerwa (2011).

Olson (2005) defines market capitalization as the price of a stock multiplied by the number of shares outstanding at any given time. For all companies listed on a given stock

exchange, market capitalization is the sum of individual outstanding shares divided by their prices.

The All-Share Index is a set of statistical data that is calculated every year to track changes in the value of commodities and securities. The price of all or some market constituents is used to create the index, which is usually expressed as a percentage change from the base period. Indices are important indicators of an economy's or financial market's performance (Eneisik, Ogbonnaya & Onuoha, 2021).

2.2.2.4.2 Value of Transaction

The total value of transactions traded on the stock market exchange divided by the gross domestic product is the value of a transaction. It calculates the organized trading of firm equity as a percentage of national output and should reflect economic liquidity. The transaction's total value adds to the market capitalization ratio (Popoola, Ejemeyovwi, Alege, Adu & Ademola, 2017). The values of a transaction, according to Raymond (2014), are the monetary amount of a transaction that may require the services of a certified or licensed appraiser to complete. Every stock listed on the exchange has a value traded that is a product of the stock's price and the volume of the stock traded that day. The total amount invested in the market for a given day, week, month, and year is calculated by adding the value of each stock that was traded on that day.

2.2.2.4.3 New Issues

John et al. (2009) stated that new issues are securities that are raised for the first time in the primary market. Shares, stock, and bond offerings that are made for the first time are referred to as new issues. The majority of new issues came from previously private companies that went public, providing investors with new opportunities. It's equities or bonds that are being offered to the public for the first time. It could be an IPO or a security issued by a well-known company that has previously floated several similar offerings.

2.2.2.4.4 Listed Securities

Listed securities, according to Abina and Lemea (2009), are financial instruments that are traded on a stock exchange, such as the Nigerian stock exchange or any other stock exchange around the world. These are investment instruments (such as stocks and bonds) that are publicly traded and officially listed (quoted) on a stock exchange.

2.2.2.4.5 Volume of Transaction

Blessing (2020) noted that the volume of transaction is the amount of security traded in a given period of time. The number of shares that changed hands during a given day is commonly reported as volume. The volume traded is the number of shares of a company traded on the exchange floor during a given session. The willingness of a stockholder to sell and the willingness of other investors to buy the offer and bid determine the volume traded.

2.2.2.4.6 Number of Deals

The number of transactions in a trading period is determined by the number of deals. The number of transactions fluctuates, revealing bears in the stock market (Eneisik, Ogbonnaya & Onuoha, 2021).

2.2.2.4.7 Market Turnover

Kenneth et al. (2019) noted that market turnover is defined as the total value of stock traded divided by the total market capitalization for a given period. Another way to determine how active or liquid a stock market is is to use this metric. Before deciding to invest in the stock market, portfolio investors and other investors consider how quickly or easily they can buy and sell securities when the need arises.

A stock market's turnover ratio is simply a measurement of how frequently stocks change hands. It's used to figure out how quickly stocks are turned into cash. A low turnover ratio tells potential investors that the stock price is unaffected by large, sudden purchases made as a result of the stock's abundance. A high turnover ratio indicates to the investor that an increase in purchases would have a significant impact on the stock due to the scarcity of data. While a higher ratio indicates greater stock demand, it also implies higher brokerage fees or transaction costs, which, if uncontrolled, could reduce returns (Investopedia, 2013). A stock market's turnover ratio is determined by dividing the value traded by the market capitalization.

2.2.3 Stock Market Development and Economic Growth

There is a large body of literature on the impact of stock markets on a country's economic growth. Joseph Schumpeter made the most significant and systematic early contribution to the relationship between financial and economic development, claiming that financial markets, as a major indicator of financial development, promote economic growth by funding entrepreneurs and, more importantly, channeling capital efficiently to entrepreneurs with high-return projects (Mishra, Mishra, Mishra & Mishra, 2010). The seminal works of McKinnon (1973) and Shaw (1976) launched modern economic analysis on the role of financial development in boosting economic growth (1973). Both authors highlighted widespread "financial repression" as a threat to financial liberalization and deepening, and thus economic growth. Following that, there have been increasing concerns and debates about the stock market's impact on economic growth and development (Levine & Zervos, 1996; Demirgue-kunt & Levine 1996; Nyong 1997; Ariyo and Adelegan 2005; Ewah, et al., 2009; Donwa & Odia, 2011).

Empirical evidence on the impact of stock markets on economic growth and development, on the other hand, has revealed a mixed pattern of results, with both negative and positive effects. Emenuga (1998), for example, claimed that the stock market in Nigeria is illiquid and blamed it on the ownership structure. He came to the conclusion that the stock market is small, with few listed companies, low transaction volume, and a low market capitalization. Gabriel (2002) also discovered that Romania's stock market has had little

impact on the country's economic growth. According to Ariyo and Adelegan (2005), stock market deregulation contributes to the growth of the Nigerian stock market, but its macroeconomic impact is negligible. Ewah et al. (2009) evaluated the impact of the stock market's efficiency on Nigeria's economic growth. They discovered that while the Nigerian stock market has the potential to stimulate growth, it has not contributed significantly to the country's economic growth due to low market capitalization, low absorptive capitalization, illiquidity, and misappropriation of funds, among other factors. Donwa and Odia (2011) used the ordinary least square method to examine the impact of the Nigerian stock market on the country's socioeconomic development from 1981 to 2008. They discovered that stock market indices had no significant impact on GDP. However, according to Levine (1991), a developed stock market reduces investors' fear of risk, encouraging them to invest their money and thus promoting economic growth.

2.3 Theoretical Review

2.3.1 Efficient Market Hypothesis

In 1960, Eugene Fama proposed the efficient Market Hypothesis. Asset prices, according to efficient market theory, reflect all available information. Because market prices should only react to new information, a direct implication is that it is impossible to consistently beat the market on a risk-adjusted basis. According to the efficient market theory, share prices reflect all available information, and consistent alpha generation is impossible. Stocks always trade at their fair value on exchange, according to the efficient market

theory, making it impossible for investors to buy undervalued stocks or sell for inflated prices (Eneisik, Ogbonnaya & Onuoha, 2021).

As a result, expert stock selection or marketing timing would be impossible to outperform the overall market, and the only way for an investor to earn higher returns is to purchase riskier investments. The Efficient Market Hypothesis is a theory that states that stock prices fully reveal all available information about all stocks in the market. This means that under a risk-adjusted criterion, it is nearly impossible to consistently overrun the market. Because market prices are only expected to react to new information, this is the case (Eneisik, Ogbonnaya & Onuoha, 2021). It is frequently conducted in an unbiased manner, resulting in unbiased estimates of underlying values. Stocks and financial market securities, according to Enoruwa et al. (2019), always trade at their fair value, implying that investors can never buy stocks at undervalued prices or sell at overvalued prices. Efficient Market Theory was created in order to provide a framework for examining the stock market's competence. It is still one of the theoretical exploits of the relationship between the stock market and economic growth. The efficient market theory was developed on the assumption that the prices of securities in financial or monetary markets completely reflect all available information, because in a well-ordered market, all untapped profit opportunities are eliminated. The study uses the efficient market theory, which assumes that all market participants have access to the same information and have equal opportunities, resulting in increased economic growth.

2.3.2 Financial Liberalization Theory

Mckinnon and Shaw (1973) developed the Financial Liberalization hypothesis, which sees government intervention in financial markets as a major constraint to savings mobilization, investment, and growth. In developing countries, the government's role in controlling interest rates and directing credit to priority sectors of the economy hinders savings mobilization, financial asset holding, capital formation, and economic growth. Deposit interest rate ceilings indirectly discourage financial savings, resulting in excess liquidity outside the banking system.

Financial liberalization and stock market development, according to Mckinnon and Shaw (1973), would promote economic growth by increasing the rate of savings, investment, and thus economic growth. Low and administered interest rates, domestic credit controls, high reserve requirements, and concessional credit practices, according to McKinnon and Shaw (1973), discourage savings, delay efficient resource allocation, increase financial market segmentation, constrain investment, and, as a result, lower economic growth rates. The McKinnon-Shaw thesis' central message is that a low or negative real rate of interest discourages savings, reducing the availability of loanable funds, constraining investment, and, as a result, slowing economic growth. On the other hand, an increase in the real interest rate may encourage savers to save more, allowing for more investment and boosting economic growth. Great international institutions like the International

Monetary Fund (IMF) and the World Bank have adopted this idea, according to Bouzid (2012).

As a result, many developing countries have adopted financial liberalization policies in order to eliminate the oppressive regime. The financial liberalization policies aimed to liberalize interest rates by shifting from an administered to a market-based interest rate determination; reduce credit controls by gradually eliminating directed and subsidized credit schemes; develop primary and secondary securities markets; and improve financial system competition and efficiency by privatizing nationalized commercial banks (Bouzid, 2012). The success of the financial liberalization process, according to the McKinnon-Shaw hypothesis, is contingent on the following assumptions: effective deepening of the financial sector, a positive correlation between saving and the real interest rate, and perfect complementarity between money demand and investment (Bouzid, 2012).

The imperfect information paradigm is the main criticism of the financial liberalization theory. This school of thought opposes these scholars' assertions and examines the problem of financial development in the context of information asymmetry and expensive information, which leads to credit rationing. As Stiglitz and Weiss (1981) pointed out, asymmetric information causes two serious issues: adverse selection and moral hazard. The implication is that higher interest rates, which often accompany financial reforms and financial liberalization policies, exacerbate risk taking throughout the economy and thus

threaten financial system stability, which can easily lead to financial crises, whereas the Feedback theory suggests a two–way causality between economic growth and financial development. The following is the analysis: Through technological advancements and product and service innovation (Schumpeter, 1911), a country with well–developed financial markets can stimulate and promote high economic growth, resulting in increased demand for financial arrangements and services. Higher economic performance is ensured as financial institutions effectively respond to this demand. Both financial development and economic growth are positively interdependent in this regard, and their relationship may result in feedback causality (Khan, 1999).

2.3.3 Endogenous Growth Theory

Several theories and empirical papers have suggested that stock market development affects economic growth in developing countries, including Levine (1991), Levine and Zervos (1996), Demirguc-Kunt (1994), and Demirguc-Kunt and Levine (1996). Discussing the channels through which stock markets stimulate economic growth has proven difficult. The growth rate is a positive function of exogenous technical progress in traditional growth theory. Financial development, on the other hand, is linked to physical capital per worker rather than economic growth (pagano 1993). Endogenous growth models, on the other hand, show that economic growth is linked to financial development, technology, and income distribution. According to Greenwood and Jovanovic (1990), income per capita influences membership in an information processing intermediacy,

which improves investment decisions and economic growth. They formalized the interactions between financial markets and economic growth by including financial factors in endogenous growth models. Recent models have been attempting to identify the mechanism through which financial markets influence economic growth as a result of advances in the endogenous growth literature. Financial markets, for example, can influence economic growth through efficient resource allocation, according to various channels. The model proposed by King and Levine (1993) is that innovation activities serve as the engine of growth. A higher rate of successful innovations leads to higher productivity growth.

In the absence of financial markets, investors might prefer to put their money into projects that can be quickly liquidated rather than assets that are more productive but financially illiquid. Individuals can use markets to make less risky and liquid productive investments. Second, through the information channel, financial markets can influence economic growth. According to Holmstrom and Tirole (1993), stock markets serve as a monitor of managerial performance because stock prices include performance information that cannot be extracted from a firm's current or future data. Growth is determined in the short run by moving to a new steady state that is only created by changes in capital investment, labor force growth, and depreciation rate. The change in the savings rate causes the change in capital investment. The Cobb–Douglas production function, F (K, L) = KL1 –, states that output (quantity produced) is a function of capital

(K) and labor (L) inputs, and the marginal product of capital is the ratio of capital income to output (that is, GDP). However, labor has an impact on economic growth in terms of the ratio of average hours worked per worker to output and the quality of the labor force (that is, human capital). Growth is primarily driven by capital stock in terms of physical stock investment, capital stock growth, and physical capital composition.

2.4 Empirical Review

Umar (2022) used the Systematic Quantitative Assessment Technique (SQAT) to study the impact of the capital market on economic growth. A total of 51 Journal articles; were used for the review. The study concluded that capital market performance influenced economic growth even though with disparity among different nations due to the difference in the level of development of capital markets across the globe. It was recommended that research on capital markets requires more attention due to the clear nexus between the capital market performance and economic growth.

Bako and Isiaka (2022) investigated the relationship between stock market and economic growth in Nigeria, covering a period of 20years between 2000 and 2019. Data on market capitalization, all share indexes, value of shares, Treasury bill rate and inflation were considered and gathered from CBN Statistical Bulletin, 2019. Ordinary Least Square method was employed and data were analyzed with the aid of Eview 09. The result revealed that market capitalization proxied for stock market have a positive relationship and statistically significant to influence economic growth at 82% magnitude. However,

Treasury bill rate, value of shares, all share indexes and inflation rate have no significant impact on economic growth. Also, VAR-Granger causality revealed that there is no longrun relationship between the variables in the model due to the scope of the data. It was further shows that market capitalization, treasury bill rate, value of shares, all share indexes and inflation rate do not granger cause or have causal relationship with economic growth except GDP that influences the treasury bill rate and value of shares.

Bakare-Aremu (2022) examined the link between capital market development and economic growth in Nigeria. Applying co-integration and error correction modelling to stock market and Macroeconomic time series data, we find evidence that the variables; All share Index, number of deals and market capitalization have individual positive and significant combined impact on economic growth. Inflation, however, has positive but insignificant effect on economic growth. The pair-wise granger causality test shows that there exists a unidirectional causality running from capital market to economic development and feedback causality between market capitalization and economic growth thus validating the endogenous growth theory.

Ezeibekwe (2021) identified the long-run impact of stock market development on the economic growth of Nigeria. The data was sourced from the statistical bulletin of the Central Bank of Nigeria (CBN) from 1981 to 2017. The Augmented Dickey-Fuller unit root test shows that all the variables are integrated of order 1, I(1). However, the Johansen cointegration test provides evidence of a long-run, or equilibrium, relationship among the

variables. The vector error correction model was used to determine the short-run and long-run relationships between the variables. Empirical results suggested that stock market development, as proxied by market capitalization to GDP ratio, does not contribute significantly to long-run economic growth in Nigeria.

Owen (2020) investigated the relationship linking stock market development and economic growth from 1985 to 2018. In measuring growth, Gross domestic product (GDP) was adopted, while stock market was surrogated by turnover ratio, market-capitalization, and value of share- traded, sourced from the Central Bank of Nigeria (CBN) and the Security and Exchange Commission Database. The inclusion of money supply (M3) captured innovation (financial) in the monetary sector. In investigating the aforementioned relationship, the ARDL Bound test methodology was adopted. Empirical results from the investigation confirm the existence of a long-run relationship between stock market development and growth. Similarly, there was a positive relationship between indices of stock market development and growth, albeit statistically insignificant.

Using the Johansen Co-integration, Error Correction, and Granger Causality methodology, Abina and Lemea (2019) looked at the stock market and the performance of Nigeria's economy from 1985 to 2017. The Johansen Co-integration test revealed that the variables had a long-term positive relationship, while the Granger Causality test revealed two significant unidirectional causalities flowing from gross domestic product to

total market capitalization and total value of new issues, respectively. As a result, the study claims that the stock market in Nigeria is a strong driver of economic growth for both public and private entities looking to invest for the medium and long term. As a result, it is critical to emphasize the importance of a sound institutional framework for market actor regulation in order to inspire investor confidence and ensure long-term sustainability.

From 2005 to 2014, Yusuf and Aminu (2016) investigated the impact of the stock market on Nigerian economic growth. The main analytical technique was the OLS econometrics technique. According to the findings, stock market performance had a minor impact on GDP.

Duke and Nkamare (2015) used the OLS estimation technique to look at the stock market and economic growth in Nigeria from 1986 to 2005. The findings suggested that the variables had a direct and perfect relationship. The findings also revealed that none of the variables predicted GDP on their own.

Okpoto (2015) looked at the impact of the stock market on Nigerian economic growth from 1980 to 2013. The ADF, co-integration, and Error Correction Mechanism techniques were used by the researcher. The results of the unit root test revealed that the variables were stationary at different levels. The variables were found to be cointegrated as a result of the analysis. The sparse findings revealed that total transaction value, market

capitalization, and total holdings of development stock all had a minor impact on economic growth.

The Nigerian stock market was investigated by Abu and Aguda (2015) as a catalyst for long-term economic development. The Nigerian stock market is important to economic development, according to the study, because the value of transactions traded on the Nigerian Stock Exchange has a positive impact on gross domestic product.

Adeoye (2015) investigated the impact of the Nigerian stock market on the economy, which is crucial for a country's economic development. Market Capitalization was used as a proxy for the Nigerian stock market against economic variables such as Gross Domestic Product (GDP), Foreign Direct Investment (FDI), Inflation Rates, Total New Issues, Transaction Value, and Total Listing. Using multiple regression analysis, the study discovered that the stock market has a negligible impact on the economy during the study period.

Emeh and Chigbu (2014) investigated the impact of the Nigerian stock market on economic growth. The study uses a time-series research design and heavily relies on secondary data from 1985 to 2012. To examine characteristics of time series data using a disaggregated stock market indices approach, the study uses regression analysis as a data analysis method, incorporating multivariate co-integration and error correction. The heterogeneity in empirical findings over what could be called a fairly uniform theoretical framework, at least in terms of causality, has been observed across studies on this subject.

The findings suggest that two have a positive relationship with economic growth, while the other two have an inverse and statistically significant relationship.

Between 1999 and 2012, Oluwatosin, Adekanye, and Yusuf (2013) investigated the impact of the Nigerian stock market on economic growth and development. Security Exchange Commission reports, Nigerian Stock Exchange Review Reports, and the Central Bank of Nigeria Statistical Bulletin were used to compile the data. The data was analyzed using the ordinary least square method of regression analysis. The result indicates that stock market indices have had little impact on GDP. The stock market in Nigeria has the potential to stimulate growth, but it has not contributed significantly to Nigeria's economic growth due to low market capitalization, low absorptive capitalization, illiquidity, and misappropriation of funds, among other factors.

Popoola (2014) investigated whether the stock market in Nigeria promotes economic growth and development. According to the study, the stock market is a common feature of a modern economy and is reputed to perform some necessary functions that promote the economy's growth and development. The data was analyzed using Ordinary Least Squares regression (OLS) from 1984 to 2008. The findings revealed that economic growth and the stock market development variables studied have a positive relationship. The model adequately explained economic growth in Nigeria for periods of 25 years, with an R-squared of nearly 95.77 percent and an adjusted R-squared of 94.92 percent (i.e. from 1984 to 2008).

The impact of stock market reform on the growth of the Nigerian economy was studied by Eze and Nwankwo (2013). The impact of stock market reform on the growth of the Nigerian economy, as measured by GDP, was measured by Market Capitalization, All Share Index, and Total Volume of Transactions (GDP). According to the study, if stock market reforms are successful, the economy will grow well. The research covered the years 1990 to 2011. In assessing the co-integrating properties of variables, the Johansen-Juselius cointegration technique outperformed the Engle and Granger (1987) approach, especially in a multivariate context. The short-run relationship between stock market reform and economic growth in Nigeria was investigated using the Vector Error Correction Model (VECM). The findings revealed that stock market reform has a significant impact on Nigeria's economic growth rate. The study also discovered that in Nigeria, there is a long-term relationship between stock market reform and economic growth.

Odita and Oghoghomeh (2013) investigated resource mobilization for long-term economic development, providing insight into the Nigerian stock market's role. From 2001 to 2010, data was gathered from the Central Bank of Nigeria statistical bulletin and the Securities and Exchange Commission. The data was analyzed using the SPSS statistical program. Gross domestic product (GDP) was used as a proxy for economic development, while annual market capitalization (AMe) and total volume of transactions were used as stock market variables (TVT). Although the relationship was not

statistically significant, the findings revealed a positive relationship between stock market activities and gross domestic product.

Ovat (2012) investigated the impact of Nigeria's stock market development on economic growth. With the goal of providing evidence on the aspect of stock market development that is the main driver of growth in Nigeria, the study disaggregated stock market development into stock market size and stock market liquidity. The results revealed that stock market development contributes significantly to economic growth in Nigeria through market liquidity based indicators such as total value of shares traded ratio and turnover ratio, using econometric techniques such as unit root test, co-integration, and granger causality test.

Ohiomu and Enabulu (2011) used ordinary least square regression to investigate the impact of the stock market on economic growth in Nigeria (OLS). They used data from 1989 to 2008, and their findings revealed that all stock market development variables have a positive impact on economic growth.

Edame, Okoro, and Anne (2013) used annualized time series data and market variables to regress annualized time series data and found that stock market has a positive and significant impact on economic growth in Nigeria between 1970 and 2010.

Seyyed (2010) presented a systematic investigation of the relationship between the two variables within the Vector Autoregressive (VAR) model in a study on emerging stock markets performance and economic growth in Iran, and concluded that macroeconomic

activity was a main cause for stock price movement in the long run, and that the stock market plays a role as a leading economic indicator of future economic growth in the short run.

Atoyebi, Ishola, Kadiri, Adekunjo, and Ogundeji (2013) use annual data from 1981 to 2010 to examine the impact of the capital market on economic growth in Nigeria. A percentage increase in market index and market capitalization was found to result in an average of 33.7 percent and 44.8 percent increase in real GDP, respectively, using the Ordinary Least Square test and Vector Auto Regression technique.

Kolapo and Adaramola (2012) investigated the impact of the Nigerian capital market on the country's economic growth from 1990 to 2010, using Johansen cointegration and Granger causality tests. The findings show that in Nigeria, there is a long-run relationship between the capital market (as measured by market capitalization, total new issues, transaction value, and total listed equities and government stocks) and economic growth (as measured by GDP). The findings of these studies show that capital market activities have a positive impact on the Nigerian economy.

2.5 Gaps in Empirical Literature

The literature review above reveals that there has been several research work with contradictory findings on the effect of stock market on economic growth in Nigeria with most studies utilizing three or four stock market development indicators as well as the ordinary least squares analysis techniques which is not without its own limitations. This

study in a bid to fill this gap in empirical literature utilizes five explanatory variables (all share index, market capitalization, total value of stocks traded, market turnover and volume of transactions) and will employ the Auto Regressive Distributed Lag modeling technique and the Engle Granger Causality test to investigate the impact of stock market development on the economic growth of Nigeria.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter focuses on the methodology employed for the study; and it covers the following areas: research design, population and sample size, sources of data, model specification and method of data analysis.

3.2 Research Design

The research designs adopted in this study is the Ex-Post-facto method. The ex-post-facto research which is very applicable in the management and social sciences is employed as the data collection method because the data involved already existed, and are inherently non-manipulable because their manifestations have already occurred (Agbonifoh & Yomere, 1999).

3.3 Population and Sampling Technique

The population of the study is the Nigerian economy. The sample size is the financial system covering a period of 27 years (1996 to 2022). The convenience sampling which is a purposive non-probability sampling method was adopted in the selection of samples for the study. The choice of this period is based on the fact that the period witnessed most of the reforms that took place in the Nigerian financial system.

3.4 Sources of Data

The data for this study covered a period of 25 years (1996 to 2022); they were sourced from the Central Bank of Nigeria Statistical Bulletin (2022).

3.5 Model Specification

The model for this study follows the neo-classical theory and Harrod-Domar theory best explain modern economic growth behaviour more clearly by analysing different economic aspects. Thus, the functional form of the model is stated as follows:

RGDP = f(ASI, MCAP, VST, VOT)……....(3.1)

However, the econometric form of the model is stated thus:

$RGDP_{it} = \beta_0 + \beta_1 ASI_t + \beta_2 MCAP_t + \beta_3 VST_t + \beta_4 VOT_t + u_{it}$……..……...(3.2)

Where;

RGDP = Real Gross Domestic Product (proxied for economic growth)

ASI = All share index

MCAP = Market capitalization

VST = Value of Stock Traded

VOT = volume of transactions

u_{it} = Error Term

Aprori expectation; $\beta_1, \beta_2, \beta_3, \beta_4 > 0$.

3.6 Method of Data Analysis

Two methods are used; these are correlation coefficient and the Fully Modified Ordinary Least Squares (FMOLS). We perform the Fully Modified Ordinary Least Squares (FMOLS) because it is usually preferred to the OLS estimator because they take care of small sample bias and endogeneity bias by taking the leads and lags of the first-differenced regressors. However, the parametric DOLS is preferred to the non-parametric FMOLS in that the latter (unlike the former) imposes additional requirements that all variables should be integrated of the same order [i.e.,I(1)] and that the regressors themselves should not be cointegrated (Philips, 1993).

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF RESULTS

4.1 Introduction

This chapter is on the empirical analysis of the impact of stock market development on economic growth in Nigeria using the method of data estimation earlier stated in the previous chapter. The procedure for the analysis includes conducting the unit root test, correlation coefficient and the ordinary least square (OLS) technique.

4.2 Unit Root Testing

The Augmented Decay Fuller test (ADF) is employed to test the stationarity properties of the data set and the outcome of the result is presented in Table 4.1. The result obtained revealed that all the variables have ADF values that are less than all the 95 percent critical ADF value (in absolute values) except that of GDP. The implication of this is that these time series are non-stationary in their levels.

Table 4.1 Unit Root Test for Variables in Levels

Variable	ADF Test Statistic	95% Critical ADF Value	Remark
GDP	0.384860	-2.948404	Non-Stationary
ASI	-1.367367	-2.945842	Non-Stationary
MCAP	2.587844	-2.945842	Non-Stationary
VOT	-2.154277	-2.945842	Non-Stationary
VST	-2.156128	-2.945842	Non-Stationary

Source: Author's Compilations 2024.

The result of the unit root test on these variables in first differences is presented in Table 4.2. From the result, it is seen that the ADF test statistic for each of the variables is greater than the 95 percent critical ADF values (in absolute values). With these result, these variables are adjudged to be stationary. This implies that the variables attained stationarity after the first differences of the variables and are integrated of order one (i.e. I[1]).

Table 4.2 Unit Root Test for Variables in First Difference

Variable	ADF Test Statistic	95% Critical ADF Value	Remark
ΔGDP	-3.262002	-2.948404	Stationary
ΔASI	-6.418103	-2.951125	Stationary
ΔMCAP	-4.720241	-2.948404	Stationary
ΔVOT	-5.788460	-2.951125	Stationary
ΔVST	-7.182258	-2.948404	Stationary

Source: Author's Compilations 2024.

Stock market performance and economic growth in Nigeria
all share index (ASI), market capitalization (MCAP), value of stock traded (VST) and volume of transactions (VOT)

all share index (ASI), market capitalization (MCAP), volume of trade (VOT), total value traded (TVT)

4.3 Correlation Analysis

The result of the correlation test is reported in Table 4.3 below. The results show that gross domestic products (GDP), proxy for economic growth has a strong positive correlation with all share index (ASI), market capitalization (MCAP), volume of transaction (VOT), value of stock traded (VST); with respective values of 0.841085, 0.892398, 0.635538 and 0.824096. On the other hand, a strong positive correlation values of 0.780801, 0.804763 and 0.836434 exist between all

share index (ASI), market capitalization (MCAP), volume of transactions (VOT), value of stock traded (TVT) respectively. Furthermore, the correlation results for the rest variables are equally high. Nevertheless, it is observed that the problem of multicollinearity does not exist amongst the independent variables used in the model.

Table 4.3: Correlation Matrix

	GDP	ASI	MCAP	VOT	VST
GDP	1				
ASI	0.841085	1			
MCAP	0.892398	0.780801	1		
VOT	0.635538	0.804763	0.488784	1	
VST	0.824096	0.836434	0.73825	0.88955	1

Source: Author's Compilations 2024.

4.4 Regression Analysis

The result of the estimated OLS regression for the impact of stock market performance on economic growth in Nigeria is presented in table 4.4. In the result, the goodness of fit statistics is very impressive. The R-squared value of 0.87 is very high and it implies that over 87 percent of the systematic variations in economic growth (GDP) is explained by the estimated model. The adjusted R-squared value of 0.85 percent is equally very high and it implies that the model has a good predictive ability. The overall significance of the model is determined by observing the F-statistic value. In the model, the F-value of 35.264 is sufficiently high and easily passes the significance test at the 1 percent level. Hence, we cannot reject the hypothesis of a significant linear relationship between economic growth and the all the explanatory variables combined. It indicates that all the independent variables combine effectively to influence the growth of the Nigerian economy over time.

Table 4.4: Stock Market Performance and Economic Growth in Nigeria (OLS)

Variables	Coefficient	T-Ratios	Prob.
Constant	22467.96	6.036511	0.0000
ASI	0.430040	2.195397	0.0360
MCAP	0.706564	2.837720	0.0081
VOT	-0.005723	-1.282143	0.2096
TVT	19.75965	3.058202	0.0047
AR(3)	-0.292337	-2.041095	0.0501
SIGMASQ	50474080	2.484178	0.0188
R^2 = 0.87	$\bar{R}^2$ = 0.85	F = 35.264	DW Statistic = 1.50

Source: Author's computation 2024. **sig. at 1%; *sig. at 5% level of significance.

Estimating the individual coefficient of the explanatory variables and their impact on GDP (economic growth), it is seen that the coefficient of all share index (ASI) is positive and passes the 5 percent level of significance; by implication, this variable is very central to the development of the Nigerian economy because a unit increase I the level of all share index leads to a more than 0.430040 percent increase in the overall growth of the Nigerian economy over the period of investigation.

The coefficient of market capitalization (MCAP) is positively signed and also passed the 1 percent significant level, suggesting that market capitalization is a relevant factor in the determination of economic growth in Nigeria. Indeed, the result indicates that as market capitalization (MCAP) increases economic growth in Nigeria rises by 0.706564 percent approximately. This means that market capitalization has actually had the needed positive impact on economic growth in the country. Hence, the government and market regulators must sustain the good development by ensuring the deployment and implementation of market oriented policies synonymous with those of the more advanced economies that will attract more foreign investors into the country capital market to supplement domestic funds/investments and by so doing, market capitalization (MCAP) will continue to have positive impact on economic growth in Nigeria.

The coefficient of value of stock traded (VST) has a significant positive impact on economic growth; as the variable was found to be significant at the 1 percent level. This simply suggests that total value traded in the Nigerian exchange limited plays significant role in the growth of the economy, hence, management, policy makers and government must evolve a more proactive strategy that will constantly stimulates trade and enhance the current liquidity level attract more investors into

The coefficient of volume of transactions (VOT) has a weak inverse relationship with economic growth, thus, it is not a relevant factors for determining economic

growth in the country. Furthermore, after correcting for serial correlation with Autoregressive process that had 29 iterations and 3 lags, the improved estimate equation were achieved as reported in Table 4.4 above. The overall results obtained from the model estimation are effectively acceptable because the D.W. statistic value of 1.50 is appropriate and it indicates the absence of autocorrelation in the model.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

This study empirically investigates the relationship between stock market performance and economic growth in Nigeria. Annual time series data for 1985 to 2021 period were used and econometric tools such as the Augmented Decay Fuller unit root test and the ordinary least square techniques were used in the analysis of data. The summary of the findings are stated below:

(i) That all share index (ASI) is positive and passes the 5 percent level of significance; by implication, this variable is very central to the development of the Nigerian economy because a unit increase I the level of all share index leads to a more than 0.430040 percent increase in the overall growth of the Nigerian economy over the period of investigation.

(ii) That coefficient of market capitalization (MCAP) is positively signed and also passed the 1 percent significant level, suggesting that market capitalization is a relevant factor in the determination of economic growth in Nigeria.

(iii) That value of stock traded (VST) has a significant positive impact on economic growth; as the variable was found to be significant at the 1 percent level.

(iv) That volume of trade (VOT) has a weak inverse relationship with economic growth, thus, it is not a relevant factors for determining economic growth in the country.

5.2 Conclusion

The role of stock market performance in the growth and development of an economy cannot be overemphasized. The reason being that the stock market is seen by finance expert as the most formidable place for effective mobilization of large resources by firms and government for long term purposes. Considering the relevance of this market, we deem it imperative to empirically investigate this relationship in the Nigeria context in order to seen the extent to which stock market have affect the growth of the Nigerian economy. To this end, time series data covering the period 1985 to 2021 were analyzed using the Augmented Decay Fuller unit root test, correlation coefficient and the ordinary least square econometric technique. The results from the analysis of data generally indicate that, all share index (ASI), market capitalization (MCAP) and value of stock traded (VST) have significant positive relationship with economic growth; while volume of transactions (VOT) has a weak inverse relationship with economic growth. The study conclude that stock market performance is very central to the overall growth and development of the Nigerian economy. Hence, the government and regulators must continuously collaborate with joint policy decisions that will continue to

strengthen the market, instill market discipline by punishing offenders and put in place workable and transparent rules and regulations that will safeguard investors' funds. Doing these will certainly attract more investors into the Nigerian market and will in turn ushers in more fund to boost economic activities.

5.3 Recommendations

Thus, on the basis of the outcome of this study, the following salient recommendations for policy decisions are brought forward:

(i) Since the results from the analysis of data has shown that all share index (ASI), market capitalization (MCAP) and value of stock traded (VST) are very crucial for economic growth, market regulators should either sustain current policy or improve on it so as to ensure that these three factors continue to sustain the growth of the Nigerian economy. Anything less than this will spell doom for the Nigerian economy.

(ii) The government and regulators must continuously collaborate with joint policy decisions that will continue to strengthen the market, instill market discipline by punishing offenders and put in place workable and transparent rules and regulations that will safeguard investors' funds. Doing these will certainly attract more investors into the Nigerian market and will in turn ushers in more fund to boost economic activities.

(iii) The negative relationship between volume of transactions (VOT) and economic growth in the country is symbolic and calls for serious attention on the part of market regulators to find ways of attracting more participants on the exchange by lowering unhealthy bottleneck with respect to new entrance. Thus, admission of new firms should be encourage at the bourse and this will not only increase participation but also stimulates volume of stock traded. This step will inadvertently make volume of stock traded to positively impact the growth of the Nigerian economy.

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APPENDICES

Dependent Variable: GDP
Method: ARMA Maximum Likelihood (OPG - BHHH)
Date: 03/01/24 Time: 23:31
Sample: 1985 2022
Included observations: 37
Convergence achieved after 29 iterations*
Coefficient covariance computed using outer product of gradients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	22467.96	3722.011	6.036511	0.0000
ASI	0.430040	0.195883	2.195397	0.0360
MCAP	0.706564	0.248990	2.837720	0.0081
VOT	-0.005723	0.004464	-1.282143	0.2096
VST	19.75965	6.461198	3.058202	0.0047
AR(3)	-0.292337	0.143226	-2.041095	0.0501
SIGMASQ	50474080	20318221	2.484178	0.0188

R-squared	0.875821	Mean dependent var	40334.09
Adjusted R-squared	0.850985	S.D. dependent var	20439.00
S.E. of regression	7889.953	Akaike info criterion	20.96047
Sum squared resid	1.87E+09	Schwarz criterion	21.26524
Log likelihood	-380.7687	Hannan-Quinn criter.	21.06791
F-statistic	35.26445	Durbin-Watson stat	1.470263
Prob(F-statistic)	0.000000		

Inverted AR Roots	.33+.57i	.33-.57i	-.66

	GDP	ASI	MCAP	VOT	VST
GDP	1	0.8410852 23518623 5	0.8923983 84961076 6	0.6355386 20848325 1	0.8240965 17686907 7
ASI	0.8410852 23518623 5	1	0.7808012 47717276 5	0.8047638 00279251 8	0.8364345 53088571 7
MCAP	0.8923983 84961076 6	0.7808012 47717276 5	1	0.4887847 75032117 3	0.7382513 84139545 8
VOT	0.6355386 20848325 1	0.8047638 00279251 8	0.4887847 75032117 3	1	0.8895526 82474104 6
VST	0.8240965 17686907	0.8364345 53088571	0.7382513 84139545	0.8895526 82474104	1

7	7	8	6

Unit root test (at level)

Null Hypothesis: GDP has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		0.384860	0.9794
Test critical values:	1% level	-3.632900	
	5% level	-2.948404	
	10% level	-2.612874	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GDP)
Method: Least Squares
Date: 03/01/24 Time: 23:38
Sample (adjusted): 1987 2022
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
GDP(-1)	0.004618	0.011998	0.384860	0.7029
D(GDP(-1))	0.504449	0.154969	3.255163	0.0027
C	647.8679	523.2961	1.238052	0.2247

R-squared	0.279849	Mean dependent var	1605.778
Adjusted R-squared	0.234840	S.D. dependent var	1523.996
S.E. of regression	1333.092	Akaike info criterion	17.31021
Sum squared resid	56868278	Schwarz criterion	17.44352
Log likelihood	-299.9286	Hannan-Quinn criter.	17.35623
F-statistic	6.217565	Durbin-Watson stat	2.080002
Prob(F-statistic)	0.005233		

Null Hypothesis: ASI has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-1.367367	0.5872
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ASI)
Method: Least Squares
Date: 03/01/24 Time: 23:38
Sample (adjusted): 1986 2022
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
ASI(-1)	-0.120131	0.087856	-1.367367	0.1805
C	3256.142	2020.281	1.611728	0.1163

R-squared	0.052125	Mean dependent var	1183.032
Adjusted R-squared	0.024246	S.D. dependent var	8110.386
S.E. of regression	8011.461	Akaike info criterion	20.86909
Sum squared resid	2.18E+09	Schwarz criterion	20.95706
Log likelihood	-373.6436	Hannan-Quinn criter.	20.89979
F-statistic	1.869693	Durbin-Watson stat	2.082476
Prob(F-statistic)	0.180482		

Null Hypothesis: MCAP has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		2.587844	1.0000
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(MCAP)
Method: Least Squares
Date: 03/01/24 Time: 23:39
Sample (adjusted): 1986 2022
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MCAP(-1)	0.125255	0.048401	2.587844	0.0141
C	276.0528	574.1516	0.480801	0.6337

R-squared	0.164556	Mean dependent var	1167.997
Adjusted R-squared	0.139984	S.D. dependent var	2970.912
S.E. of regression	2755.136	Akaike info criterion	18.73427
Sum squared resid	2.58E+08	Schwarz criterion	18.82225
Log likelihood	-335.2169	Hannan-Quinn criter.	18.76498
F-statistic	6.696939	Durbin-Watson stat	2.184951
Prob(F-statistic)	0.014104		

Null Hypothesis: VOT has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.154277	0.2258
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(VOT)
Method: Least Squares
Date: 03/01/24 Time: 23:39
Sample (adjusted): 1986 2022
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
VOT(-1)	-0.230232	0.106872	-2.154277	0.0384
C	216081.0	131901.3	1.638202	0.1106

R-squared	0.120104	Mean dependent var	28790.17
Adjusted R-squared	0.094224	S.D. dependent var	625357.9
S.E. of regression	595167.2	Akaike info criterion	29.48502
Sum squared resid	1.20E+13	Schwarz criterion	29.57300
Log likelihood	-528.7304	Hannan-Quinn criter.	29.51573
F-statistic	4.640911	Durbin-Watson stat	1.977403
Prob(F-statistic)	0.038393		

Null Hypothesis: VST has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-2.156128	0.2251
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(VST)
Method: Least Squares
Date: 03/01/24 Time: 23:40
Sample (adjusted): 1986 2022
Included observations: 37 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
VST(-1)	-0.240978	0.111764	-2.156128	0.0382
C	137.0056	82.84820	1.653694	0.1074

R-squared	0.120285	Mean dependent var	26.48750
Adjusted R-squared	0.094411	S.D. dependent var	410.3819
S.E. of regression	390.5294	Akaike info criterion	14.82684
Sum squared resid	5185450.	Schwarz criterion	14.91481
Log likelihood	-264.8831	Hannan-Quinn criter.	14.85754
F-statistic	4.648888	Durbin-Watson stat	2.169858
Prob(F-statistic)	0.038237		

Unit root test (at first diff.)

Null Hypothesis: D(GDP) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-3.262002	0.0246
Test critical values:	1% level	-3.632900	
	5% level	-2.948404	
	10% level	-2.612874	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(GDP,2)
Method: Least Squares
Date: 03/01/24 Time: 23:41
Sample (adjusted): 1987 2022
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(GDP(-1))	-0.478761	0.146769	-3.262002	0.0026
C	807.0838	316.2939	2.551689	0.0155

R-squared	0.243824	Mean dependent var	73.47886
Adjusted R-squared	0.220910	S.D. dependent var	1490.689
S.E. of regression	1315.773	Akaike info criterion	17.25768
Sum squared resid	57131502	Schwarz criterion	17.34656
Log likelihood	-300.0094	Hannan-Quinn criter.	17.28836
F-statistic	10.64066	Durbin-Watson stat	2.096215
Prob(F-statistic)	0.002574		

Null Hypothesis: D(ASI) has a unit root

Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=1)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-6.418103	0.0000
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(ASI,2)
Method: Least Squares
Date: 03/01/24 Time: 23:41
Sample (adjusted): 1988 2022
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(ASI(-1))	-1.600470	0.249368	-6.418103	0.0000
D(ASI(-1),2)	0.433605	0.169110	2.564041	0.0154
C	1788.284	1355.540	1.319241	0.1968

R-squared	0.634720	Mean dependent var	71.13588
Adjusted R-squared	0.611153	S.D. dependent var	12462.61
S.E. of regression	7771.380	Akaike info criterion	20.83838
Sum squared resid	1.87E+09	Schwarz criterion	20.97306
Log likelihood	-351.2525	Hannan-Quinn criter.	20.88431
F-statistic	26.93320	Durbin-Watson stat	1.972638
Prob(F-statistic)	0.000000		

Null Hypothesis: D(MCAP) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*

Augmented Dickey-Fuller test statistic		-4.720241	0.0005
Test critical values:	1% level	-3.632900	
	5% level	-2.948404	
	10% level	-2.612874	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(MCAP,2)
Method: Least Squares
Date: 03/01/24 Time: 23:42
Sample (adjusted): 1987 2022
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(MCAP(-1))	-0.812668	0.172167	-4.720241	0.0000
C	994.8540	541.3403	1.837761	0.0751

R-squared	0.403046	Mean dependent var	98.99200
Adjusted R-squared	0.384957	S.D. dependent var	3824.475
S.E. of regression	2999.333	Akaike info criterion	18.90561
Sum squared resid	2.97E+08	Schwarz criterion	18.99449
Log likelihood	-328.8482	Hannan-Quinn criter.	18.93629
F-statistic	22.28068	Durbin-Watson stat	1.981090
Prob(F-statistic)	0.000042		

Null Hypothesis: D(VOT) has a unit root
Exogenous: Constant
Lag Length: 1 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-	0.000

		5.788460	0
Test critical values:	1% level	-3.639407	
	5% level	-2.951125	
	10% level	-2.614300	

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(VOT,2)
Method: Least Squares
Date: 03/01/24 Time: 23:42
Sample (adjusted): 1988 2022
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(VOT(-1))	-1.455379	0.251428	-5.788460	0.0000
D(VOT(-1),2)	0.328183	0.170161	1.928658	0.0630
C	43022.60	107425.5	0.400488	0.6915

R-squared	0.596345	Mean dependent var	-2635.882
Adjusted R-squared	0.570303	S.D. dependent var	953317.8
S.E. of regression	624911.8	Akaike info criterion	29.61271
Sum squared resid	1.21E+13	Schwarz criterion	29.74738
Log likelihood	-500.4160	Hannan-Quinn criter.	29.65864
F-statistic	22.89917	Durbin-Watson stat	2.025891
Prob(F-statistic)	0.000001		

Null Hypothesis: D(VST) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=1)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-7.18225	0.0000

		8
Test critical values:	1% level	-3.632900
	5% level	-2.948404
	10% level	-2.612874

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

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(VST,2)
Method: Least Squares
Date: 03/01/24 Time: 23:43
Sample (adjusted): 1987 2022
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TVT(-1))	-1.221864	0.170122	-7.182258	0.0000
C	34.12237	69.86109	0.488432	0.6285

R-squared	0.609859	Mean dependent var	-3.785429
Adjusted R-squared	0.598037	S.D. dependent var	650.0297
S.E. of regression	412.1226	Akaike info criterion	14.93596
Sum squared resid	5604885.	Schwarz criterion	15.02484
Log likelihood	-259.3794	Hannan-Quinn criter.	14.96664
F-statistic	51.58483	Durbin-Watson stat	2.105699
Prob(F-statistic)	0.000000		

DATA

Year	RGDP	ASI	MCAP	VOT	VST
1985	17,170.08	127.30	6.60	23,571	0.32
1986	17,180.55	163.80	6.80	27,718	0.50
1987	17,730.34	190.90	8.20	20,525	0.38
1988	19,030.69	233.60	10.00	21,560	0.85
1989	19,395.96	325.30	12.80	33,444	0.61
1990	21,680.20	513.80	16.30	39,270	0.23
1991	21,757.90	783.00	23.10	41,770	0.24
1992	22,765.55	1,107.60	31.20	49,029	0.49
1993	22,302.24	1,543.80	47.50	40,398	0.80
1994	21,897.47	2,205.00	66.30	42,074	0.99
1995	21,881.56	5,092.20	180.40	49,564	1.84
1996	22,799.69	6,992.10	285.80	49,515	6.98
1997	23,469.34	6,440.50	281.90	78,089	10.33
1998	24,075.15	5,672.70	262.60	84,935	13.57
1999	24,215.78	5,266.40	300.00	123,509	14.07
2000	25,430.42	8,111.00	472.30	256,523	28.15
2001	26,935.32	10,963.10	662.50	426,163	57.68
2002	31,064.27	12,137.70	764.90	451,850	59.41
2003	33,346.62	20,128.94	1,359.30	621,717	120.40
2004	36,431.37	23,844.50	2,112.50	973,526	225.82
2005	38,777.01	24,085.80	2,900.06	1,021,967	262.94
2006	41,126.68	33,189.30	5,120.90	1,367,954	470.25
2007	43,837.39	57,990.20	13,181.69	2,615,020	1,076.02
2008	46,802.76	31,450.78	9,562.97	3,535,631	1,679.14
2009	50,564.26	20,827.17	7,030.84	1,739,365	685.72
2010	55,469.35	24,770.52	9,918.21	1,925,314	799.91
2011	58,180.35	20,730.63	10,275.34	1,235,467	638.93
2012	60,670.05	28,078.81	14,800.94	1,147,626	808.99
2013	63,942.85	41,329.19	19,077.42	3,245,866	2,350.88
2014	67,977.46	34,657.15	16,875.10	2,248,939	1,338.60
2015	69,780.69	28,642.25	17,003.39	950,001	978.05
2016	68,652.43	26,874.62	16,185.73	837,259	577.82
2017	69,205.69	38,243.19	21,128.90	879,067	1,078.49

2018	70,536.35	31,430.50	21,904.04	1,048,777	1,203.37
2019	72,094.09	26,842.07	25,890.22	875,711	931.48
2020	70,800.54	40,270.72	38,589.58	1,156,830	1,086.18
2021	73,382.77	42,716.44	42,054.50	1,060,017	953.87
2022	74,521.81	48,921.52	47,512.20	1,060,017	976.54

Source: CBN Statistical Bulletin (2022)