

**STOCK MARKET PERFORMANCE AND ECONOMIC GROWTH IN  
KENYA**

**FLORENCE JELAGAT SANG**

**D61/11495/2018**

**RESEARCH PROJECT SUBMITTED IN PARTIAL FULLFILMENT OF  
THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER  
OF BUSINESS ADMINISTRATION, UNIVERSITY OF NAIROBI**

**OCTOBER, 2021**

## DECLARATION

This research project is my original work and has not been presented for any award in any other institution of learning

Signed:  .....

Date...01/11/2021.....

**Florence Jelagat Sang**

**D61/11495/2018**

This research project has been submitted for my approval as University Supervisor.

Dr. Herick Ondigo

Lecturer, School of Business,

University of Nairobi.

Sign:  ..... Date: 01/11/2021 .....



## **ACKNOWLEDGEMENT**

First and foremost I would like to thank the Almighty God for this far I have reached. My sincere acknowledgement then goes to my supervisor, Dr. Herick Ondigo for the professional guidance and advices that were very crucial throughout this journey. I would also like to acknowledge lecturers and the whole department of finance and accounting for laying the foundation of knowledge, upon which this work was based. Many thanks also go to the University of Nairobi administration for giving me a chance to study at the university. Lastly, I thank my fellow students their company, advices and love they showed me throughout this journey.

Thank you all.

## **DEDICATION**

I dedicate this research work to my parents Mr and Mrs Joseph Sang and my family members who supported me both emotionally and financially.

## TABLE OF CONTENTS

<b>DECLARATION</b> .....	<b>ii</b>
<b>ACKNOWLEDGEMENT</b> .....	<b>ii</b>
<b>DEDICATION</b> .....	<b>iv</b>
<b>LIST OF TABLES</b> .....	<b>vii</b>
<b>LIST OF FIGURES</b> .....	<b>viii</b>
<b>LIST OF ABBREVIATIONS</b> .....	<b>ix</b>
<b>ABSTRACT</b> .....	<b>x</b>
<b>CHAPTER ONE</b> .....	<b>1</b>
<b>INTRODUCTION</b> .....	<b>1</b>
1.1 Background of the Study.....	1
1.1.1 Stock Market Performance.....	3
1.1.2 Economic Growth .....	4
1.1.3 Stock Market Performance and Economic Growth.....	5
1.1.4 Nairobi Stock Exchange .....	8
1.2 Research Problem.....	9
1.3 Objectives of the Study .....	11
1.4 Value of the Study.....	11
<b>CHAPTER TWO</b> .....	<b>12</b>
<b>LITERATURE REVIEW</b> .....	<b>12</b>
2.1 Introduction .....	12
2.2 Theoretical Review .....	12
2.2.1 Schumpeter Finance Growth Theory .....	12
2.2.2 Neo-Classical Theory .....	13
2.2.3 McKinnon and Shaw Theory.....	14
2.3 Empirical Literature Review .....	15
2.4 Determinants of Economic Growth .....	20
2.4.1 Government Spending.....	20
2.4.2 Export - Import (Net Export).....	21
2.4.3 Investment.....	22
2.5 Conceptual Framework .....	23
2.6 Summary of the Literature .....	24
<b>CHAPTER THREE</b> .....	<b>26</b>
<b>RESEARCH METHODOLOGY</b> .....	<b>26</b>
3.1 Introduction .....	26

3.2 Research Design .....	26
3.3. Target Population .....	26
3.4 Data Collection.....	26
3.5 Data Analysis .....	27
3.5.1 Conceptual model.....	27
3.5.2 Empirical model .....	27
3.6 Diagnostic Tests of Secondary Data .....	29
3.6.1 Multicollinearity .....	29
3.6.2 Test Normality .....	29
3.7 Variables Measurements .....	30
<b>CHAPTER FOUR: .....</b>	<b>31</b>
<b>ANALYSIS AND DISCUSSING .....</b>	<b>31</b>
4.1 Introduction .....	31
4.2 Diagnostic Tests .....	31
4.2.1 Multicollinearity Test.....	31
4.2.2 Normality Test .....	32
4.3 Secondary Data on Stock Market Performance and Economic Growth Trend..	33
4.4 Regression Analysis .....	33
4.5 Descriptive Analysis .....	35
4.5.1 Stock Turnover Ratio and Economic Performance.....	36
4.5.2 Stock Market Capitalization and Economic Performance .....	36
4.5.3 Stock Traded Value and Economic Performance .....	37
4.6 Discussion of Research Findings .....	38
<b>CHAPTER FIVE .....</b>	<b>40</b>
<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS .....</b>	<b>40</b>
5.1 Introduction .....	40
5.2 Summary .....	40
5.3 Conclusion.....	41
5.4: Recommendations .....	41
5.5 Limitations of the Study .....	41
5.6 Suggestions for Further Research .....	42
<b>REFERENCES.....</b>	<b>43</b>

## LIST OF TABLES

Table 1.1: Economic Growth Trend of the Country for the Past Nine Years.....	7
Table 3.1: Description of the Variables .....	28
Table 3.2: Variables Description Table .....	30
Table 4.1 Multicollinearity Test .....	31
Table 4.2 Normality Test .....	32
Table 4.3: Stock Market Performance and Economic Growth Indicators from 2010 to 2020.....	33
Table 4.4 Model Summary .....	34
Table 4.5 Analysis of Variance.....	34
Table 4.6: Regression Analysis for Stock Market Performance and Economic Growth .....	35

## LIST OF FIGURES

Figure 2.1: Conceptual Framework showing the relationship between the variables	.24
Figure 4.1 Stock Turnover ratio and Economic Performance .....	36
Figure 4.2: Stock Market capitalization and Economic Performance .....	37
Figure 4.3: Stock Traded Value (TVL) and Economic Growth .....	38

## **LIST OF ABBREVIATIONS**

<b>CMA</b>	Capital Markets Authority
<b>EAC</b>	East Africa Community
<b>GDP</b>	Growth Domestic Product
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>LS</b>	Listed Securities
<b>MC</b>	Market Capitalization
<b>MI</b>	Market Index
<b>NSE</b>	Nairobi Securities Exchange
<b>STO</b>	Stock Turnover Ratio
<b>TVL</b>	Stock Traded Value

## **ABSTRACT**

Stock market is seen as an avenue where efficient distribution of capital resources takes place and that through this market, borrower' obtain funds which they utilize to finance various long term projects, while savers use stock markets to invest their surplus funds. Many empirical studies have been conducted to assess how stock market performance relate with economic growth. However, the findings remain inconclusive on the relationship especially in developing economies. The present study therefore seeks to investigate whether stock exchange performance affects economic growth in Kenya. The objective of the study was to investigate effects of stock market performance on economic growth in Kenya. Causation design was used to assess the correlation between performance of stock market and Kenya's economic expansion over a period from 2010-2020. The target population entails the entire 63 business firms trading with the Nairobi Securities Exchange from 2010 to 2020. The study relied on secondary data gathered annually for a period of ten years, from 2010 to 2020, obtained from different economic investigations from Nairobi Securities Exchange (NSE), Kenya National Bureau of statistics (KNBS), Capital Markets Authority (CMA) and World Bank statistics. The study used descriptive statistics inform of percentages, frequencies and mean and presented the results in tables and graphs. Inferential results were generated by regression analytical approach. Results identified a bidirectional causality relationship between economic growth and stock turnover ratio, stock market capitalization and stock traded value. The government should formulate and execute Stock Markets strategic policies to guarantee relative stability and steady growth and development of the economy.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background of the Study**

A stock or security market is a complex platform in which trading of stocks and shares takes place (Ikikii and Nzomoi, 2013; Nairobi Securities Exchange, 2019). Simultaneously, it plays a major role in creating a strong and competitive economy of a country. Atje and Jovanovic (2013) also explain that a stock market is very crucial for any meaning economic transformation of a country, from outmoded, inflexible, insecure bank-based to a more supple, more secure economy that cannot be interfered with by shocks and instabilities. In fact, according Kithinji, and Ngugi (2010) stock markets provide a suitable platform where the government and industry raise long-term capital and investors are able to purchase and liquidate their securities.

Contemporary empirical literature has tried to correlate economic expansion of a nation and stock market performance. For instance, Caporale, and Spagnolo (2011) argues that higher per capita income as a function of stock market may influence the many facets of a nation's economy as well as stock market performance. Agarwal (2011) also explains that the cardinal role of financial markets such as stock markets is transacting in securities and via this trading, the flow of capital from savers to business investors and vice versa, which promotes a nation's economic growth, especially when efficient allocation and utilization of resources occurs. As a result of this role, it is anticipated that a good performing stock or security market enhances the availability and adequacy of lasting capital for economically constructive business ventures.

Most scholars have conflicting schools of thought on how stock market performance may influence or impact the economic growth and development (Beck, and Levine, 2011; Caporale, and Spagnolo 2011; Kiptoo, 2010; Kithinji, and Ngugi 2010). Many

models underpin that an efficient performing stock market transforms information and transactions costs hence foster resource allotment thereby finally leading to economic expansion (King and Levine, 1993; Beck and Levine, 2001).

The study is anchored on Schumpeter Finance Growth Theory, Neo-Classical Theory and McKinnon and Shaw Theory. Schumpeter Finance Growth Theory postulates that in the case of equity and credit, monetary markets represented by the "banker" and the "capitalist", position the financial assets to be easily accessed by the entrepreneurs, whereby the latter is required to carry out their roles of presenting fresh blends of products and methods of production. Operational financial markets are hence a major requirement for economic progress given that they provide financial assets (capitals) to agents who can place these resources to their most useful use.

In Neo-Classical Theory, this theory underscores economic undertakings based on the viewpoint of lone representing agent, containing all personal households and business organizations. The theory postulates that within certain presumptions, competitive markets, steady returns to scale, same goods and agents, proper information and foresight encourage precise assessment of optimal conditions of the inter temporal exchange of resources, and this is basically the level at which the agent should mobilise capital, and distribute resources over period of time.

In McKinnon and Shaw Theory, the proponents of this theory highlight financial broadening, financial suppression and liberalization of stock markets as the main suggestions concerning finance and economic growth. Both scholars also argued that financial expansion through increasing financial intermediation and control of monetization of the economy, promotes economic growth. Secondly, they also postulates that financial repression, in which most of the governments of developing

countries hold the interest rates in the lending institutions temporally low and gives subsidized credits to either selected sectors or award themselves, is unfriendly to long-term economic growth. Finally, that liberalization of these suppressed credit markets will promote growth and development, given that increasing rates charged on interest to an stability state not only boosts savings but also encourages increased utilization efficiently of investment resources. The present study therefore seeks to explore the effect of performance of stock market on Kenyan economic expansion. The study seeks to use market performance indicators such as market capitalization (MC), stock turnover ratio (STO), stock traded value (TVL), and stock market index (MI), listed securities (LS) to percentage of GDP from 2010- 2020.

### **1.1.1 Stock Market Performance**

According to Osamwony (2013) stock market offers a platform, where transaction of financial stock takes place and where one can build long-term capital. Stock or security markets are conventionally viewed as instrument of operations for domestic or local financial institutions as a whole (Kenny & Moss, 1998). Simiyu (1992), highlights the significance of coming up with measurement parameters that can be applied for assessing stock market performance. However, there has not been a universal measurement for security market performance, although majority of the scholars encourage the application of weighted securities market index as credible parameter given that it aids reviewing the securities market performance over a duration of time and also shows the stock capitalization of securities (Nyang'oro, 2012; Odhiambo, 2004; Osamwony 2013)

According to Yartey (2008), security markets in emerging markets have witnessed a noteworthy advancement and progress since the early 1990's. Yartey further reports

that the market capitalization of developing economies has increased in the past few years, rising from \$2 trillion in 1995 to almost \$ 5 trillion in 2015. Similarly, Standard and Poor (2005) report that emerging markets are currently more than 12% of the global market capitalization. Sheila (2014) also documents that the market capitalization ratio for Nairobi Stock Exchange was stationary in the late 1980's, but only began to increase in 1991, to arrange of 43% in 1994 prior to deteriorating and producing a deep and wide economic trough in 1995 to 2006. Nevertheless, market capitalization developed greatly between 2001 and 2006, and in 2007, the stock market capitalization recorded 50% increase. Nonetheless, this was still considered comparatively low when compared to many of the developed countries (World Bank, 2012). The period between 2014 and 2018 was characterised by enhanced trading activities in stock market as well increased stock market capitalization of about KES 750 billion in 2014 to realize a 4.9trillion Kenya shillings by 2018. Similarly, the amount of shares traded grew from 593million to a high of 6.33 billion in similar period (NSE, 2019).

### **1.1.2 Economic Growth**

Many scholars such as Vakidis, (2009) and Ikikii and Nzomoi, (2013) explain economic growth of a country as an amplifier of the economicwellbeing of a country that comes as a consequent of improved quality of services and goods generated over a duration of time (Vakidis, 2009). After Kenya got her independence, the government stimulated speedy economic advancement via public investment, promoting small scale agribusiness as well as encouraging agricultural production and incentives for private and foreign industrial venture which consequently led to the annual GDP growth on average of 6.6% from 1963 to 1973 (Ikikii and Nzomoi, 2013).This slump in economic growth can be explained by both external and internal determinants.

The early years of post-independence were characterised by high implementation of import substitution (IS) policy by the government of Kenya, yet during this period, there was high inflation of oil prices therefore making manufacturing countries to be disadvantaged as they became less competitive in the market (Nyang'oro, 2012). Odhiambo, (2004) also reported that from 1974 to 1990 the Kenya's economy declined as a result of its internal policy of import exchange and increasing oil prices that rendered the manufacturing sector less competitive and also failure to provide export incentives, restricted import and foreign exchange check and balances that rendered the domestic environment unattractive.

In 2013, the country came up with the economic recovery framework that was aimed at creating wealth and employment as a policy of getting back the country into the path of economic recovery after a year of economic unproductivity. The approach was a change from the preceding planning that aimed to alleviate poverty and in its place create wealth and employment (Odhiambo, 2004). The execution of this plan was seen successful as the country's economy sustained a speedy growth from 2013 to 2020 of 5.9% to 7%. However, the growth recorded a major decline in 2020 of 4.6% as a result of global Covid-19 pandemic. In response, the government came up with measures such as tax reliefs to stimulate economic growth including restoring investors' confidence, expansive fiscal policy, financial policy focusing on attaining and sustaining price stability within the confines of a single digit inflation rate.

### **1.1.3 Stock Market Performance and Economic Growth**

Howells and Keith, (2000) explains that stock market is seen as an avenue where efficient distribution of capital resources takes place. They further observed that through stock market, borrowers obtain funds which they utilize to finance various long

term projects, while savers use stock markets to venture their surplus funds. Therefore, stock markets provide both private and public firms with the opportunity to raise funds for financing long-term venture in the country. Vakidis, (2009) was practical when he found that the economic yard stick of a country measured by GDP increases when adequate capital is availed in the market for borrowing by both private corporations and public institutions for investment, hence promoting economic advancement and development. Similarly, Gitobu, (2000) reiterated that the security market is a link between borrowers and savers for a country's economic growth and development. Gitobu, further advice those with excess funds to invest in stock market which gives a better return compared to financial institutions.

In Kenya, the country's economy has been witnessing mixed economic growth in the last decade, occasioned by both internal and external factors. For instance in 2012, the country's economy moved upward by 6.8%, 2013 by 2.7%, 2014 by 5.8%, 2015 by 8.6% and 2016 by 6.1%, 2017 by 4.6, 2018 by 4.7, 2019 by 5.3 and 2020 by 3.2 (KNBS, 2020). Table 1.1 shows the economic progression trend for the past nine years.

**Table 1.1: Economic Growth Trend of the Country for the Past Nine Years**

<b>Year</b>	<b>Economic growth</b>
2012	6.8
2013	2.7
2014	5.8
2015	8.6
2016	6.1
2017	4.6
2018	5.7
2019	5.3
2020	3.2

Source: KNBS, 2020 report

The omnibus economic growth for the past decade also reflected some growth in major sectors of economy like agriculture & forestry which grew by 5.1%, retail and wholesale businesses by 6.7%, transport and communication by 4.8%, manufacturing by 5.1%, commercial institutions by 7.5% while construction grew by 8.8% by the year 2018 (KNBS, 2020).

However, varying sectors of economy have registered unsteady economic growth due to other determinants. For instance, in 2020 the economic growth rate shrunk to 3.2, which was explained by the global Covid-19 pandemic that wreaked havoc in major economic activities across the world (KNBS, 2020).

On a separate aspect, the Nairobi Security Exchange 20 Share Index grew by 30% to KES 4,133 billion from previous KES 3,205 billion in December 2017 and by August 2019, it shot to KES 4,851.54 billion. It is vital to note that as the Kenyan economy is developing and growing, the NSE Share Index is also growing. This therefore begs the question to whether the two variables (Stock Exchange Performance and Kenyan Economy) are correlated. The duration between 2014 and 2019 experienced an increase

in activities taking place in trading in stock market and an increase in Market Capitalization of about KES 1,250 billion Kenya shillings in 2014 to KES 4.4 trillion in November 2018. The present study therefore strives to investigate the effects of stock exchange performance on economic advancement in Kenya.

#### **1.1.4 Nairobi Stock Exchange**

Nairobi Securities Exchange (NSE) provides a platform on which trade of security market such as debenture securities and equity shares is carried out. Kenya started trading in securities in early 1920s, when the British was still colonising the country. The stock exchange market was officially set to operate in 1954, when it was registered under Societies Act, (1954). The act brought together stockbrokers, designing of the security market and governing the trade activities. Consequently, the stock exchange market has witnessed slow but steady growth of many business companies being listed in the financial market, currently standing at 63 companies.

However, the operation of stock market is under the regulation of Capital Markets Authority (CMA, 2018), which is a body that controls the security market and guarantees scrutiny for their compliance. Security markets have always been at the forefront for petitioning the government to provide conducive policies and framework that would ease economic expansion and also boosting the growth and performance of the stock markets (Ngugi, 2005). This regulatory institution is meant to sustain a healthy security market performance that permits allocative proficiency to happen freely in line with the existing market dynamics. In 2006, the NSE implemented live trading through automated trading system (Wambui, 2005) and in 2011 the Nairobi Stock Exchange Limited, was rebranded Nairobi Securities Exchange Limited, and this move was a strategic plot to rebrand into a fully service security exchange platform, which

encourage transaction and settlement of debt products, equities and many other related market tools.

Nonetheless, the Nairobi Securities Exchange market has also witnessed setbacks in its growth for instance, the dwindling performance of the market from 1997 to 2002 which was caused by unsuitable land and agriculture policies, coupled with poor governance and weak balance of trade. Moreover, owing to influence of unfavourable political environment, the stock market up to date still experiences ineptitudes such as constant unfavourable macroeconomic measures, inadequate liquidity and disorganised flow of information (Abdallah, 2011). Therefore, empirical information on the correlation between economic growth trend and Stock Market performance is very significant and critical, particularly in emerging economies like Kenya.

## **1.2 Research Problem**

Nairobi Securities Exchange (NSE) provides a platform on which trade of security market such as debenture securities and equity shares is carried out. Therefore, this market is conventionally viewed as instrument of operations for domestic or local financial institutions as a whole.

The relationship between NSE market performance and Kenyan economic growth has piqued the curiosity of researchers, policymakers, and economists around the world in recent years. There have been attempts to empirically examine the relationship between the stock market and economic growth; nevertheless, the methodology and outcomes for assessing the relationship between the stock market and growth have differed, resulting in disagreements in the predictions. For instance, hither to, variety of studies (Beck, and Levine, 2011; Caporale, and Spagnolo 2011; Kiptoo, 2010; Kithinji, and

Ngugi 2010) have revealed that stock market performance had high relationship with per capital income of a given country.

This implies stock markets plays a cardinal role in shaping or transforming macroeconomic factors. This is clearly illustrated where an efficient stock market provides both private and public investors with the much needed capital to fund their long-term ventures (Kumo, 2009). Therefore, where stock market is well structured and performing, there is a boost in savings and distribution of capital to investments, leading to enhanced rate of a country's economic growth (Osaze, 2007). Empirical evidence based on the study of Nkukuu (2012) also found a correlation between economic growth and financial performance of the business ventures listed in financial market, which takes place due to uninterrupted economic growth that had been had been witnessed in the latest times. In addition, past studies have also exposed that there are array of macroeconomic factors which destabilise securities market performance and this gives unclear probability of the findings as to whether stock exchange performance positively or negatively correlate with the Kenya's economic trend of growth.

However, global studies such as Atje and Jovanovic (2013) showed a strong significant relationship between stock trading value and GDP performance of a country. However, the findings of these studies cannot be generalised for the Kenyan case as there is inadequate empirical data on developing nations particularly from sub Saharan Africa. Besides, most studies on security markets in Kenyan context have mainly focused on the knowledge on policies to enhance stock markets financial performance with respect to political strength and how the macro-economic factors such as interest rates influence the performance of security market (Gekone, 2011 and Kiptoo, 2010; Kithinji and Ngugi 2010). This clearly shows that most of the studies done in Kenya have not looked at the stock's performance as a predictor of economic growth, indicated by GDP; hence

the current study sought to answer the question on what are the effects of Nairobi stock exchange performance on GDP growth in Kenya.

### **1.3 Objectives of the Study**

- i. To investigate effects of stock market performance on economic growth in Kenya

### **1.4 Value of the Study**

The study findings may be of immense help to both the capital markets regulatory authorities and the government in that it ventilates on the significance of formulating and executing Stock Markets strategic policies to guarantee relative stability and steady growth and development. The government may also use the study findings in making rational policies which may consequently encourage the performance of the security market.

The study benefits the public and other economic stakeholder in shedding light on the importance of savings and how the culture of savings can go a long way in promoting investments and ventures for economic development of a nation. This implies that savers may be capable of forecasting stock prices at the prevailing economic development rate of the nation. Investors may also achieve from the fact that foretell economic growth by analysing the stock market performance.

The study may also help in beefing up the existing scholarly works on financial markets and economic advancement and subsequently assist as a source of empirical reference resources for future researchers whose interests are in alike topics.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section presents academic work by various researchers on how performance of stock market influences the economic advancement of a nation. The chapter also discusses various theoretical literatures that is fiscal growth theories, and also provides empirical literature review on stock market performance and its correlation to economic growth.

#### **2.2 Theoretical Review**

This study was anchored on the three theories namely; Schumpeter Finance Growth Theory, Neo-classical theory, McKinnon and Shaw Theory. Each of these theories underlines various aspects of how stock exchange markets influence economic growth and development.

##### **2.2.1 Schumpeter Finance Growth Theory**

Finance Growth Theory was postulated by Schumpeter in 1912. In fact, King and Levine (1993) reports that Joseph Schumpeter was the initial economist to describe the correlation that existed between fiscal markets such as exchange markets and economic progress of a country or state. The theory states that with loan and equity, capital can be easily accessed by the entrepreneurs, with players in the financial markets being the "banker" and the "investors" whereby the latter is required to carry out their role of presenting new blends of products and methods of production. Operational financial markets are hence a major requirement for economic progress given that they provide capital to agents who can place these resources into a more productive use.

This theory underlines the significance of security market on economic performance of a country as it illustrates how the financial markets aids in steering economic growth through efficient procedure of fiscal intervention between lenders and also through encouraging savings, proper risk management, scrutinizing and observing business ventures and lessening cost of transaction. Sustaining efficiency of fiscal intermediation and lessening transaction expenses would result into increasing market liquidity. This theory assist the present study in explaining the influence of stock turnover ratio, number of listed securities, market capitalization, transacted share value, security market index and as pointers of performance of financial market on economic progress of a country.

### **2.2.2 Neo-Classical Theory**

The Solow Neoclassical model is the initial point for nearly all analysis of economic growth. The proponent of this model, Solow (1956) came up with a comparatively simple growth model which fit existing data on US economic advancement with some accomplishment. The Exogenous model was an addition to the Harrod Domar model which incorporated the new term, "productivity growth". Solow growth model exhibit how saving, population increase and technological advancement affect economic growth over time. It also illustrate why countries undergo differential growth rates over time.

This theory emphasises economic undertakings from the viewpoint of lone agent, containing all households and business organizations. The theory postulates that within certain presumptions, good markets, steady returns, proper market information encourage precise assessment of optimal conditions of the inter-temporal exchange of resources, and this is basically the level of which the agent should forgo consumption,

mobilise capital, and distribute resources over period of time. The theory underprops savings as a motivator of economic progress of a nation through distribution of savings to viable ventures. The theory is germane to the present study because it describes how market capitalization as performance indicator influences economic expansion through building up savings, whereby a rise in savings in stock markets translates to adequate finance to be distributed to business firms that require capital to fund their ventures, this will hence encourage most of business firms to be in the securities exchange markets and this consequently leads to growth of market capitalization. Odhiambo (2004) also explains that increase in stock market capitalization leads to availability of adequate finances to be allocated to feasible investment projects thereby promoting economic expansion. Winkler (1998) also supports that this theory highlights a reason behind variances in financial markets performance and economic growth in various economies globally.

### **2.2.3 McKinnon and Shaw Theory**

Shaw (1973) and McKinnon (1973) in different but similar studies gave a contemporary theoretical framework on how economic advancement of a nation can be influenced by financial system of the said developing country. In their theories, they underscore financial broadening, financial suppression and liberalization of stock markets as the main suggestions concerning finance and economic growth. Both scholars also argued that financial expansion through increasing financial intermediation and control of monetization of the economy, promotes economic growth. Secondly, they also postulates that financial repression, in which most of the governments of developing countries hold the interest rates in the lending institutions temporally low and gives subsidized credits to either selected sectors or award themselves, is unfriendly to long-term economic growth. Finally, that liberalization of these suppressed credit markets

will promote growth and development, given that increasing interest rates to equilibrium state not only boosts savings but also encourages increased utilization efficiently of investment resources. This theory supports the present study by stressing on the financial widening through increasing financial intermediation as a driving force towards economic growth of a nation. Ideally, financial intermediation in financial markets can only be attained if sufficient savings area available for investors, as well as efficient stock market that lessen transaction and information costs to permit increase of liquidity. This theory also helps the present study explain the effects of increased market capitalization, more stock turnover and increased value of traded shares to economic advancement of a country. The theory further illustrates that when funds are more available, there is increased market capitalization as there are more finances for borrowing by the investors. Secondly, that cost of transaction and information can only be decreased if the market is highly liquid, and increased liquidity translates to more turnover and overall or total value of traded shares. Increase in savings and well-organized market foster smooth and actual intermediation which then results to economic advancement.

### **2.3 Empirical Literature Review**

This study highlights the empirical evidences of how stock exchange performance influences the economic growth of a country, as measured through GDP. The empirical literature review is done according to the study question which is; what is the effect of Nairobi Stock Exchange performance on GDP growth in Kenya?, therefore allowing the gaps to be identified with respect to the current study.

### **2.3.1 International Evidence**

Arestis and Demetriades, (2020) assessed the existence of association between economic expansion of five developed nations (United United Kingdom, Germany, United States, France and Japan ) and performance of stock markets, while controlling for banking systems using time series analysis. They used market capitalization ratio and overall value of transacted shares as development indicators of stock market development. The study found that banking arrangement had a strong association with the economic progress of Germany, Japan and France. However, the banking system had a weak relationship with the economic advancement of the entire USA and United Kingdom. In the case of Germany and Japan the study found that banking system and performance of stock market had a strong positive influence on the long run economic expansion of the two countries. Country's specific findings were that there exists a weak link between financial progress and economic advancement for UK and US. In Japan and France findings proposed that financial market volatility had a negative influence on both countries while in Germany the stock market volatility was found to be insignificant. They concluded that while stock markets predict economic expansion or progress, their effects is a small portion as compared to that of banking system

Nazir, Gilaniand and Nawaz, (2019) conducted a study on the association that existed between development of stock market and economic progress of Pakistan between the period of 2006 to 2018. The study utilised market capitalization ratio and overall value of transacted shares ratio as their stock market development indicators while controlling for foreign direct investment. The study used annual data as opposed to quarterly data which could have led to more refined results due to the use of shorter intervals of data. The study found that both total values of transacted shares and market capitalization

positively and significantly predicted economic expansion as measured by gross domestic product. However, it was found that market size had comparatively greater influence on economic expansion of a country than market liquidity, and this was revealed through the larger coefficient value of market size as compared to that of market liquidity. They concluded that both market liquidity and market size, positively and significantly influenced economic advancement of the country. Their results also exposed that Pakistan economic expansion can be achieved by expanding stock market and market capitalization.

Wild and Lebdaoui, (2020) investigated the correlation that existed between security markets and economic progress of Morocco. The study used quarterly data that was derived from 2010 to 2019. The obtained secondary data looked at total market share index, the ratio of all value of traded shares, market capitalization ratio and market index as performance and development indicators of stock market. Their study showed a direct long term correlation between performance of stock market and economic expansion of the country. However, there was no short term correlation between the two variables. They also a unidirectional connection from economic expansion to total market share index, volume of share traded and stock market index. However, the study found that there was no association between economic expansion and market capitalization. The reviewed study showed that the performance and development of stock market did not encourage economic expansion of Morocco and this could be justified by inflated stock prices which do not increase economic broadening given that elevated stock prices can only leads to destructive effects on business firms.

Nyanaro and Elly (2019) carried out a study to investigate how stock market progress correlated with EAC economic growth. In this study, the stock market indicators were;

liquidity, stock market capitalization, and share price volatility. The economic growth of the east African community was measured using GDP trend. The study used quantitative research methodologies to assess the nature of correlation between these variables. The population of the study were all-Share index of the four security financial platforms EAC countries. The performance of stock market was obtained from the EASRA and Capital markets, while data on GDP trend was sourced from the World Bank websites. The study found a lasting correlation between the stock market performance indicators (market capitalization and liquidity) and economic progression in the EAC. However, the study found no correlation between the volatility of share price and economic progress.

### **2.3.2 Local Evidence**

Ikikii and Nzomoi (2020) analysed how the progress of stock market influences Kenyan economic performance, taking the trends of GDP as an indicator of economic performance, while stock market performance were measured using stock market capitalization and trade volume. Empirically the study found that variables were statistically significant, and correlated positively with the feed-back effects. The study also found that capitalization and trade volume positively correlated with Kenyan economic growth, with trade and capitalization justifying 91% of the change of economic growth. Further, a 1% increase in both trade volume and capitalization explains 0.025% and 0.115% increase in GDP respectively.

Nyamongo et al., (2018) also carried out a study on how development of stock market influences economic progress of Kenya. The reviewed study used time series econometric model for 2010-2019. The study assessed both long term and short term correlation using error correction model. The study utilised amount of transacted shares and market capitalization ratio as development indicators of stock market while taking

care of foreign direct investment and human capital. Market capitalization and liquidity were found to be correlated positively and significantly with economic advancement. It was also concluded that foreign direct ventures and human capitals were significant predictors of economic development and that the influence of foreign direct investment on economic progress related with the prevailing conditions and absorptive capacities.

Kiptoo (2020) carried out a study on the influence of stock market growth on economic progress, applying dynamic panel evidence from different developing economies between 2015-2019. The study studied market capitalization ratio, turn over and trade volume ratio as stock market performance indicators. The researchers also came up with a 3 alternate composite indices of stock market development and applied them in regression each at a time while regulating foreign direct investment, trade freedom, rate of inflation, rate of exchange and aggregate investments. Whereas analysis the results of the stock market development indicators individually they found that market capitalization had a positive but insignificant effect on economic development implying that market capitalization may not be a practical conduit for economic progression this is due the fact that stock markets in developing markets are small. However, total traded shares and turnover had positive significant effects on economic growth justified the fact that highly liquid stock markets permits investors to faster increase their portfolio and majorly making business venture less likely to be risky by enhancing capital distribution which in turn enhances the prospect of economic development. Foreign direct investment was found to be a significant variable towards increasing economic growth while amount of investment and trade honesty were positively and significantly explaining the extent of economic advancement. Exchange rate was found to be significant to economic expansion denoting that a not so well managed rate of exchange may prevent the degree of economic expansion. The study concluded to have found a

unidirectional causality that from stock market growth to economic expansion of a country.

## **2.4 Determinants of Economic Growth**

Good government expenditure, consumption, Net exports and investments are considered necessary preconditions for Good Economic Growth in developing economies (Ikikii and Nzomoi, 2020).

### **2.4.1 Government Spending**

Government expenditure is an integral component of government policy. Upon ratification of a program to purchase goods and services, the government spending indicates the costs are incurred to execute these policies (Alex, 2016). Therefore, government spending consists of three major elements namely expenses for the buying of goods and services, expenditure for transfer payment and expenses for salaries and employees (Kelly, 2017).

Several contradicting views and opinions have been documented by scholars on influence of government expenditures on economic growth of a country. For instance, a study by Ghosh and Gregoriou (2008) and that of Benos (2009) had dissimilar outcomes even when they applied similar research methodology. Ghosh and Gregoriou (2008) exhibited a direct and significance correlation between present components of government expenditure and economic growth of the 15 sampled emerging countries. Similarly, Benos (2009) found that infrastructural development and human capital related positively with the lasting economic advancement of the sampled 14 EU nations. Lamartina and Zaghini (2008), Szarowská (2012), Arpaia and Turini (2008) all investigated the existence of correlation between government expenditure and country's economic progress applying the Wagner's law. However, of the three

scholars, only the results of Zaghini and Lamartina (2008) supported Wagner's theory, given that the coefficient of public spending elasticity with respect to GDP presumes values beyond par. The resultant analysis also deduced that the predicted coefficient values of lasting elasticity are greater in developing nations with lesser GDP per capita. Similarly, Pieroni (2009) and Ho and Chen (2014) carried out a study on the correlation between government spending in military and economic progress of a nation. In all of these studies, it was noted that defence expenditure had a negative influence on economic progress and growth of a country. However, Benoit (2018) study found that for developing countries, defence expenditure had a positive correlation with economic progress of the state. The presumption that this element of public expenditure had a positive influence on economic progress depends on the sample sizes, nature of the samples, the diverse theoretical provisions and the time factor. However, in most of the reviewed studies above, there is scanty information on how public spending intervenes on the correlation between stock market performance and economic advancement. The present study will therefore establish how public spending influences the correlation between performance and progress of stock market and economic progress of Kenya.

#### **2.4.2 Export - Import (Net Export)**

In examining how net exports influence economic growth of a country as measured through the GDP, two elements needs to be put into consideration, i.e exports and imports of a country. A country's export is bought by foreigners and the goods and services are domestically produced, which implies that exports also add to collective expenditure Kelly (2017). On the other hand, a country's imports are goods and services purchased by local residents of the said country, which denotes that expenses on imports discourages spending on domestic goods and services. Therefore, transactions

on goods and services exports are trades that involve the transfer of economic power and ownership for the said goods and services from the residents of a nation to non-resident economic players. Conversely, transactions on imports of goods and services handover economic ownership for the said goods and services from non-resident economic players to residents of the importing country.

Abdul, Mohamad and Zakimi (2014) established that expenses on consumption increases with increase in national income hence, in the context of macroeconomic concept, this correlation is similar to imports in which purchases incurred on goods and services imported increases with increase in national income of the importing country. This implies that demand for our exports by the foreigners correlate with their country's national income, but not on our domestic national income. Therefore, net exports are the worth of goods and services taken to other countries through exports subtracting the value of goods and services taken in the country through import from other nations. When the value of exports exceeds the value of imports, then net export is said to be positive and the reverse is true. Therefore, net exports shows net foreign expenditure on domestic goods and services, which gives income for domestic producers, hence increases the GDP of the exporting country.

### **2.4.3 Investment**

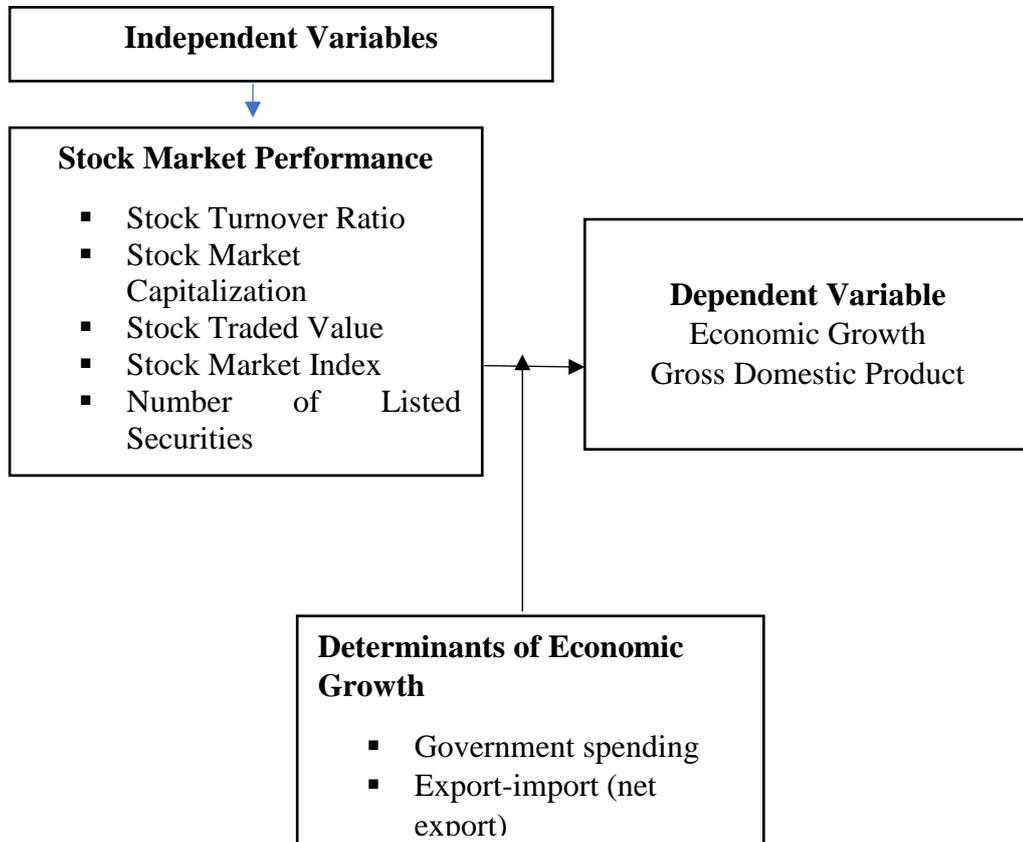
In the context of macro economy, this is investment is one factor that influence GDP or the country's income in such a view that the influence of investments on a nation's economy can be seen through the lenses of its national income. Hence, investment has a positive correlation to GDP. This implies that rise in investment also increases GDP of the country. Moreover, investment in the context of macroeconomics, can be also separated from independent investment also known as autonomous investment and

affected investment which is also called induced investment. Therefore, independent (autonomous) investments are a venture that is never affected by national income, implying, that the extent of national income is not hinged on the quantity of investments made by business organizations.

This nature of venture is normally undertaken by the state with the premises of furthering economic expansion of the country, for instance, spending in road constructions and other infrastructural projects. On the other hand, investments affected are kind of investments influenced by the level national income, implying that rise in national income will raise local's income and subsequently increase demand for goods and services and so as community income (Sadono Sukirno, 2018).

## **2.5 Conceptual Framework**

According to Kothari, (2009) conceptual framework is an illustration that shows a unique idea of gathered thoughts from pragmatic fields of enquiries to pre-empt the existing relationships between the variables and like a hypothesis, the illustrated idea does not need much verbal explanation to be understood. In this study, the conceptual framework illustrates the relationship of stock market performance and economic growth of a country as measured through gross domestic product. The study measures stock market performance through stock turnover ratio, stock market capitalization, stock traded value, stock market index and number of listed securities (independent variables) as having an influence on economic growth of Kenya as measured through gross domestic product. However, this relationship between the two variables is intervened by determinants of economic growth such as government spending, net export and investments (intervening variables). The conceptual framework for this study is illustrated in Figure 1.



**Figure 2.1: Conceptual Framework showing the relationship between the variables**

## 2.6 Summary of the Literature

Recent empirical literature as well as theoretical researches, as highlighted above, have found that there are varying views on how performance of stock market influence economic progress of a country. These different literature have also used diverse methodologies making their inferences on how performance of stock market influence economic advancement. For instance, in Kenya, Ikikii and Nzomoi, (2020) studied effects of stock market and economic advancement and found a positive and direct correlation between performance of stock market and a nation's economic advancement. Nonetheless, their study only focused on value of transacted shares and

market capitalization as the only performance indicators of financial market and that they only measured market size and liquidity. The present study will include other indicators of performance such as stock turnover ratio, stock market index and number of listed firms to make an in-depth and comprehensive conclusion on the relationship between the variables. The current study also seeks to add to the existing scholarly works by concentrating on how performance of stock market influences Kenyan economic advancement, from an emerging economy viewpoint.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This section underscores the methodological approaches that were adopted by the present study to successfully accomplish research objectives. Therefore, it entails the design, study population and sampling methods. It also has data gathering framework and the working empirical models.

#### **3.2 Research Design**

The study adopted descriptive research design. This approach was ideal given that it is apprehensive with constructing accurate valuation of the arithmetical inferences, relationship and distribution of phenomenon (Edwards, 2006). Descriptive studies have the benefits of providing significant information to the public and research fields like one desired in this research. Owing to fact that the study seeks to bring out the how performance and progress of stock market influences economic advancement of Kenya, descriptive research design was appropriate for the study.

#### **3.3. Target Population**

Cooper *et al.*, (2000) explains that population is the entire group with same features from which the researcher seeks to draw the analyses and interpretations. In this study, the study population were all the 63 business firms listed in NSE. The study applied census sampling approach to include all the 63 business firms listed in NSE.

#### **3.4 Data Collection**

The present study solely used secondary data to obtain information on NSE all share index data, Consumption data, Investment data, Government Spending data and Net Export data. All these were gathered from Nairobi Security Exchange (NSE) and

Capital Markets Authority for a ten year period, from 2010 to 2020. Stock exchange performance was measured through, value of shares traded, the turnover ratio, market index and market capitalization listed securities.

### **3.5 Data Analysis**

To analyse the nature of correlation that can be found between stock exchange performance and the Kenyan GDP trend, the study adopted both descriptive and inferential statistics. The kind of descriptive statistics to be adopted by the study was trend analysis, while regression analysis was adopted as an inferential statistics. The regression tests helped in establishing the nature of correlation that exists between the study variables.

#### **3.5.1 Conceptual model**

The model that was adopted was:

$$Y = f(x)$$

Where:

$$Y = f(X_1, X_2, X_3, X_4, X_5)$$

Y - Gross Domestic Product

X<sub>1</sub>- Turnover Ratio

X<sub>2</sub>- Market Capitalization

X<sub>3</sub>- Traded Value

X<sub>4</sub>- Market Index

X<sub>5</sub>- Number of Listed Securities

#### **3.5.2 Empirical model**

Therefore, the econometric model was:

$$y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

Where:

Y represents Gross Domestic Product

$\infty$  - constant

$\beta_1 - \beta_8$ - coefficients

X<sub>1</sub>- Turnover Ratio

X<sub>2</sub>- Market Capitalization

X<sub>3</sub>- Traded Value

X<sub>4</sub>- Market Index

X<sub>5</sub>- Number of Listed Securities

**Table 3.1: Description of the Variables**

Variable	Measurement	Description
Dependent Variable	Economic Growth	This is the overall assessment of goods and services found in a particular nation, whereby, the actual growing rate being adopted as a pointer of the economic development of a nation
Independent Variables	Stock turnover ratio	Provides the value of all transacted shares in the security market as a fraction of stock market capitalisation
	Stock market capitalization	It is stock price multiplied by the total number of remaining or outstanding shares.
	Stock Trade value	Is total share value traded on the securities market exchange rate as a fraction of GDP
	Stock Market index	Prices of particular stocks ordinarily a weighted average
Intervening Variables (Determinants of Economic Growth)	Number of listed securities	All the business organizations listed in stock market
	Government spending	This financial spending by state or government on public projects
	Export–import (net export)	Net exports are the worth of goods and services taken to other countries through exports subtracting the value of goods and services taken in the country through import from other nations
	Investments	Financial resources ventured in selling of goods and services that would then influence GDP of a country

### **3.6 Diagnostic Tests of Secondary Data**

#### **3.6.1 Multicollinearity**

The current research work used the correlation coefficients coupled with determinants of variance inflation to assess the presence of multi-collinearity. As Kothari, (2004) asserts, multicollinearity is a circumstance in which independent variables relate with one another to a greater extent, therefore causing interference with the coefficients and making the interpretation and comprehension of the study findings difficult, hence invalidating the significance of the tests. On the other hand, VIF reveals the extent at which standard errors increase as a consequence of multicollinearity. The coefficients are then checked whether they exceed or are less than 0.8 and in case of VIF, the value must be at least 5. This observation is also supported by Gujarati (2003) who also explains that the availability of multicollinearity among the variables was not realised since the independent variables have their coefficients less than 0.8 thresholds.

#### **3.6.2 Test Normality**

In assessing the normality of the research data set, the test was carried out to establish whether independent variables and their respective regression coefficients showed non-skewness. Normal distribution should neither be too flat (platykurtic) nor should it be excessively steep (leptokurtic). It should also not be negatively or positively skewed and in case of absence of non-normality of the data with the estimators, interference may be witnessed in efficiency and statistical tests thereby rendering the data invalid (Green, 2008). High skewness and kurtosis of the values shows the likelihood of abnormality in data spread. Kerlinger, (2011) similarly illuminates that when the value of skewness exceeds 3, and the value of kurtosis exceeds 10, then the data may be rendered abnormal.

### 3.7 Variables Measurements

**Table 3.2: Variables Description Table**

<b>Variable type</b>		<b>Measurement of variables</b>
Dependent Variable	Economic Growth of Kenya	▪ Gross Domestic Product (GDP)
Independent variable	Stock Market Performance	▪ Stock Turnover Ratio ▪ Stock Market Capitalization ▪ Stock Traded Value ▪ Stock Market Index ▪ Number of Listed Securities
Intervening Variables	Determinants of Economic Growth	▪ Government spending ▪ Import –export (net export)

## CHAPTER FOUR: ANALYSIS AND DISCUSSING

### 4.1 Introduction

This chapter presents the results of the analysis of the study data based on the research objective. The results are discussed based on the guiding objectives. The objective of the study was to determine the effects of stock exchange performance on Economic growth of Kenya.

### 4.2 Diagnostic Tests

The study conducted a diagnostic assessment to certify the presumptions of regression model. This exercise was significant given that any desecration of these assumptions could result into invalid results got from regression analysis. Therefore, the specific tests that were run were multicollinearity test and normality test as illustrated below:

#### 4.2.1 Multicollinearity Test

The study carried out Multicollinearity test to verify that none of the predictor variables were highly correlating with each other, aside from than the dependent variable (economic growth). This was done through the analysis and assessment of Variance of Inflation Factor (VIF) as shown specified in Table 4.1.

**Table 4.1 Multicollinearity Test**

	Collinearity Statistics	
	Tolerance	VIF
Stock Turnover Ratio	.943	1.038
Stock market capitalization	.941	1.067
Stock Traded Value	.953	1.041
Stock Market Index	.964	1.053
Listed Securities	.985	1.049
<b>Mean VIF</b>	<b>.957</b>	<b>1.050</b>

**Source: Research Findings (2021)**

Table 4.1 illustrates the average value of VIF to be 1.050 which was within the range of 1-5. Similarly, all the VIF values for the individual predictor variables were within the range on 1-5. From these findings, it can be deduced that no severe multi-collinearity effects was witnessed within the predictor variables. It therefore implies that the challenges associated with multi-collinearity was not there among the independent variables, thus allowing confident interpretation of the results.

#### 4.2.2 Normality Test

The present study tested normality of the secondary data through Skewness and Kurtosis approach and the findings was as presented in Table 4.2. The reason for this test was to ensure that the secondary data gathered was and utilised for the analysis was normally distributed.

**Table 4.2 Normality Test**

	N	Skewness		Kurtosis	
		Statistic	Std. Error	Statistic	Std. Error
Economic Growth		1.756	.221	1.264	.311
Stock Turnover Ratio	63	1.344	.221	1.462	.311
Stock market capitalization	63	1.296	.221	1.362	.311
Stock Traded Value	63	1.361	.221	1.442	.311
Stock Market Index	63	1.452	.221	1.362	.311
Listed Security	63	1.612	.221	1.561	.311
Mean	63	1.470	.221	1.409	.311

**Source: Research Findings (2021)**

Table 4.2 gives the mean value of Skewness as 1.470 while that of Kurtosis as 1.409. This is also supported by Kothari (2004) who also recommends that Value of Skewness and Kurtosis should be within the range of + or – 2 to signify that the data is normality in the data. Therefore, the data used in this study was normally distributed since the mean values of Skewness and Kurtosis meet the threshold.

### 4.3 Secondary Data on Stock Market Performance and Economic Growth Trend

Data for the study was secondary data obtained from analysis of the stock exchange performance and economic growth indicator from KNBS statistical abstract and World Bank. Data was analysed for a 10 year period from 2010 to 2020 covering Stock turnover ratio (STO) Stock Market capitalization (MC), Stock Traded Value (TVL), Stock Market Index (MI) and Listed Securities (LS) from analysis of the Nairobi Securities Exchange Performance and Economic Growth statistics from the Statistical Abstract. Data extract is presented in Table 4.3

**Table 4.3: Stock Market Performance and Economic Growth Indicators from 2010 to 2020**

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Economic Growth	8.41	6.12	4.56	5.88	5.36	5.72	5.88	4.81	6.32	5.37	-0.31
Stock Turnover Ratio	8.3	8.1	5.5	7.9	6.8	7.5	8.1	6.4	7.4	7.4	2.3
Stock market capitalization	44.9	30.3	36.3	37.9	36.7	41.8	38.2	40.6	38.7	40.9	47.3
Stock Traded Value	8.3	7.1	4.4	6.5	4.9	6.3	6.6	4.8	7.4	6.2	2.6
Stock Market Index	3379	3163	4323	4259	4178	4399	3847	3264	4029	4132	2827
Listed Securities	55	58	60	61	65	64	63	64	65	68	66

### 4.4 Regression Analysis

Regression analysis was adopted for the study. The overall econometric model to be adopted was  $Y = f(x)$  in which case the overall equation was given as:

$$y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5$$

Where:

Y represents Gross Domestic Product

$\alpha$ - constant

$\beta_1 - \beta_5$ - coefficients

$X_1$  - Turnover Ratio

$X_2$  - Market Capitalization

$X_3$  - Traded Value

X<sub>4</sub> - Market Index

X<sub>5</sub> - Number of Listed Securities

Thus, multiple regression approach was performed with Economic growth Indicator as the Dependent variable while various stock exchange performance indicators were the independent variables. The findings of the regression analysis were as tabulated in subsequent tables. Table 4.4 exhibits model summary.

**Table 4.4 Model Summary**

Model	R	R <sup>2</sup>	Adjusted R Square	Standard Error of the Estimate
1	.741 <sup>a</sup>	.549	.545	.15624

**Source: Research Findings (2021)**

Table 4.4 depicts that the value of R square is .549; implying that 54.9% change in economic growth in Kenya assessed through GDP is explained by stock market performance in Kenya. The findings similarly implies that aside from stock market performance indicators, (Turnover Ratio, Market Capitalization, Traded Value, Market Index and Number of Listed Securities) there are also other factors that affect the economic growth in Kenya. Table 4.5 gives the findings of the ANOVA.

**Table 4.5 Analysis of Variance**

	SS	df	MS	F	Sig.
Regression	46.67	5	9.334	17.446	0.000 <sup>b</sup>
Residual	31.03	58	0.535		
Total	77.70	63			

**Source: Research Findings (2021)**

Table 4.5 reveals that, the value of F was 17.446 with p-value as 0.000 which was (p<0.05). This implies that stock market performance significantly predicted economic growth of Kenya. The beta coefficients and significance results were equally computed and the summarized in Table 4.6.

**Table 4.6: Regression Analysis for Stock Market Performance and Economic Growth**

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>
Constant	2.256	5.041	0.448	0.004
Stock Turnover Ratio	0.825	0.420	1.964	0.007
Stock Market Capitalization	0.045	0.064	0.713	0.008
Stock Traded Value	0.240	0.416	0.577	0.039
Stock Market Index	0.001	0.001	1.044	0.344
Number of Listed Securities	-0.126	0.074	-1.698	0.150

$R^2 = 0.744$ , Adj.  $R^2 = 0.689$ , F-stat. (5, 5) = 17.01 (p=0.004)

The regression coefficient table show that only STO (p = 0.007), MC (p = 0.008) and TVL (p = 0.039) with  $p < 0.05$  significantly influence economic growth. However, stock market index and number of listed securities did not have significant influence on economic growth ( $p > 0.05$ ). Moreover, the number of listed securities had a negative influence on economic growth. Based on the result, the model obtained by including only significant terms are reduced to:

$$y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 \text{ where}$$

$X_1$  - Turnover Ratio

$X_2$  - Market Capitalization

$X_3$  - Traded Value

By replacing the coefficients of the significant terms, the equation becomes:

$$y = 2.256 + 0.825X_1 + 0.045X_2 + 0.024X_3$$

Thus, only three indicators of stock market performance influence economic performance of a country.

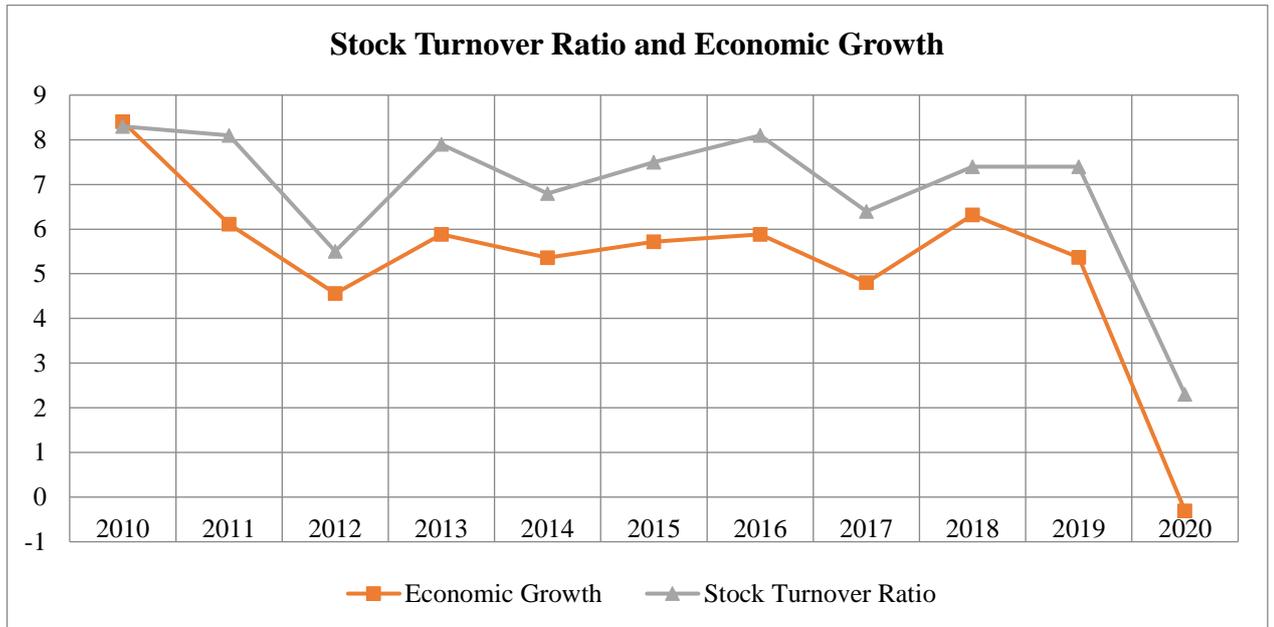
#### **4.5 Descriptive Analysis**

In order to understand how each of the variables with statistically significant influence on economic performance actually affects the performance, descriptive analysis was

conducted. This was achieved through a trend analysis comparing each indicator against economic growth.

#### 4.5.1 Stock Turnover Ratio and Economic Performance

Trend analysis for STR and Economic Performance is presented in Figure 4.1.



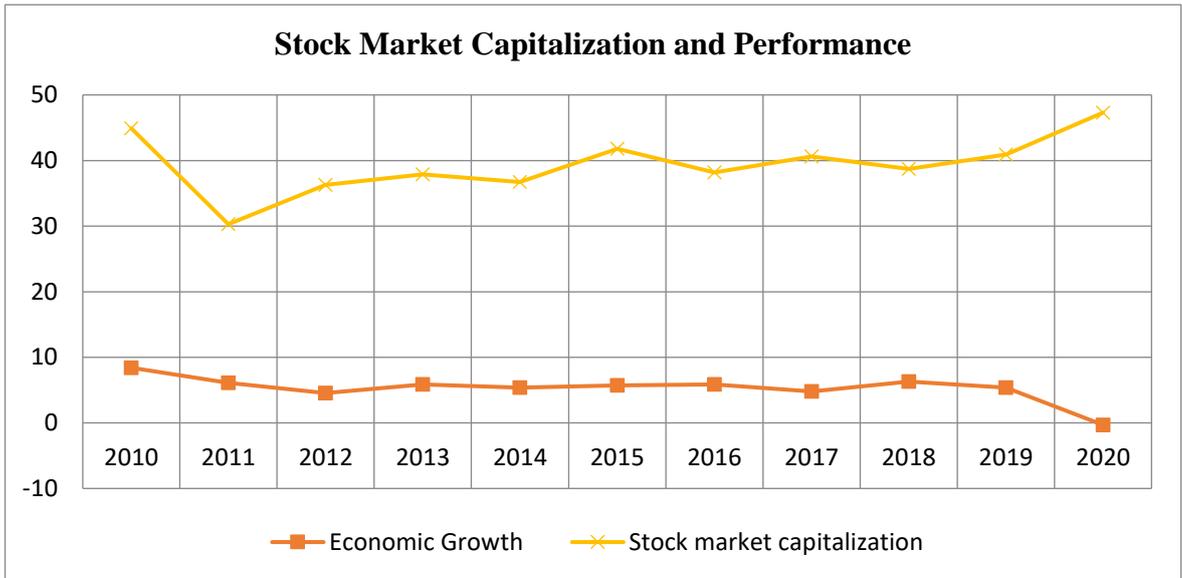
**Figure 4.1 Stock Turnover ratio and Economic Performance**

*Source: NSE annual reports and accounts, KNBS annual economic surveys*

Figure 4.1 shows that Stock turnover Ratio for NSE mimic's the trend for economic growth. The two parameters decline from 2010 to 2012 before relatively rising up to 2016. There is equally a noticeable decline in 2017 before recording a rise in 2018. The two parameters attain there all time low in 2020.

#### 4.5.2 Stock Market Capitalization and Economic Performance

Trend analysis for SMC and Economic Performance is presented in Figure 4.2.



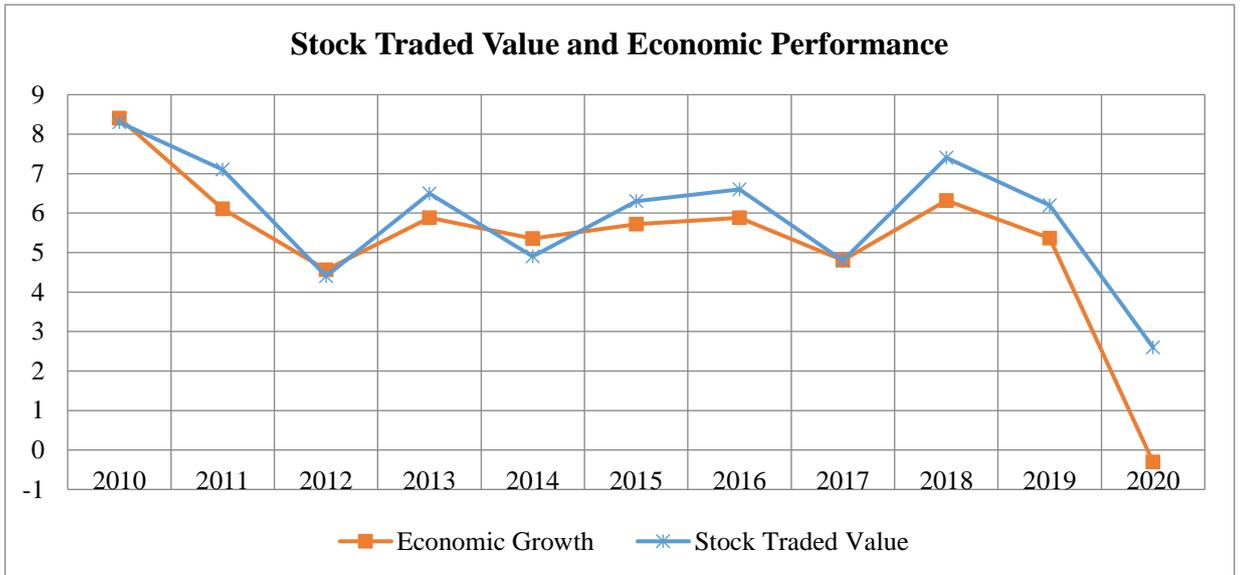
**Figure 4.2: Stock Market capitalization and Economic Performance**

*Source: NSE annual reports and accounts, KNBS annual economic surveys*

From the trend analysis in Figure 4.2, although values of Stock Market Capitalization were generally higher than those of economic trend, they followed the same pattern especially between 2012 and 2018 when the values were almost consistent. Further, there was a decline from 2010 to 2011 for MC and economic growth. However, whereas economic growth declined from 2019 to 2020, MC increased to its highest peak.

#### **4.5.3 Stock Traded Value and Economic Performance**

Trend analysis for Stock Traded Value (TVL) and Economic Performance is presented in Figure 4.3.



**Figure 4.3: Stock Traded Value (TVL) and Economic Growth**

*Source: NSE annual reports and accounts, KNBS annual economic surveys*

From the trend analysis in Figure 4.3, stock traded value (TVL) is almost superimposed onto economic growth. Thus, the variables move consistently with a decline from 2010 through to 2012 before rising in 2013, declining in 2014 and again rising in 2015 and 2016. The greatest decline in the two parameters is witnessed in 2020 when they reach an all-time low.

#### **4.6 Discussion of Research Findings**

Based on the research findings, it emerges that economic growth in Kenya (GDP) is reflected in the stock market performance. Thus, there is a significant relationship between stock market performance indicators and economic growth. Specifically, Stock Turnover ratio, Stock market Capitalization and Stock Traded Value significantly influence economic growth. However, Market Index and sum of listed business firms do not influence economic growth. Increased traded stock value and stock turnover implies increased level of economic activity thus contributing to GDP. These findings were in agreement with that of Kiptoo (2020) in his study on the influence of stock market growth on economic progress and similarly found that market capitalization had

a positive but insignificant influence on economic development implying that market capitalization may not be a practical conduit for economic progression this is due the fact that stock markets in developing markets are small. However, total traded shares and turnover had positively and significantly influenced the economic growth as justified by the fact that highly liquid stock markets permits investors to faster increase their portfolio and majorly making business venture less likely to be risky by enhancing capital distribution which in turn enhances the prospect of economic development. Similarly, in a study carried out by Nyamongo et al., (2018) on how development of stock market influences economic progress of Kenya, they also found that market capitalization and liquidity were positively and significantly relating with economic advancement.

The decline and increase in performance of various indicators across the years from 2010 to 2020 is indicative of the business environment and external factors affecting. Specifically, there is a decline in performance between 2011 and 2012 as well as between 2016 and 2017. This coincides with election cycle in the country which leads to unpredictability in the market. However this decline is similar for both periods and the recovery is almost identical. This shows that the market is developing consistent response behaviour by predicting the instability and recovery after the elections.

The greatest decline in the performance indicators (Stock Market and GDP) was recorded in 2020. This year corresponds to the outbreak of COVID 19, with the pandemic leading to closure of economic due to containment measures. The level of trade declined globally and locally with leading to decline in economic growth.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter provides a summarised study findings. The summary is based on the study objective. The chapter provides conclusions, recommendations for both policies and for further studies.

#### **5.2 Summary**

The study investigated the effect of stock market performance on economic growth. Thus, secondary data from the NSE was used to determine performance of stock market while statistical data from KNBS on economic performance were used to determine economic performance. All 63 firms listed at NSE were used as the sample and secondary data obtained from their annual reports. Descriptive statistics and inferential statistics were used for analysis. Specifically, regression helped in determining the relationship between the study variables.

The findings show that stock market performance significantly affected the economic performance as measured by GDP. Specifically, stock turnover ratio, stock market capitalization and stock traded value have statistical significant effect on a country's performance. However, market index and number of listed securities had no statistically significant effect on performance. From trend analysis, the economic performance is affected by other external factors which affect trading. Key to this is the electoral process where performance indicators showed a decline during those election years of 2012 and 2017. However, other unforeseen health issues such as COVID 19 also affected trading thus affecting performance.

### **5.3 Conclusion**

The study concluded that stock market performance indicators had a substantial effects on economic performance as assessed by GDP. Particularly, stock turnover ratio, stock market capitalization and stock traded value significantly and statistically influence economic growth of a country through its GDP. However, market index and number of listed securities as stock market performance indicators have no statistical significant or meaningful effect on economic growth of a country. It is therefore safe to conclude that there is a link between stock market performance and economic performance of a country, hence making it possible to predict economic performance based on stock market performance.

### **5.4: Recommendations**

The government through various institutions should encourage the culture of savings among its citizens which is directly proportional to investments by putting in place conducting policies which will encourage the citizens to save. Consequently, the citizens will be able to buy stock and invest in the Capital markets which eventually enhance economic growth. Due diligence should be performed to ensure stable securities are listed in the market to ensure stability of prices and eliminate unpredictability.

### **5.5 Limitations of the Study**

The analysed theories in the present study failed to consider the role of stock, market in upholding economic growth hence a research gap. However, this study shows a connexion between stock market performance and economic performance of a country but fails to show the effect of the same. Basically, the present study only shows that stock market performance is an indicator of GDP but not influencing GDP hence the limitation.

## **5.6 Suggestions for Further Research**

This study has shown that the stock market performance predicts economic performance. The sample size was small which may suffer from data scarcity in the regression analysis. Further research should be conducted using increased sample size. This can be achieved through a comparative study for various other countries with similar characteristics to Kenya.

## REFERENCES

- Aboudou, K. and Tachiwou, P (2010). Stock market development and economic growth: The case of selected African Countries. *African Development Review*, 18(1),
- Adjasi, K . D and Biekpe, N.B (2016). Stock market development and economic growth: The case of selected African Countries. *African Development Review*, 28(1),
- Agarwal, S., (2011) “*Stock Market Development and Economic Growth: Preliminary Evidence from African Countries*
- Ake, B &Ognaligui, R, W. (2010). Financial Stock market and economic growth in developing countries: The case of Doula Stock Exchange in Cameroon. *International Journal Business and management*, 5(5),
- Alajekwu,U. B., & Achugbu, A. A. (2011). The Role of Stock Market Development on Economic Growth in Nigeria: *A Time Series Analysis. African Research Review*.
- Arestis, T., and Demetriades, P. (2020). Financial Development and Economic Growth: The Role of Stock Markets," *Journal of Money, Credit and Banking*, 2001, pp. 16-41.
- Atje, R. and Jovanovic, B. (2013). ‘Stock markets and development’, *European Economic Review*, 37 (6)
- Baboo, N., (2009) Determinants of Economic Growth: A Cross-Country Empirical Study’, Cambridge, MA: *Working Paper Series WP5698*.
- Beck, T. and Levine, R. (2020). ‘Stock markets, banks, and growth: correlation or causality?’ Policy Research Working Paper 2670, Washington DC: World Bank.
- Capoasso, G.M (2006). Stock Market Development and Economic Growth: The Causal Linkages, *Journal of Economic Development*, 29(1):
- Caporale, G. M., and Spagnolo A. M., (2011). Stock Market Development and Economic Growth: The Causal Linkages, *Journal of Economic Development*, 29(1)
- Ikikii, S. and Nzomoi, J. (2020). An Analysis of the Effects of Stock Market Development on Economic Growth in Kenya. *International Journal of Economics and Finance*. 5. 10.5539/ijef.v5n11p145.
- Ikikii, S.M & Nzomoi, J.N (2020). An analysis of the effect of stock market development on economic growth in Kenya. *International Journals of Economics and Finance*, 5 (11),
- King, R.G. and Levine, R., (2018). "Finance and Growth: Schumpeter Might Be Right," *Quarterly Journal of Economics*, 108(3),
- Kiptoo, J., (2020). Macroeconomic determinants of stock market development in emerging markets: *Research Journal of Finance and Accounting*, 108(3),
- Kithinji, G and Ngugi. R., (2010). Financial sector development and economic growth for African countries. KIPPRA Discussion Paper No. 99, Nairobi.

- Levine, R. and Zervos, S. (2018). 'Stock markets, banks and economic growth', *American Economic Review*, 8: (5)
- Levine, R., (2015) "Stock Markets, Growth, and Tax Policy," *Journal of Finance*, 46(4),
- Mahtadi, H. and Agarwal, S., (2000). Stock Market Development and Economic Growth: Evidence from Developing Countries.
- McKinnon, R. I. (1973). *Money and Capital in Economic Development*. Washington, DC: Brookings
- Nairobi Stock Exchange. (2019). Annual Reports. Nairobi: Nairobi Stock Exchange
- Nazir, M.S, Nawaz, T and Gilani, K. (2019). Relationship between economic growth and stock market development, *African journal of business management*, 3(7)
- Nyamongo, E. M., Misati, R. N., Kipyegon, L., and Ndirangu, L. (2018). Remittances, financial development and economic growth in Africa. *Journal of Economics and Business*, vol. 8 (12)
- Nyanaro, E. and Elly.D (2019) The Relationship between Stock Market Performance and Economic Growth in the East African Community, *African development finance journal*, Vol1 No.1, (20)
- Odhiambo, N.M (2004). Financial Depth, savings and economic growth in Kenya: A dynamic Casual Linkage, *Economic Modelling*, 25 (4):
- Osaze, B. E. (2007). *Capital Markets: African & Global*. Nigeria: Bookhouse Company.
- Owiti, J. (2012). *The relationship between stock market development and economic growth in Kenya*. University of Nairobi, Kenya.