THE EFFECT OF SELECTED FACTORS ON THE DEVELOPMENT OF NAIROBI SECURITIES EXCHANGE

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DECLARATION AND RECOMMENDATION

Declaration

I hereby declare that this research project is my original undertaking that was identified based on my own study, research and observation, and to the best of my knowledge it has not been presented elsewhere for examination purposes.

Signature: ______________________________ Date: ________________

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Recommendation

This research project has been submitted for examination with my approval as the university supervisor.

Supervisor

Signature: ______________________________ Date: ________________

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DEDICATION

I would like to dedicate this project to my brother Joshua, for always being my inspiration.

ACKNOWLEDGEMENT

First I would like to thank God for giving me good health and guidance throughout the period I was working on this project. Sincere thanks to Egerton University for the opportunity and also to all academic and non-academic staff. Many individuals have made this project feasible including my supervisor Dr. Fredrick Kalui, without his input this project would not have been a success, my sincere regards. Lastly, I want to acknowledge my family and friends for their encouragement moral and intellectual contributions towards the success of this project. You have been a source of strength and inspiration that has seen me come this far.

ABSTRACT

This study aimed to find out the effect of selected factors on the development of the Nairobi Securities Exchange. The general objective of this study was to determine the effect of selected factors on the development of the NSE. The specific objectives were to determine the effect of market information; market efficiency; market transparency; market openness; transaction processing system and operating/transaction cost; legal and regulatory framework on the development of the NSE. Both primary and secondary data collection methods were used. A structured data collection questionnaire was used to collect data on market infrastructure factors. The population of study was the Nairobi Securities Exchange. Secondary data was collected on market capitalization from 2006 to 2015 which was used as the indicator of NSE development. This study used a descriptive research design to describe the empirical data. A regression model was used for data analysis and hypothesis tested with a 0.05 significance level. The regression results of the study indicated that the predictor variables in the regression model explained 80.19% of the variation in development of the NSE; where a unit increase in market information leads to a 0.382 increase in NSE development, a unit increase in Market efficiency leads to a 0.097 increase in NSE development, a unit increase in Market transparency leads to a 0.348 increase in NSE development, a unit increase in Market openness leads to a 0.368 increase in NSE development, a unit increase in Transaction processing system and Operating/transaction cost leads to a 0.507 increase in NSE development and a unit increase in Legal and regulatory framework leads to a 0.226 increase in NSE development. Given the effect of the predictor variables on NSE development, the government should improve the market infrastructure which is the center on which financial market revolves. This can be done through initiation of policies that foster growth and development as countries liberalize their financial systems and further enhance domestic resource mobilization, public education awareness programmes, elimination of excessive barriers to the market and putting in place tax regimes and incentives geared towards stimulating companies to be listed in the stock market. Public education awareness programme. This study is of great importance to researchers and academics, government policymakers, regulators and investors and the results should lead to the creation of an enabling environment, development of good regulatory framework and thus faster development of the securities market.

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LIST OF ABBREVIATIONS

ADB - African Development Bank

CDS - Central Depository System

CMA - Capital Market Authority

FDI - Foreign Direct Investments

GDP - Gross Domestic Product

NSE - Nairobi Securities Exchange

SPSS - Statistical package for social sciences

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The financial market handles the exchange of assets and is made up by several separate markets for various types of asset classes. Capital markets provide trading services for long-term securities such as shares and bonds with a maturity of more than one year. Other markets include money markets for shorter-term bonds; currency markets for foreign exchange; commodities markets where anything from metals to grain is traded; mortgage markets for property debt; and derivatives markets with products based on the underlying assets of all previously mentioned markets and more (Saunders, 2004).

Financial markets play a fundamental role in the economic development of a country by facilitating the flow of funds from savers to investors and thus mobilizing domestic savings and efficiently channelling them into productive investments. Financial intermediation between borrowers and savers can be done through equity financing which is only possible through the development of capital markets which deal with securities and are associated with financial resource mobilization on a long term basis. The securities market forms a significant component of the financial sector of any economy (Ochieng, 2014).

Capital markets allow for wider ownership among the public and provide an effective vehicle for making investment choices which suit investors' preferences of risk and returns based on available information; thus capital markets help the economy generate more savings and productive investments. An efficient capital market should have constant liquidity and easy entry and exit by investors which requires sufficient volume and size of transactions in the market (Aduda, Masila & Onsongo, 2012).

A well-functioning capital market facilitates the allocation of capital to productive use in companies by encouraging the placement of shares and bonds in the primary market. It gives investors an efficient means of buying or selling assets in a liquid secondary market, and it requires companies to provide accurate information to investors to facilitate them to make sound investment decisions and by doing so promotes good corporate governance. A typical capital market comprises of the following institutions: Banks, insurance companies, mutual funds, mortgage funds, finance companies and stock markets. A stock market is a financial institution where securities are bought and sold (Fauziah Wan Yusoff, 2015).

Capital markets are expected to accelerate economic growth by boosting domestic savings and increasing the quantity and quality of investment. Thus a well-organized capital market is crucial for mobilizing both domestic and international capital and for serving as a medium for transferring part of the business ownership of foreign corporations to the citizens. Central to the efficient functioning of a capital market is the development of the securities market. In particular, capital markets encourage economic growth by providing an avenue for growing companies to access capitals at lower cost (Chepkoiwo, 2011).

Emerging capital markets are financial markets that reside in the low or middle income economies or where the ratio of investable market capitalization to Gross National Product is low. The International Finance Corporation (IFC) defines an emerging market as one which is found in a developing country (IFC, 1994). According to Emerging Economies Report, The Centre for knowledge Societies give examples of emerging markets as India, China, Indonesia, South Africa, Kenya, Egypt and Brazil (Joshi et al. 2008).

Ellefsen, (2004) noted that emerging capital markets show the following characteristics which distinguish them from developed Capital market. First, market size in emerging markets is far smaller than developed markets. The overall size of their economies and the size of their financial market in relation to their economies as a whole is relatively small compared to developed countries. The market is not open to all as foreign investors are restricted and there is also an ownership restriction. There is market inefficiency in emerging market as new information is not quickly reflected in the securities prices. The policy enrolments in many emerging markets are very unstable and investors in emerging market are particularly concerned about the case of capital movement owing to emerging markets spotty liquidity. Other characteristics include low market activities (few companies keep the market active) few market intermediaries, lack of electronic trading, no qualified personnel of emerging capital markets.

The securities market plays significant role in any economy, according to Stijn (1995) and Munga (1974) as quoted by Basweti (2002), a stock market acts as a vehicle for raising capital for firms and it takes on a large role in developing countries, where privatization of state corporations is taking place. Most companies and governments of the developing countries have turned to the stock market as an avenue raising capital to finance various projects.

The proponents of securities markets emphasize the importance of having a developed securities market in enhancing the efficiency of investment. A well-functioning securities market is expected to lead to a lower cost of equity capital for firms and allow individuals to more effectively price and hedge risk, attract foreign portfolio capital and increase domestic resource mobilization, expanding the resources available for investment in developing countries. Recognizing the importance of securities market on economic growth, prudential authorities such as World Bank, IMF and ADB undertook stock market development programs for emerging markets in developing countries during 80s and 90s and they found that, emerging securities markets have experienced considerable development since the early 1990s (Masila, 2010).

The securities market is one of the most important sources for companies to raise funds as it enables businesses to be publicly traded thus raise additional capital in a public market. An attractive feature of investing in stocks, is the liquidity an exchange provides enables investors to quickly buy and sell securities. An economy where the stock market is on the rise is considered to be an up-and-coming economy as the stock market is often considered to be the primary indicator of a country's economic strength and development. Exchanges also act as the clearinghouse for each transaction, meaning that they collect and deliver the shares, and guarantee payment to the seller of a security. This eliminates the risk to an individual buyer or seller that the counterparty could default on the transaction (Caster, 2014)

Kenya’s capital market has come a long way since the country’s independence in 1963.The capital market now comprise of; the trading debt and equity over the Nairobi Securities Exchange(NSE); debt capital markets(bonds); development financial institutions (DFI’s) and pension funds. (Chepkoiwo, 2011). The NSE was incorporated under Companies act of Kenya 1991 as a company limited by guarantee and without a share capital (NSE, 2016). In Kenya, the capital market has not played its role in capital mobilization, though if properly organized it could be a source of much needed capital necessary for, economic growth (Wagacha 2001). Additional supply of capital is urgently required to maintain the momentum of the growth in GDP.

NSE is today poised to play an important role in the Kenyan economy: It facilitates the mobilization of capital for development and provides savers in Kenya with an alternative sawing tool, it can also be used by the government and local authorities as an alternative source of funds to increasing taxes in order to finance development projects and is used as an instrument of privatization and also as an avenue of liberalization of sectors previously dominated by the government (Chepkoiwo, 2011). However, as an emerging capital market, NSE has faced challenges to its development and growth. This study therefore looked at the effect of selected factors on the development of the NSE and to makes the necessary recommendations.

1.2 Statement of the Problem

The securities market plays a vital role in economic prosperity by fostering capital formation they help in efficient allocation of credit in the economy. The benefits of well-developed markets are numerous; facilitating higher savings rate of the working population, offering of variety of securities to as many people as possible, flow of foreign direct investment into long established or recently introduced companies, they facilitate the flow of resources to the most productive investment opportunities, redistribution of wealth in the economy and improved corporate governance through increased transparency, increase the level and sophistication of financial intermediation in an economy while offering to the investing public a variety of financial products and promote economic growth through increased access to savings and risk diversification (Sejjaaka, 2011).

Despite the apparent advantages of a well-developed securities market, the growth of the securities exchange in Kenya has been relatively slow, and has especially received a poor response from private companies wishing to raise capital (Wagacha, 2001). In Kenya, like in most developing economies, the capital market has not played its role in capital mobilization, though if properly organized it could be a source of much needed capital necessary for, economic growth (Chepkoiwo, 2011).

The government of Kenya, in realizing the importance of the securities market, instituted various measures including automation, removal of capital gains tax and establishment of a regulatory body called Capital Market Authority (CMA) in the late 1980s, despite all these apparent benefits and measures instituted by the government at different times, performance indicators show that the NSE hasn’t yet performed to its full potential compared to other securities markets. These include: low turnover ratio, low market capitalization to GDP ratio and low value of stock (Angko, 2013).

Most studies on the development of Nairobi Securities Exchange including Basweti (2002), Chepkoiwo (2011), Aduda, Masila & Onsongo, (2012), have often focused on the macroeconomic factors and no study has devoted much attention to market infrastructure factors. The need for a quicker development of a well-organized and functioning capital market is extremely important, and in light of this knowledge gap, a better understanding of the effects of selected factors on the development of Nairobi Securities Exchange was of vital importance.

1.3 Objective of the Study

1.3.1 General Objective of the study

The general objective of the study was to determine the effect of selected factors on the development of Nairobi Securities Exchange.

1.3.2 Specific Objectives of the Study

i. To determine the effect of market information and on the development of Nairobi Securities Exchange.
ii. To determine the effect of market efficiency on the development of Nairobi Securities Exchange.
iii. To determine the effect of market transparency on the development of Nairobi Securities Exchange.
iv. To determine the effect of market openness on the development of Nairobi Securities Exchange.
v. To determine the effect of transaction processing system and operating/ transaction cost on the development of Nairobi Securities Exchange.
vi. To determine the effect of legal and regulatory framework on the development of Nairobi Securities Exchange.

1.4 Research Hypothesis

H_{O1}-Market information does not significantly affect the development of Nairobi Securities Exchange.

H_{O2}-Market efficiency does not significantly affect the development of Nairobi Securities Exchange.

H_{O3}-Market transparency does not significantly affect the development of Nairobi Securities Exchange.

H_{O4}-Market openness does not significantly affect the development of Nairobi Securities Exchange.

H_{O5}- Transaction processing system and operating/ transaction cost does not significantly affect the development of Nairobi Securities Exchange.

H_{O6}-Legal and regulatory framework does not significantly affect the development of Nairobi Securities Exchange.

1.5 Significance of the Study

This study adds onto the growing body knowledge of securities market development in developing countries in Africa as it shows how a number of factors affect securities market development in Kenya. The study is important to the government policy makers in their quest to develop the financial and securities market in Kenya as the results point to the areas that need further review in order to develop the securities market in Kenya. The results of the study are also important to researchers and academics as they offer an insight on the modeling aspects of factors affecting securities market development in Kenya and suggest areas that need further research by scholars in this area.

It also helps the regulators to determine good regulatory framework which will facilitate the faster development of the capital market through policies and regulations which will create and enhance an enabling environment. The regulators include CMA, NSE and the government. The study findings also assist investors with an opportunity of knowing the constraints facing the market and its future prospects.

1.6 Scope of the Study

This study focused on the effect of selected factors on Nairobi Securities Exchange development, therefore was limited to the Kenyan market. The scope was limited to the market infrastructure factors with the macroeconomic variables as the moderating variable. The factors studied included market information, market efficiency, market transparency, market openness, transaction processing system and transaction/operating cost and legal and regulatory framework. This study covered ten years from 2006 to 2015 where the dependent variable, market capitalization ratio, was recorded for the entire ten-year period on average annual basis.

1.7 Limitations of the Study

A financial system is highly complex, and its performance is determined by how well its institutions carry out their functions and also by a number of domestic macroeconomic, political and other factors. Furthermore, no economy today exists in a vacuum, but interacts with regional and global markets. These interactions make it impossible to study one function, or one institution, in isolation. At the same time, the complexity makes it impossible to exhaustively study the entire system. When studying a specific aspect of financial markets, a balance must be found between limitations for convenience and inclusions for completeness. It would therefore be of interest to study several countries in different stages of economic development, but in order to get to a level of detail that allows for relevant conclusions and specific recommendations; the time and resources available for this study limited it to a field study in a single country.

Also secondary data was used in the data collection which is subject to limitation. Secondary data has the limitation of: data being out of date, incomplete data, incompatible format for internal comparison and data inaccessible. The study used only licensed brokerage firms excluding other stakeholders; this limited the study further since other stakeholders can also contribute to the study. The study used regression analysis method only whereas there are other methods to be considered. Using various methods enhances good interpretation of the factors in consideration.

1.8 Operational Definition of Terms

Stock Market- The market in which shares of publicly held companies are issued and traded either through exchanges or over-the-counter markets. Also known as the equity market, the stock market is one of the most vital components of a free-market economy, as it provides companies with access to capital in exchange for giving investors a slice of ownership in the company.

Securities exchange: A form of exchange which provides services for stock brokers and traders to buy or sell stocks, bonds, and other securities. They also provide facilities for issue and redemption of securities and other financial instruments, and capital events including the payment of income and dividends.

Emerging capital markets: financial markets in low or middle income economies or where the ratio of investable market capitalization to Gross National Product is low. A market which is found in a developing country.

Market capitalization: the total dollar market value of all of a company's outstanding shares. Market capitalization is calculated by multiplying a company's shares outstanding by the current market price of one share.

Development: this refers to the act or process of growing or causing something to grow or become larger or more advanced. Indicators of market development include stock market size as represented by market capitalization and the number of listed companies, stock market liquidity, stock market performance/volatility, stock market concentration and stock market linkage to real sector performance. Other proxies of market development are market traded value, and market turnover. This study will focus on market capitalization as the proxy for securities market development. The study focuses on market capitalization rather than constructing a composite index of securities market development because market capitalization is a good proxy for such general development and it is less arbitrary than any other index. Therefore, in this study development means the growth of the market in terms of market capitalization.

Market information: the communication or reception of knowledge or intelligence about the market. The information could be past, present or future about securities trading in the market

Market efficiency: This refers to the degree, to which the present asset price accurately reflects current information in the market place, i.e. any new information about any given firm is known with certainty, and is immediately priced into that company's stock.

Market transparency: this is the extent to which investors have ready access to any required financial information about a company such as price levels, market depth and audited financial reports. A transparent market is one in which price and supply information is readily available to the investing public.

Market openness: An open market is an economic system with no barriers to free market activity, i.e. how easy it is for investors to enter and exit the market. Market openness refers to the relaxation of government restrictions in the market. For instance, how easy it is for investors, both local and foreign to enter and exit the market.

Transaction/ operating cost: these are the expenses incurred when buying or selling securities. They include brokers' commissions and spreads. The transaction costs to buyers and sellers are the payments that banks and brokers receive for their roles in these transactions.

Transaction processing system: this refers to an information processing system for business transactions involving the collection, modification and retrieval of all transaction data.

Legal and regulatory framework: a system of regulations and the means to enforce them, usually established by a government to regulate a specific activity. A regulatory framework can have varying meanings, but it commonly pertains to tax information, necessary regulations and other important information, like relevant rules, laws and regulatory bodies.

Moderating Variables: A moderating variable is a variable that changes (increases or decreases) the otherwise established effect of the independent variable upon the dependent variable. Macroeconomic and fiscal environment were the moderating factors as they affect the development of the NSE but they are not being studied, and for purposes of this study they'll be held constant.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examines the literature relevant to the study; the objective of the study was to determine the effect of selected factors on the development of Nairobi Securities Exchange. This chapter explores the theoretical models of stock markets, empirical findings of other research studies on the same subject. The literature under review was obtained from journal articles, websites and text.

2.1 Theoretical Framework

2.1.1 The Efficient Market Hypothesis

Through provision of market liquidity which enables implementation of long term projects with long term returns, securities markets promote a country's economic growth. Efficient markets avail resources to investors and facilitate inflow of capital into the domestic economy. Though debt and equity markets are not thriving, the credit market has played a significant role in financing investment while deposits form a significant proportion of the financial asset basket (Ngugi et al 2009).

The Efficient Market Hypothesis (EMH) is a theory developed by Eugene Fama which states that asset prices fully reflect all available information. Since stocks always trade at their fair value, it is impossible for investors to outperform the overall market through expert stock selection or market timing, and that the only way an investor can possibly obtain higher returns is by chance or by purchasing riskier investments. There are three variant forms of market efficiency; weak, semi-strong and strong. Weak EMH states that prices on traded assets reflect all past publicly available information. In a Semi-Strong EMH prices reflect all publicly available information and that prices instantly reflect new public information. Strong EMH states that prices instantly reflect every hidden information (Burton, 1996).

According to the EMH therefore all stocks are perfectly priced and all market participants possess this knowledge equally. This theory is important to this study since the confidence investors have on the efficiency of the market may have an effect on them investing in it and thus its development.

2.1.2 The Agency Theory

Agency theory is a management and economic theory that attempts to explain relationships and self-interest in business organisations. Agency theory originates from the problems of risk sharing between principal and agents. It describes the relationship between principals and agents and delegation of control. It explains how best to organise relationships in which one party (principal) determines the work and which another party (in this case the agent) performs or makes decisions on behalf of the principal (Schroeder et al., 2011).

The value of institutions to shareholders results from their regulation of transactions and agency costs. Governance indicators reflect the ability of institutions to effectively minimize these costs, which are ultimately born by shareholders. These indicators compose measures of the stability of governments, the proper regulation of markets, and the degree of corruption; all of which shape the ability of institutions to govern the financial markets. Better governance environments can increase returns to shareholders by reducing both transaction costs and agency costs (Hooper et al, 2005).

Principal-agent relationships are characterized by uncertainty and risk. The openness and integrity of financial disclosures is vital to the operation of the securities market in determining a company's share-price and its underlying market valuation. In a principal-agent relationship, there are bound to be conflicts for example between corporate managers, stockholders, and creditors; and thus the analysis of these conflicts and their resolutions increases the understanding of the survival of many contractual practices. The agency theory provides a useful tool for detailed analysis of the determinants of the complex contractual arrangement found in most of the modern corporations, for instance in the case of investors investing in securities markets through brokerage firms and thus this theory is important to this study (Smith & Jensen, 2000).

2.1.3 The Arbitrage Pricing Theory

Developed in 1976 by Stephen Ross as an alternative to Capital Asset Pricing Model (CAPM), the Arbitrage Pricing Theory (APT) is a theory of asset pricing that holds that the expected return of a financial asset can be modelled as a linear function of various factors or theoretical market indices, where sensitivity to changes in each factor is represented by a factor-specific beta coefficient. And thus it uses a multifactor model to calculate the expected return for a security based on the security's sensitivity to movements in multiple macroeconomic factors (Maina, 2013).

The arbitrage pricing theory is based on three assumptions: a factor model can be used to describe the relation between the risk and return of a security, idiosyncratic risk can be diversified away and efficient financial markets do not allow for persisting arbitrage opportunities. APT assumes an asset's return is dependent on various macroeconomic, market and security specific factors and that the resultant expected return can then be used to price the security (Ross, 1976).

Because it includes more factors, the arbitrage pricing theory can be considered more accurate, and thus relevant to this study as it allows the user to adapt the model to the security being analyzed and it helps the user decide whether a security is undervalued or overvalued and so he or she can profit from this information. APT is also very useful for building portfolios because it allows managers to test whether their portfolios are exposed to certain factors (Maina, 2013).

2.2. The Nairobi Securities Exchange (NSE)

The Nairobi Securities Exchange was established in the 1920's by the British as an informal market for Europeans only. It was incorporated to a company in 1954, with Africans being allowed to join and trade in the market in 1963 and operated through the telephone with a weekly meeting at the Stanley. At the dawn of independence, stock market activity slowed down due to uncertainty about the future Kenya after independence but after three years of stability and economic growth, confidence in the market was rekindled and the exchange handled a number of highly over- subscribed public issues only affected by the oil crisis of 1972, which introduced inflationary pressures on the economy which depressed share prices and when a 35% capital gains tax was introduced in 1975 (suspended since 1985) inflicted further losses to the exchange. The bourse lost its regional character following the nationalizations, exchange controls and other inter- territorial restrictions introduced in neighbouring Tanzania and Uganda (The NSE Market Fact File, 2016).

In the 1980s the Kenyan Government realized the need to design and implement policy reforms to foster sustainable economic development with an efficient and stable financial system. It set out to enhance the role of the private sector in the economy, reduce the demands of public enterprises on the exchequer, rationalize the operations of the public enterprise sector to broaden the base of ownership and enhance capital market development. In 1984 an IFC/CBK study, "Development of Money and capital Markets in Kenya", became a blueprint for structural reforms in the financial markets, culminating in the formation of a regulatory body- The Capital Markets Authority (CMA) in 1989, to assist in the creation of an environment conducive to the growth and development of the country's capital markets (Bitok et al., 2015).

The NSE was registered under the Companies Act in 1991 and phased out the "call over" trading system in favour of the floor- based "open Outcry System". Subsequently the stock exchange embarked on an extensive modernization exercise, including a move to more spacious premises at the Nation Centre in July 1994. The facilities included a modern information centre. The improvement of market infrastructure through the development of an automated central clearing settlement and depository system (CDS) intended to serve the East African region. With the incorporation of the central Depository & settlement corporation, share trading became electronic via the Central Depository System. This contributed to increased turnover. The Electronic Trading System (ETS) recently implemented (2007) is also expected to increase turnover and efficiency at the bourse (Gichangi, 2014).

The Nairobi Securities Exchange has played an increasingly important role in the Kenyan economy, especially in the privatization of state- owned enterprises. Public enterprises have been successfully privatized through the NSE where the government has raised billions of shillings. The first privatization exercise was the sale of 20% government stake in Kenya Commercial Bank. Kenya airways followed in 1996. To encourage FDIs, the government introduced several incentives for capital markets growth including tax free Venture Capital Funds, removal of capital gains tax on insurance companies' investments, allowance of beneficial ownership by foreigners in local stockbrokers and fund managers (Bitok et al., 2015).

For the first time since the formation of the NSE, the number of stockbrokers increased with the licensing of 8 new brokers. In 1995, The Kenyan Government relaxed restrictions on foreign ownership in locally controlled companies subject to an aggregate limit of 20% with any single holding not exceeding 2.5%. To help encourage foreign portfolio investments these were doubled to 40% and 5% respectively in the June 1995 budget. The entire Exchange Control Act was repealed in December 1995. Seven more stockbrokers are licensed, bringing the number to twenty from the original six (one of which still survives) at the inception of the exchange in 1954. Commission rates were reduced considerably from 2.5% to between 2% and 1 % on a sliding scale for equities and 0.0625% for all fixed interest securities. Kenya adopted International Accounting Standards (IAS) in 1999 (The NSE Market Fact File, 2016).

Implementation of live trading on the automated trading systems (ATS) at the NSE commenced in September 2006 and trading hours increased from two to three hours, 10:00 am – 1:00 pm. Other innovations included the removal of the block trades board and introduction of the functionality for the trading of rights in the same manner as equities. Besides trading equities, the ATS is also fully capable of trading immobilised corporate bonds and treasury bonds. The anticipated benefits of the new system include greater transparency in the placement of bids and offers. The system will also improve market surveillance and transmit almost in real time, trading information relating to index movements and price and volume movements of traded securities. More current information will become readily available to a wider constituency of our stakeholders, facilitating the decision making process and lowering the risk of participating in our markets. As such the Exchange views a situation where it will soon have an opportunity to enhance its revenue streams through information vending to our stakeholders (Masila, 2005).

A memorandum of understanding (MoU) between the Nairobi Stock Exchange and Uganda Securities Exchange on mass cross listing was signed in November 2006 allowing listed companies in both exchanges to dualist thus enhancing growth and development of the regional securities markets. Some of NSE’s listed companies that have dual- listed include: Kenya Airways, East Africa Breweries and Jubilee Holdings. Benefits that accrue to cross listed companies include: access to a wider capital base across the region, a regional presence, resulting in a wider acceptance and recognition of the company brand across the region by company stakeholder- shareholders, employees, customers and regulators) and the prestige of a regional listing (The NSE Market Fact File, 2016).

NSE facilitates the mobilization of capital for development and provides savers in Kenya with an alternative saving tool. Funds that would otherwise have been consumed or deposited in bank accounts are redirected to promote growth in various sectors of the economy as people invest in securities. NSE can also be used by the government and local authorities as an alternative source of funds to increasing taxes in order to finance development projects.

NSE is used as an instrument of privatization and also as an avenue of liberalization of sectors previously dominated by the government (Okoyo, 2012).

The Nairobi Securities Exchange (NSE) demutualisation in 2014 marked the beginning of a period of rapid innovation in East Africa's capital markets. The NSE and the CMA took a series of steps to support long-term growth in the exchange as part of the Capital Markets Master Plan (2014-23). Among the initiatives rolled out were new products to boost liquidity and help attract more domestic retail investors, given that only 4% of the population currently participates in the local market. These included exchange-traded funds (ETFs) launched in the first quarter of 2016, derivatives market, new securities settlement platform that features functionalities such as same-day trading, settlement services for government securities, and securities lending and borrowing to facilitate short-selling and other investment strategies. The government also sought to encourage activity on the capital markets in other ways, including rolling back a capital gain tax (CGT) which was reintroduced at 5% on equities and bonds in 2015, reduced to 0.3% withholding tax(The NSE Market Fact File 2016).

The dependable variable of interest was Nairobi Securities Exchange development. Indicators of market development include stock market size as represented by market capitalization and the number of listed companies, stock market liquidity, stock market performance/volatility, stock market concentration and stock market linkage to real sector performance. Other proxies of market development are market traded value, and market turnover. Indices used at the NSE include the NSE ALL share index, NSE 20 share index, FTSE NSE Indices (FTSE NSE Kenya 15 index, FTSE NSE Kenya 25 index, FTSE NSE Kenya government bond index and FTSE ASEA Pan African Index) and Denis. NSE development was measured using market capitalization as a proportion of GDP. This measure equals the value of listed shares divided by GDP. The assumption behind this measure is that the overall market size is positively correlated with the ability to mobilize capital and diversify risk on an economy wide basis. Market capitalization was used as a proxy for development rather than constructing a composite index of market development because market capitalization is a good proxy for such general development and it is less arbitrary than any other index. Secondly, the most traded security at the NSE is shares so market capitalisation is the best proxy. In addition, Demirguc-Kunt and Levine (1996b) have shown that different individual measures and indexes of stock market development are highly correlated (Job, 2014).

2.3 Emerging Capital Market Development

Emerging economies use of capital markets relative to their GDP continues to trail behind that of more developed countries yet they could offer investors higher returns than those available in developed countries, and these returns are likely to be weakly correlated with returns in developed markets, thus creating a diversification benefit. Given their low initial income levels, continued capital flows could support an extended period of economic growth. These effects could operate in tandem, thus giving investors higher expected returns and lower risks. Capital markets with a sound financial infrastructure are essential to guide capital to its most productive uses worldwide (Wyman, 2015).

Capital markets play an important role in promoting economic activity worldwide by facilitating and diversifying firms' access to finance. At the macro level, deepening capital markets, which have ample liquidity and developed secondary markets, are also reshaping the developing world, driving wealth creation and the emergence of powerful regional trading blocs. In emerging economies, the benefits that accrue to national economies as capital markets growth and deepen are potentially greater, but they are also particularly sensitive to a host of institutional variables, including competition, protection of minority investors and overall business productivity. Because of this, supporting the development of capital markets usually involves a broad and ambitious program of reform (Laeven, 2014).

Development of emerging capital markets offers several benefits to borrowers, investors and governments. They provide for better risk sharing and a more efficient allocation of capital and improve the implementation of fiscal, monetary, and exchange rate policy. The development of capital markets can improve the availability of long term financing, allowing households and firms to better manage interest rate and maturity risk associated with long-term investments and also improve access to local currency financing. They allow for financial deepening alongside the development of banking markets, improving the efficiency of capital allocation in the economy. When opened to foreign investments, capital markets increase financial integration by attracting foreign capital, which can lower the cost of capital for local firms and household and improve risk sharing across countries. This could also improve market access and relieve credit constraints on small and medium-sized enterprises. Finally, the development of emerging capital markets can enhance financial stability by enhancing the ability of financial institutions to manage risk (Laeven, 2014).

2.4. Macroeconomic and Fiscal Environment

The macroeconomic environment should be conducive to the supply of good quality securities and sufficient demand for them. The demand for and supply of securities is crucially linked to the state of the macroeconomy. The macroeconomic factors include; inflation, interest rate; foreign exchange rates; government expenditure. If the macroeconomy is conducive to profitable business operation, a sufficient number of sound businesses can develop to a stage where access to securities markets is useful for their continued growth. This means that if there are not sufficient profitable businesses with good prospects for the future, there is little reason to have a securities market. (Osei, 1998).

Macroeconomic environment was the moderating variable for this study. Moderating variable is a variable that changes (increases or decreases) the otherwise established effect of the independent variable upon the dependent variable. Therefore, for purposes of this study, macroeconomic and fiscal environment are factors that affect the development of the NSE but they are not being studied, and as such are the moderating variables.

2.4.1 Interest Rate

An increase in the interest rate results in falling stock prices due to the fact that high interest rate increases the opportunity cost of holding money, causing substitution of stocks for interest bearing securities hence falling stock prices. Interest rate is one of the important macroeconomic variables and is directly related to economic growth. From the point of view of a borrower, interest rate is the cost of borrowing money while from a lender's point of view; interest rate is the gain from lending money. The interest rate is expected to be negatively associated to stock returns (Talla, 2013).

The Treasury bill rate is often used as the measure of interest rate because investing in Treasury bill is seen as opportunity cost for holding shares. High-treasury bill rates encourage investors to purchase more government instruments. Treasury bills thus tend to compete with stocks and bonds for the resources of investors. The expected relationship between stock prices and Treasury bill rates is thus negative. High interest rates decrease the present value of future cash flows, thus reducing the attractiveness of investment. Therefore, according to economic theory, the increase in interest rates should lead to a drop in stock prices (Adam & Tweneboah, 2009).

2.4.2 Foreign Capital Investment

Foreign capital inflows can make significant contributions to the host country's economic growth and development by lessening and cushion shocks resulting from low domestic saving and investment. FDI can have a positive impact on growth by engaging domestic capital accumulation. Strong domestic investment performance is a sign of high returns to capital, which in turn will attract more foreign capital. FDI also has potential to enhance growth of domestic firms through complementarily in production and productivity spill overs. Private capital flows as percent of GDP are used to measure foreign direct investment (Ezeji,Chijindu & Uzoamaka, 2015).

Yartey (2008) shows the influence of private capital flows as a determinant of stock market development. He highlights the impact of foreign investors and how they have become major participants in emerging stock markets in the last few decades. Foreign investment has been noted to be associated with institutional and regulatory reform, while also providing for strict disclosure requirements and fair trading practices. Overall, this increase in both informational and operational efficiency will boost confidence in the local markets, which in turn will result in an increase in the number of investors (Irungu, 2015).

2.4.3 Consumer Price Index (CPI)

Consumer price index is used as a proxy for inflation. Inflation refers to a rise in the general level of prices which reduces the real value of money, thereby reducing the expected cash inflow from an asset, exceptions being inflation-indexed securities. Investors who own securities are exposed to changes in inflation, since their payment at the end of period depends on inflation during the holding period. Thus, inflation is expected to affect negatively the stock prices. Along with full employment, maintaining low inflation is the main economic policy task in most countries (Benaković & Posedel, 2010).

The relationship between inflation and stock returns can be positive or negative depending on whether the economy is facing unexpected or expected inflation. Expected inflation happens when demand exceeds supply, causing an increase in prices to stimulate more supply, which would also increase their earnings which would lead to them paying more dividends and hence increase the price of their stocks as well. On the other hand, when inflation is unexpected, an increase in price will lead to the increase in cost of living and this will shift resources from investment to consumption. Indeed, as inflation increases, nominal interest rates will also increase. The discount rate used to determine intrinsic values of stocks will therefore increase, and thus this will reduce the present value of net income leading to lower stock prices. Moreover, if the price elasticity of demand for the firm´s products is high, a rise in inflation may cause a decline in a firm's sales and net income, and thus its stock price. This negative relationship between unexpected inflation and stock prices is hypothesized by Fama (1981) as a function of the relationship between unexpected inflation and real activity in the economy (Talla, 2013).

2.4.4 Banking Sector Development (BSD)

Banking sector is key player in the economic development process. Major players in the sector are commercial banks, Non-Financial Banking Institutions (NFBIs), the retirement benefits institutions, and the development finance institutions. To strengthen the financial sector, the government pledges to reform the sector and play only regulatory role. These reforms are aimed at making credit and other financial services affordable and encourage savings in order to provide a basis for economic growth and eradication of poverty (Aduda, Masila & Onsongo, 2012).

Securities markets and banks may be complements or substitutes as they both intermediate savings towards investment. In light of its complementary role, an efficient banking system would help to facilitate the transaction procedures by improving the clearing and settlement process, thus reducing transactions costs and the time frame to settle. However, if the banking system had to be underdeveloped, sluggish trading activity may be experienced in the market. As such, investors who wish to diversify their funds in an effort to obtain a lower-risk portfolio may spread their savings between the banking sector and the stock market (Irungu, 2015).

2.4.5 Tax Policy

In an imperfect financial market, one of the factors that influence firms' choice of financing is the taxation of income. If the fiscal policies are not favourable, the market will be drastically affected. Different rates influence how investors will invest their funds (Wagacha, 2004). Specifically, with respect to emerging capital markets, there seems to be clear causality from fiscal policy to capital market behaviour. However, it has been argued that the impact of taxation on the capital market depends on the stage of market development (Brean, 1996).

Differences in effective tax rates on income from different financial instruments can influence how investors make their financial and investment decisions (Osei, 1998). He argues that differences also determine whether an individual should invest in securities or whether a corporate body should raise funds though equity or debt instruments. Therefore, high tax rates may discourage investors from investing in financial instruments. Taxation and other government fees raise the new issue barriers by increasing the transaction costs for new listings in the stock market in South Africa. In addition, discriminatory tax policies, including personal income taxes, tax on dividends, tax on firm profits as well as on different financial assets, render inefficient the mobilization of domestic savings through the capital market (Chepkoiwo, 2011).

2.5 Effects of Market Infrastructure factors on the Development of Nairobi Securities Exchange

There are two basic building blocks necessary for a thriving securities market: a macroeconomic and fiscal environment and a market infrastructure (Pardy, 1992).The market infrastructure should be capable of supporting efficient operation of the securities market. i.e., the securities market should operate in an efficient, fair and stable manner. Market infrastructure factors were the independent variables for this study. There are institutional infrastructure factors and legal and regulatory factors. The institutional infrastructure provides the operational basis for the market. It relates to intermediaries that provide trading, investment management and financial advisory services; market and market-related service providers for stock exchanges, over-the-counter markets, market information services, transaction clearance and settlement systems, and securities transfer, registration and custody; and providers of ancillary services such as accounting and auditing, legal advice, and financial valuation and debt rating services. They include market information, market efficiency, market openness, market transparency and operating system and operating/transaction costs (Osei, 1998).

2.5.1 Market Information and NSE Development

Kimura and Amoro, (1999) argue that the major factor contributing to poor performance of the NSE is general lack of awareness and information on the role, functions and operations of the stock exchange. For companies, the question is not so much lack of knowledge but a concern that the risks associated with additional disclosure are not adequately compensated by additional returns. Public disclosure of relevant information about securities is important for both pricing efficiency and market confidence. In emerging markets, there are many barriers to the dissemination of information and information asymmetries are profoundly found in these markets (Chepkoiwo, 2011).

In markets for publicly offered securities, investor access to information pertaining to their prospective investments is more limited than that of professional intermediaries. Investors can therefore be protected by the compulsory disclosure of financial data and other relevant information relating to the issues of securities which facilitates increased investors' confidence in the stock markets. A company that raises funds from the public must be required to disclose sufficient information to allow an educated investor to make a reasoned investment decision so that the aggregate of investors' decisions may be a good assessment of a company's worth. This requires an effective legal infrastructure to specify and enforce disclosure standards for all companies issuing securities for the public. Those companies that have securities listed for secondary trading on a market such as a stock exchange should be subjected to additional disclosure requirements imposed as listing rules (Bitok, Tenai, Bitok & Chenuos, 2015).

2.5.2 Market Efficiency and NSE Development

Chuppe and Atkin (1992) argue that information asymmetries abound in financial markets. The managers of a firm know more about that firm's market prospects and investment opportunities than do outsiders. Financial market professionals often have access to information that is not widely available. In an unregulated market, the possibility exists that unsuspecting investors will be harmed by those with access to information not available to the public at large. This is important for the economy because lack of public confidence in securities markets would cause the supply of funds to the markets to dry up, thus depriving the economy of the benefits of a functioning market. The authors further observe that these information asymmetries are the basic justification for a large number of regulations. Disclosure requirements for public companies must ensure that financial information is available for investors in a way that facilitates inter-company comparisons. It must be noted, however, that disclosure is only effective if there are good accounting standards in place, standards that allow investors to assess the financial health of enterprises (Bugalama, 2013).

Also a study by Cheung and Krinsky, (1994) confirmed under-pricing of securities by investment banks in an environment of information asymmetry. In addition, banks tend to indirectly discourage the stock exchange as a means of raising capital since they play the dual role of being investment advisors as well as lenders. For the stock exchange itself, there is both inadequate marketing of itself as well as lack of a sufficient number of products to attract the investing public (Chepkoiwo, 2011)

2.5.3 Market Transparency and NSE Development

Transparency of trading and other procedures allows efficient price setting and confidence in the fairness of the market. The degree to which markets are transparent and competitive affect investors' ability to gain information and develop performance expectations. Though all markets exhibit varying degrees of transparency, emerging markets are likely to be less transparent than developed market. Fragmented or privately conducted trading with limited disclosure of quantity and price means that each new transaction in effect must be based on relatively expensive search costs and there is a risk of the transaction going out of line with prevailing prices. Opaque trading procedures engender suspicion of market manipulation and may reduce the rate of investment and most of the dealings done through brokers can enhance limited disclosure of some vital information which can lead to of market manipulation (Osei, 1998).

2.5.4 Market Openness and NSE Development

Markets can either be open or closed to foreign investors. Excessive barriers especially to foreign investors like the Kenyan 25% rule where investors are to allow the locals to own 25% of holding in any foreign investment in Kenya hampers the development of any securities exchange. Bruner et al (2003) studied 33 developing countries to ascertain the extend of market openness in those countries and noted that only 18 out of 33 listed as emerging markets are 100% open to foreign investment and the remaining 15 markets are either closed to foreign investment or having varying restrictions on foreign ownership. The most common restriction includes; special classes of shares for foreign owners; limits on foreign ownership; limits on ownership held by a single foreign shareholder; company imposed limits that differ from national law; and national limits on aggregate foreign ownership. Demirgug& Levine (1996) finds that the restriction placed on foreign investors on the above restrictions constrain the performance of the capital market. However, the restrictions vary from one country to the other (Chepkoiwo, 2011).

2.5.5 Transaction Processing System and Cost and NSE Development

The transaction clearance and settlement system contributes to the development of the securities market, a factor that was being addressed in Kenya with the introduction of the CDS system (Chepkoiwo, 2011). The operating-transaction costs should be within acceptable limits aimed at minimizing costs in order to maximize returns. Unreasonably high costs of transactions will affect market development since investors aim at minimizing cost to increase their returns. For companies going public through share issue and subsequently seeking listing on the exchange, the main costs are: underwriting fee, legal and accounting expenses, brokerage commissions, cost of printing and advertising prospectus and fees for the NSE. The cost of going public as percentage of capital raised decreases as more capital is raised. It is also cheaper to raise capital through private placement than through public issue (Osei, 1998).

For individuals buying and selling shares on the stock exchange, the main cost is brokerage commissions. A latent cost is the interest forgone when payment is made to the broker while the investor waits, sometimes for a couple of weeks or more, before the stock is purchased. (Osei, 1998).

2.5.6 Legal and Regulatory Infrastructure and NSE Development

The regulatory infrastructure relates not only to the government body that has the power and responsibility to supervise the market, but also includes self-regulatory organizations such as stock exchanges, accounting standards boards, and accounting and auditing professional associations and similar organizations. It also includes their rules and regulations, procedures, and facilities such as stock exchange listing and trading rules or accounting and auditing standards, plus the monitoring and enforcement of these rules (World bank, 1992).

The legal infrastructure provides the basis for the operational and regulatory framework. It provides for property rights, contractual relationships, forms of incorporation, and rights and responsibilities of participants in the market. It also specifies the powers and responsibilities of the government supervisory authority and self-regulatory organizations. Legal and broader institutional environment plays an important role in the development of the financial markets as they protect investors, clearly define property rights and support private contractual arrangements thet are crucial for adequate functioning of financial markets. Empirical evidence shows that regulations that protect creditors and minority investors are associated with deeper and more active financial markets, increased valuations, lower concentration of ownership and control, greater dividends pay-out (Torre & Schmukler, 2007).

Beck (2000), an empirical study done in Brazil observed that legal environment is the first impediment to financial system development. He found a strong relationship between the financial development and legal environment. Levine (1999) also found a strong link between legal environment and financial development. In order to facilitate capital development in the emerging market, the legal environment should be favourable. The environment should have laws and regulations which are not prohibitive in nature. In Kenya, CMA has been mandated to regulate the capital market (Chepkoiwo, 2011).

Currently, there are multiplicity of regulators and regulations in Kenya governing the capital market. They include the Central Bank of Kenya, Capital Markets Authority, Retirement Benefits Authority and Commissioner of Insurance. All these bodies enact policies that affect the development of the stock Market. The Capital Markets Authority as the regulatory agency must alter its approach from the sometimes heavy-handed type of control to a more proactive, creative and supportive role in order to assist in the creation of a more vibrant and forward looking capital market environment by seeing itself as a catalyst in development rather than as a traditional regulator of what is a very small market (Capital Markets Authority, 2016)

2.6 Empirical studies

Several researchers have centred their empirical studies on the securities market development and this has been intensively examined in both emerging and developed capital markets.

Pagano (1993) in financial markets and growth finds that regulatory and institutional factors may influence the efficient functioning of stock markets. For example, mandatory disclosure of reliable information about firms may enhance investor participation, and regulations that instil investor's confidence in brokers should encourage investment and trading in the stock market.

Morland (1995) in the study on where have all the emerging markets gone, he noted that stock market development in Africa is still not complete despite the positive and encouraging development in the restructuring of African financial systems. South Africa excluded, the emerging stock market in Africa are by far the smallest of any region, both in terms of numbers of listed companies and market capitalization. Moreover, the listed companies consist mostly of foreign firms a reflection of the weak, private system in these countries.

Demirguc-Kant and Levine (1996) observed that economics with strong information disclosed laws internationally accepted accounting standards and unrestricted international capital flow tend have more liquid markets. Developing markets are characterized as having a low level of liquidity, high information asymmetry and thin trading because of their weak institutional infrastructure.

Osei (1998) analysed the factors affecting the development of an emerging capital market with a specific focus on the Ghana stock market. The study looked at the institutional factors affecting the development of the Ghana stock market. The study found and concluded that the most significant factors impinging on the development of the Ghana stock market as far as the local people are concerned are lack of national awareness, lack of knowledge about stock markets and low incomes of the bulk of the people.

Bhattacharya et. al. (2001) analyse the causal relationship between the stock Market and three macroeconomic variables in India`s case using the Granger non-causality. These macroeconomic variables are: exchange rate, foreign exchange reserves and trade balance. The results suggest that there is no causal linkage between stock prices and the three variables under consideration.

Bruner et al (2003) in the study on investing in emerging markets studied 33 developing countries to ascertain the extend of market openness in those countries. Using regression analysis, they present several empirical observations on the pricing of stocks and market integration. They noted that only 18 out of 33 listed as emerging markets are 100% open to foreign investment and the remaining 15 markets are either closed to foreign investment or having varying restrictions on foreign ownership.

El-Wassal (2005) investigated the relationship between stock market growth and economic growth, financial liberalization, and foreign portfolio investment in 40 emerging markets between 1980 and 2000. The result showed that economic growth, financial liberalization policies, and foreign portfolio investments were the leading factors of the emerging stock markets growth.

Yartey and Adjasi (2007) in their study on macroeconomic and institutional determinants of stock market development in Africa found that a percentage point increase in financial intermediary sector development tends to increase stock market development in Africa by 0.6 points controlling for macroeconomic stability, economic development, and the quality of legal and political institutions.

Ben Naceur et al. (2007) examined the macroeconomic determinants of stock market development in the MENA region. Using an unbalanced panel data from 11 MENA countries (over 1979-1999) and employing fixed and random effects specifications, they found that saving rate, credit to private sector, the ratio of value traded to GDP and inflation change are the important determinants of stock market development.

Yartey (2008) study on examining the macroeconomic and institutional determinants of stock market development. Using a panel data of 42 countries over 1990 to 2004, he found that income level, gross domestic investment, banking sector development, private capital flows, and stock market liquidity are important determinants of stock market development. He also provides evidence that institutional factors such as law and order, political risk, and bureaucracy quality are important determinants of stock market development.

Cherif and Gazdar (2010) studied the influence of macroeconomic environment and institutional quality on stock market development. The study used both panel data and instrumental variable techniques, using data from 14 MENA countries over the period of 1990-2007. The study found that income level, saving rate, stock market liquidity, and interest rate influence stock market development with the expected theoretical signs. The study also found that the institutional environment as captured by a composite policy risk index does not appear to be a driving force for the stock market capitalization in MENA region.

Mohammad (2011) in the study of the impact of changes in selected microeconomic and macroeconomic variables on stock returns in Bangladesh using Multivariate Regression Model examines monthly data for all the variables under study covering the period from July 2002 to December 2009. The study found a negative relationship between stock returns and inflation as well as foreign remittance while market Price/Earnings and growth in market capitalization have a positive influence on stock returns. However, no unidirectional Granger Causality is found between stock returns and any of the independent variables and the lack of Granger Causality reveals the evidence of an informally inefficient market.

Sejjaaka (2011) in challenges to the growth of capital markets in underdeveloped economies, the case for Uganda and using panel regression models, the correlation and regression results conclude that there is a need to improve levels of disclosure by firms because these firms occupy an important place in the business space. As firms' disclosure improves, so will their readiness to go IPO and firms need to legitimize their business so as to increase their acceptability as investment vehicles for mobilising private savings.

Kimura and Amoro (1999) in their study on impediments to the growth of Nairobi Stock Exchange found that there was a poor degree of correlation between economic growth and growth of the stock exchange. The former averaged 3.8% in the period 1985 – 1996 while the later averaged only 0.6% as measured by the number of quoted companies. The results indicated that a major factor is general lack of awareness and information on the role, functions and operations of the stock exchange.

Basweti (2002) in the study on factors limiting the development of emerging stock markets: The case of NSE using factor analysis established that both external (macro-economic and social cultural factors) and market (legal, regulatory and institutional) factors have constrained the development of the Kenyan stock market.

Muyundo and Kibua (2004) in their study on capital market policies in Kenya: historical trends and challenges, they showed empirically that there is a two-way causal relationship between stock market development and economic growth in Kenya and concluded that a coordinated, consistent and predictable policy must be maintained to enhance the development of the stock market.

Odundo (2004), while examining the overview and evolution of investments in sub-Saharan Africa with special reference to Kenya, observed that financial markets typically comprise of several institutions including banks, insurance, mortgage funds, finance companies and stock markets. It was also observed that, in developing countries, financial markets are dominated by commercial banks, which have not been reliable sources of long- term financing. The non-bank sources of medium and long term are generally underdeveloped. Heavy reliance on banks increases vulnerability of financial systems as exemplified by the Asian financial crisis in the 1990s'.

Chepkoiwo (2011) examines the factors affecting the development of emerging capital markets, the case of Nairobi Stock Exchange. Covering the period 2005-2010 on all listed companies in NSE and using regression analysis, the study established that 85% of stock market development is determined by: stock market liquidity, institutional quality, income per capita, macroeconomic stability-inflation, domestic savings and private capital flows and bank development.

Bitok et al., (2011) in their study on the determinants of leverage at the Nairobi Stock Exchange in Kenya, investigated the determinants of investor confidence for firms listed at

Nairobi Stock Exchange using the regression model. The results showed that political/economic stability, economic growth, and stock market liquidity play a key role in stock market development in Kenya.

Aduda, Masila & Onsongo,(2012) investigated the determinants of development in the Nairobi Stock Exchange using regression analysis. The study found that stock market liquidity, institutional quality, income per capita, domestic savings and bank development were important determinants of stock market development. The regression analysis reported no relationship between stock market development and macroeconomic stability - inflation and private capital flows.

2.7 Research Gap

While some studies have focused on the effects of factors on securities market development, very few studies have been done on the Nairobi Securities Exchange. In Kenya, the studies which have been done in the past on the same have focused only on specific macroeconomic factors and have used purely secondary data. The present study reviewed market infrastructure factors that affect the development of the NSE with the moderating variable being macroeconomic variables. Further, both primary and secondary data were used. This is a deviation from the past studies and hence this study aimed to fill that gap.

2.8 Conceptual Framework

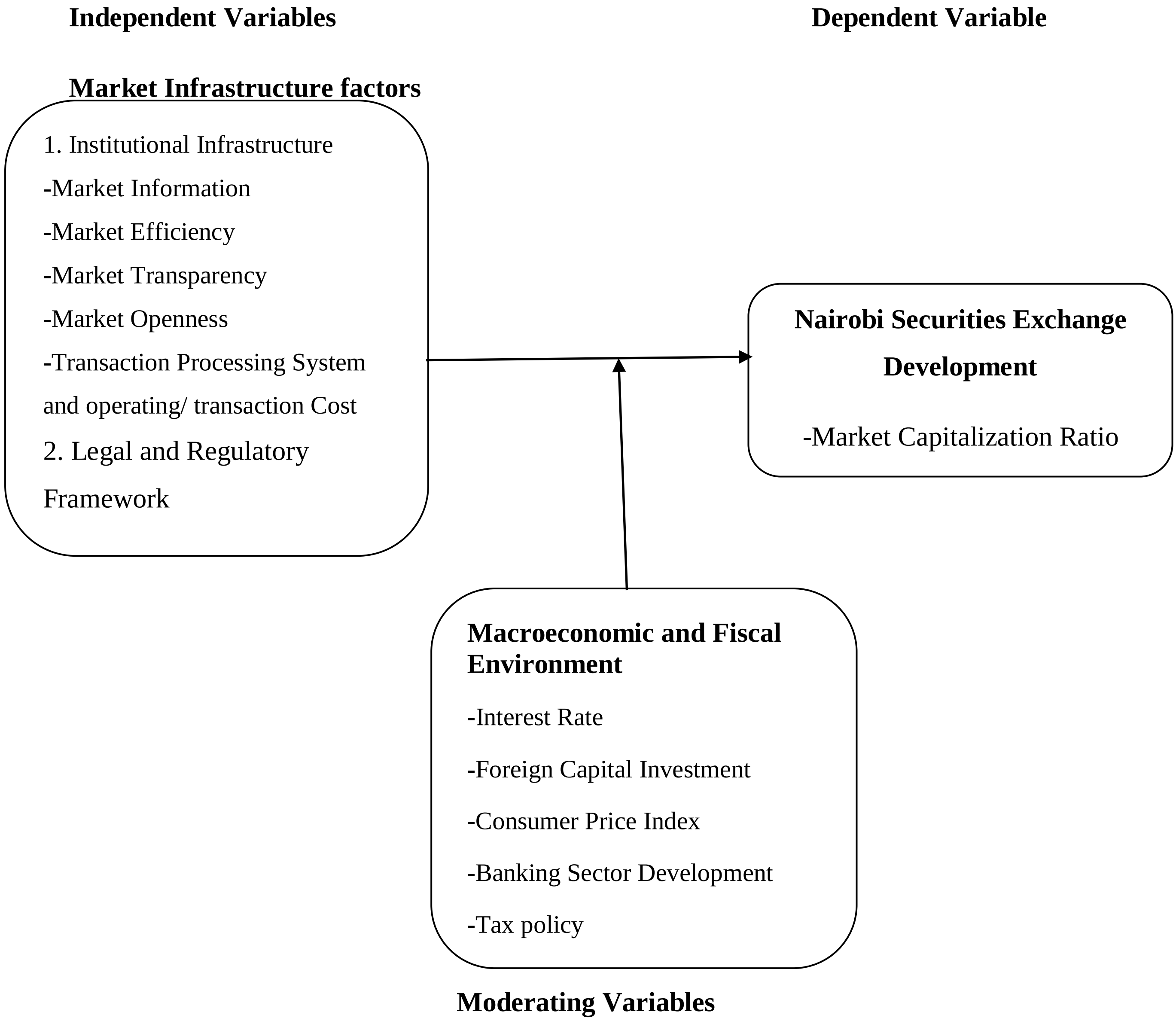


Figure 2.81: Conceptual Framework

The conceptual framework above describes the relationship between the variables under study. NSE development which was measured by market capitalization ratio is the dependent variable. The independent variables were each studied on their effects on the dependent variable with banking sector development, foreign capital investment, consumer price index interest rate tax policy as the moderating variables.

CHAPTER THREE
RESEARCH METHODOLOGY

3.0 Introduction

This chapter starts with a discussion on the research design of the study. It then discusses the population from where the data will be collected as well as the method of data collection and data analysis.

3.1 Research Design

Research design refers to a detailed outline on how the research will take place. It specifies the methods and procedures that will be used to collect and analyze data (Borg et al. 2007). A descriptive research design was used in finding out the effects of selected factors on the development of Nairobi Securities Exchange. Descriptive research design is a statistical method that quantitatively synthesizes the empirical evidence of a specific field of research. Flick (2009) notes that descriptive research design has become widely accepted in the field of finance and economics since it is proving to be very useful in policy evaluations. According to Groves (2004) descriptive technique gives accurate information of persons, events or situations.

The main reason for the use of a descriptive survey design is the aim to provide as much information on the entire population under study in relation to the effect of selected market infrastructure factors on the development of NSE. It was relevant for this study as raw data was used as collected from brokerage firms. Survey designs are of particular value to researchers seeking help on investigating and analysis interrelationships of a number of factors involved, and in which it is difficult to understand the individual factors without considering their relationships with each other (Mugenda&Mugenda, 1999).

3.2 Target Population

The target population refers to the entire group of people, events or things that the researcher intends to investigate (Borg et al. 2007). The target population for this study was the NSE as it is the ideal market for carrying out this study due to availability, accessibility, and reliability of the data and it plays an important role in economic development. In studying the NSE, the study population was brokerage firms licensed by the Capital Market Authority.

There are currently 23 licensed stock brokers with two of them placed under statutory management. The researcher carried out a census on all the 21 licensed firms (other than those placed under statutory management). For each brokerage firm, respondents were the investment and risk managers.

3.3 Data Collection Methods and Instruments

Data collection is the process of gathering and measuring information in order to be able to answer questions that prompted the undertaking of the research (Flick, 2009). The study utilized both primary and secondary data to find out the factors that affect the development of the NSE. Secondary data refers to the information that has been collected by other individuals (Cooper and Schindler, 2006). Self-administered structured questionnaire consisting of closed-ended questions were designed, and administered at one point and given to the respondents from the brokerage firms targeting two questionnaires per brokerage firm. The respondents were the investment managers and the risk managers. Secondary data was obtained from Nairobi Securities Exchange and Central Bank of Kenya. For the purpose of this study, the secondary data was obtained for a period of 10 years, spanning between years 2006 – 2015.

3.4 Data Validity and Reliability

Cooper and Schindler (2001) state that validity is a process used to establish whether research instruments indeed measure what they are supposed to measure. Content validity of the adopted research instruments was assessed through expert judgment whereby the research instruments questions were discussed with the University supervisor and changes made to ensure the collection of quality research data.

Mugenda and Mugenda (2003) state that reliability is a measure of the extent with which research instruments are able to yield consistent results after each repeated trials. In order to determine the reliability of the adopted research instruments, a pre-test was done to enable proper revision of the research instruments and for the researcher to identify sensitive and redundant items in the research instruments so as to properly seek the required research data. A pilot study was carried out in the two brokerage firms under statutory management. A Cronbach’s alpha was also used to test for homogeneity or internal consistency of the data.

3.5 Data Analysis

Since both primary and secondary data were used, descriptive statistics analysis was used. Descriptive statistics describe data on variables with single numbers while analysis of variance (ANOVA) tests for any significance difference between mean values of variables. Arithmetic mean, median, maximum, minimum and the standard deviation are some of the main descriptive statistics that were applied in data analysis.

The study used a multiple regression model to test the hypotheses of the combined effect of the six independent variables on the dependent variable. The hypothesis was tested on a 0.05 significance level. Studies by Yartey (2008) and Lazaridis and Trofornidis (2006) have used regression analysis while studying relationships among variables. The regression model below was used to determine the impact of each variable in the development of the NSE.

$y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$

Where:

y = Nairobi Securities Exchange development

β0 = Constant Term

βi= Beta coefficients

X1= Market Information

X2= Market Efficiency

X3= Market Transparency

X4= Market Openness

X5= Transaction Processing System and Operating/ Transaction Cost

X6= Legal and Regulatory Framework

e=Standard error

With the model, the study identified the values of the independent variables and predicted the future values. The statistical package for social sciences (SPSS) was used to analyze the data into frequency distribution. The primary data from the questionnaire was analyzed using descriptive statistics, particularly frequencies and percentages. Information then was generalized and summarized using tables and histograms where appropriate.

To enable analysis and clarity of the information sourced; the Likert scale values used on the questionnaire were converted into percentages with equal interval assumption (Trochim, 2006). The percentages assigned were used to define the mean of the respondents' views. This was done in order to clearly show the level of influence that each of the factors has on the development of Nairobi Securities Exchange. This was also done so as to avoid possible erroneous assumptions that may be made with reference to Likert scale values. The distribution was assigned as in table 3.1 below:

Table 3.1: Conversion of Likert Scale values

Likert Scale Description	**Likert Scale Range**	**Weight Assigned**	**Percentage Range**
Strongly disagree	1	1	0-20%
Disagree	2	2	21-40%
Neutral	3	3	41-60%
Agree	4	4	61-80%
Strongly Agree	5	5	81-100%

Source: Survey Data, author computation

3.6 Data Presentation

Qualitative information was presented using tables, charts and graphs generated based on quantitative analysis using descriptive techniques. Regression analysis results for the quantitative data were presented using tables generated by the analysis tool.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This chapter discusses the data analysis, findings, interpretations and presentation. The analysis was based on the objective of the study which was to determine the effect of selected factors on the development of Nairobi Securities Exchange. The chapter starts with data analysed using descriptive statistics, then regression analysis.

4.1 Response Rate

The study targeted all the licensed brokerage firms other than the ones under statutory management targeting two questionnaires each. Therefore, 42 questionnaires were issued. Only 34 out of the 42 questionnaires were returned so the response rate was 80.95%.

4.2 Background Information of the Respondents

The target population of the study comprised of all licensed brokerage firms at the Nairobi Securities Exchange. The data for the study was collected through questionnaires.

Table 4.2 1: Respondents Gender

Of all the questionnaires issued, the researcher managed to collect a good proportion as shown in the figure below

	Frequency	Percent	Cumulative Percent
Male	20	58.8	58.8
Female	14	41.2	100
Total	34	100	

Source: Research Data 2016

From the data presented by the figure above, the questionnaires response was good with an aggregate of 100%. The respondents were represented by Female 41.2% while Male composes of 58.8%. This implies that both genders were well represented in the study.

4.2.2 Respondents Work Experience with the Brokerage Firm

The Study also sought to investigate the work experience in their current placement in their respective brokerage firms. The results are tabulated in table below.

Table 4.2 2:Duration of Working in the Firm

	Frequency	Percent	Cumulative Percent
Below 2 Years	5	14.71	14.71
2-6 Years	19	55.88	70.59
7-10 Years	7	20.59	91.18
Above 10 Years	3	8.82	100
Total	34	100	

Source: Research Data 2016

The Study found out that 14.71% of the respondents had a working experience of less than two years. About 55.88 % of the respondent had a working experience of 2-6 years whereas 20.59% each had a working experience of 7-10 years with 8.82% having an experience of above 10 years. This implies that majority of respondents had quite some experience in the firms and thus had good knowledge on the operations.

4.2.3 Respondents Current Role in the Brokerage Firm

The study also sought to find out the current role of the respondents in the brokerage firm. The findings were as follows:

Table 4.2 3 : Current Role in the Organization

	Frequency	Percent	Cumulative Percent
Investment Manager	19	55.88	55.88
Risk Manager	15	44.12	100
Total	34	100	

Source: Research Data 2016

The Study found out that 55.88% of the respondents were investment managers with the remaining 44.12% being risk managers.These were the respondents the questionnaire targeted as they're believed to have a vast experience.

4.2.4 Respondents Experience in the Current Role

Table 4.2 4: How Long in the Current Role

	Frequency	Percent	Cumulative Percent
Below 5 Years	23	67.6	67.6
5-10 Years	10	29.4	97.1
5 Years	1	2.9	100
Total	34	100	

Source: Research Data 2016

The study found out that 67.6% of the respondents had been working in their current role for under 5 years, 2.9% for 5 years, and 29.4% for a period of between 5-10 years. This indicates that most of the respondents had some experience in their current positions.

4.2.5 Respondents Level of Education

The Study sought to investigate distribution of respondents by academic qualification. The results were as indicated in table below.

Table 4.2 5: Level of Education

	Frequency	Percent	Valid Percent	Cumulative Percent
Masters	4	11.8	11.8	11.8
Bachelors	29	85.3	85.3	97.1
Post Graduate Diploma	1	2.9	2.9	100
Total	34	100	100	

Source: Research Data 2016

11.8% of the respondents has Masters Degrees as their highest level of education, 85.3% had bachelors and the remaining 2.9% a post graduate diploma. This implies that they are knowledgeable and well trained.

4.3 Validity and Reliability of Test Results

Content validity of the adopted research instruments was assessed through expert judgment whereby the research instruments questions were discussed with the University supervisor and changes made to ensure the collection of quality research data. In order to determine the reliability of the adopted research instruments, a pre-test was done to enable proper revision of the research instruments and for the researcher to identify sensitive and redundant items in the research instruments so as to properly seek the required research data. A pilot study was carried out in one of the two brokerage firms under statutory management.

Reliability also relates to whether similar results can be obtained if another group of respondents were used. The tests for homogeneity or internal consistency were applied by examining the correlation between the individual items which showed high correlation to reflect homogeneity. (Burns & Grove, 2001).

Reliability is an indication of the stability and consistency with which the instrument measures a concept and helps to assess the goodness of the measure. In this study, Cronbach's alpha, which is a reliability coefficient, was used to indicate how well the items in the study were correlated with each other. The reliability results obtained are shown below:

Table 4.3. 1: Cronbach Alpha

Variable	Cronbach's alpha	Number of items	Comment
Market information	0.782	6	Accepted
Market efficiency	0.797	6	Accepted
Market transparency	0.86	6	Accepted
Market openness	0.718	6	Accepted
TPS & Operating/ transaction cost	0.754	6	Accepted
Legal and regulatory framework	0.769	6	Accepted

Source: Research Data 2016

The reliability results indicate that all the variables had a Cronbach's alpha above the acceptable minimum coefficient of 0.7 and good internal consistency. On average, a Cronbach's alpha of 0.780 was found indicating acceptable reliability of the data. Based on this therefore, all items were accepted and considered for the study

4.4 Descriptive Statistics Summary

4.4.1 Market Information

The result of the study indicated that market information affects the development of Nairobi Securities Exchange by 3.8 or 76%. 86% agreed that unsuspecting investors can be harmed by those with access to information not available to the public at large with 80%agreeing that the managers of a firm and financial market professionals know more about that firm's market prospects and investment opportunities than do outsiders as they often have access to information that is not widely available.

66% of the respondents agreed that investor access to information pertaining to their prospective investments is more limited than that of professional intermediaries and 88% were of the opinion that disclosure will facilitate increased investors' confidence in the stock markets.

Respondents agree that listed companies trading in NSE are subjected to additional disclosure requirements imposed as listing rules with an agreement rate of 88%. The study also revealed that information asymmetries are the basic justification for the large number of regulations at the NSE at 72% and the respondents agreed that there are still some barriers to the dissemination of information in the NSE at 58% agreement rate. The overall response was as shown in the figure below;

Table 4.4.2 : Market Information Effect on Development of NSE

Market Information	**PERCENTAGES**		
	Mean	**Mean (%)**	**STD DEV**
Unsuspecting Investors Can be Harmed	4.3	86	0.8061
Managers Know More of Financial Market	4	80	0.9996
Financial market professionals often have access to information that is not widely available.	3.5	70	1.1206
Investor Access to information pertaining to their prospective investments is more limited than that of professional intermediaries	3.3	66	1.0879
Disclosure will facilitate increased investors' confidence in the stock markets	4.4	88	0.697
Listed companies trading in NSE are subjected to additional disclosure requirements imposed as listing rules	4.4	88	0.697
Information asymmetries are the basic justification for the large number of regulations at the NSE	3.6	72	0.9173
There are many barriers to the dissemination of information in the NSE	2.9	58	1.2585
	3.8	**76**	**0.948**

Source: Research Data 2016

4.4.2 Market Efficiency

The result of the study indicated that market efficiency affects the development of Nairobi Securities Exchange by 67.8%. According to the study, 54.7% agreed that prices of securities listed at the NSE do not reflect all available information but only some and 88.2% of the respondents agreed that public disclosure of relevant information about securities is important for pricing efficiency and market confidence. The results of the study indicate a 69.4% agreement that there are some information asymmetries in the NSE with 58.8% under-pricing of securities by investment banks in Kenya. The overall response was as shown in the figure below;

Table 4.4.3: Market Efficiency Effect on Development of NSE

Market efficiency	PERCENTAGES Mean	 Mean (%)	 STD DEV
Prices of securities listed at the NSE reflect all available information	2.7	54.7	1.1094
Public disclosure of relevant information about securities is important for pricing efficiency and market confidence.	4.4	88.2	0.7014
There are information asymmetries in the NSE	3.5	69.4	0.9919
There is underpricing of securities by investment banks in Kenya	2.9	58.8	1.2046
	3.4	**67.8**	**1**

Source: Research Data 2016

4.4.3 Market Transparency

The result of the study indicated that market transparency affects the development of Nairobi Securities Exchange by 75.9%. According to the study, 67.6% of transactions are not made known to the public as 60.7% of trading is conducted privately outside the NSE. 84.7% of respondents agreed that emerging markets are likely to be less transparent than developed market. The degree of market transparency and competitive was said to affect by 85.9% the investors' ability to gain information and develop performance expectations since transparency in dealings enhance the market confidence by 89.4%.

The study also supported at 74.1%the argument that fragmented or privately conducted trading with limited disclosure leads to relatively expensive search costs and there is a risk of the transaction going out of line with prevailing prices and that Transparency of trading and other procedures allows efficient price setting and confidence in the fairness of the market by 84.2%.

The study results reveal that opaque trading procedures engender suspicion of market manipulation and may reduce the rate of investment by 77.1%. Respondents also agree that dealings done through brokers can enhance limited disclosure of some vital information and that 60% of market intermediaries in Kenya lead to market manipulation. The overall response was as shown in the figure below;

Table 4.4.4: Market Transparency Effect on Development of NSE

Market transparency	**PERCENTAGES** **Mean**	**Mean (%)**	**STD DEV**
Every transaction isn't made known to the public at the NSE	3.4	67.6	1.4145
Some trading is conducted privately outside the NSE	3	60	1.1807
Emerging markets are less transparent than developed market	4.2	84.7	0.8549
Transparency in dealings enhance the market confidence	4.5	89.4	0.7876
Degree of market transparency affects investors' ability to gain information and develop performance expectations.	4.3	85.9	0.719
Transparency of trading and other procedures allows efficient price setting and confidence in the fairness of the market.	4.2	84.2	0.82
Fragmented or privately conducted trading with limited disclosure leads to relatively expensive search costs and there is a risk of the transaction going out of line with prevailing prices.	3.7	74.1	1.0879
Market intermediaries in Kenya cause market manipulation.	3	60	1.3027
Opaque trading procedures engender suspicion of market manipulation and may reduce the rate of investment.	3.9	77.1	0.8575
	3.8	**75.9**	**1**

Source: Research Data 2016

4.4.4 Market Openness

The result of the study indicated that market openness affects the development of Nairobi Securities Exchange by 59.6%. According to the study, 32.1% of NSE is not open to all investors, local and foreign and respondents agreed at 58.8% that there are restrictions on foreign ownership at the NSE. Respondents agreed that excessive barriers to foreign investors at 69.4% including the 68.1% of the Kenyan 25% rule, hamper the development of NSE. The overall response was as shown in the figure below;

Table 4.4.5: Market Openness Effect on Development of NSE

Market openness	PERCENTAGES		
	Mean	**Mean (%)**	**STD DEV**
NSE is not open to all investors, local and foreign	1.6	32.1	1.088
There are restrictions on foreign ownership at the NSE	2.9	58.8	1.4778
There are excessive barriers to foreign investors at the NSE	3.5	69.4	1.2848
Restrictions on foreign investors constrain the performance of the capital market.	3.5	69.4	1.261
The Kenyan 25% rule affects the development of the NSE	3.4	68.1	1.2664
	3	**59.6**	**1.3**

Source: Research Data 2016

4.4.5 Transaction Processing System and Operating/Transaction Cost

The result of the study indicated that transaction processing system and operating/transaction cost affects the development of Nairobi Securities Exchange by 68.6%. The results indicated that the clearance and settlement system used at the NSE is fast and effective at 59.4%, with 41.2% of transactions being processed on time and this has led to increased turnover at the NSE. The processing system guarantee that the prices obtained by buyers and sellers are 63.5% good. 90% of investors' usually aim at minimizing cost to increase their returns and thus unreasonably high costs of transactions affect market development by 77%. It is 68.2% cheaper to raise capital through private placement than through public issue though the cost of going public as percentage of capital raised decreases as more capital is raised by 78.2%. Respondents agreed that for individuals buying and selling shares on the stock exchange, the main cost is brokerage commissions. The overall response was as shown in the figure below;

Table 4.4.6: Transaction Processing System and Operating/Transaction Effect on Development of NSE

Transaction processing system and Operating/transaction cost	PERCENTAGES Mean	Mean (%)	STD DEV
Transactions take too long to be processed at the NSE	2.9	58.8	1.1791
The CDS at the NSE is ineffective	2	40.6	0.904
The processing system affects the prices obtained by buyers and sellers	3.2	63.5	1.167
Lengthy transactions affect the turnover of the market	3.6	72.4	1.0735
Investors aim at minimizing cost to increase their returns	4.5	90	0.6629
Unreasonably high costs of transactions affect market development	3.8	77	1.2278
The cost of going public as percentage of capital raised decreases as more capital is raised.	3.9	78.2	1.1011
It is cheaper to raise capital through private placement than through public issue.	3.4	68.2	1.282
	3.4	**68.6**	**1.1**

Source: Research Data 2016

4.4.6 Legal and Regulatory Framework

The study indicated that legal and regulatory environment plays an important role in the development of the securities markets and affects the development of the NSE by 73.8%. 58.2% of respondents believe that legal and regulatory framework could be an impediment to NSE development thus favourable legal environment facilitates stock market development by 81.8% hence the law and enforcement mechanisms that protect creditors and minority investors the NSE.

The study indicated that laws and regulations at the NSE are 56.5% prohibitive in nature. Regulatory bodies enact policies that affect the development of the stock Market by 75.9% but 60% of the times use a heavy-handed type of control. 80% of study results indicate that CMA is a catalyst in development rather than a traditional regulator of NSE with 84.7% agreeing that proactive, creative and supportive regulations assist in the creation of a more vibrant and forward looking capital market environment. The overall response was as shown in the figure below;

Table 4.4.7: Legal and Regulatory Framework Effect on Development of NSE

	PERCENTAGES		
Legal and regulatory framework	**Mean**	**Mean (%)**	**STD DEV**
Legal environment is an impediment to financial system development.	2.9	58.2	0.9475
A favorable legal environment facilitates stock market development	4.1	81.8	0.7535
There are law and enforcement mechanisms that protect investors at the NSE	4.4	87.6	0.6038
There are regulations that protect creditors and minority investors at the NSE	4	79.4	1.0294
Laws and regulations at the NSE are prohibitive in nature	2.8	56.5	0.9991
Regulatory bodies enact policies that affect the development of the stock Market.	3.8	75.9	0.9464
Regulatory authorities for the NSE use a heavy-handed type of control	3	60	0.9535
Proactive, creative and supportive regulations assist in the creation of a more vibrant and forward looking capital market environment.	4.2	84.7	0.9553
CMA is a catalyst in development rather than a traditional regulator of NSE	4	80	0.8876
	3.7	**73.8**	**0.9**

Source: Research Data 2016

4.5 Market Capitalization Ratio

The dependable variable of interest was Nairobi securities exchange development which was measured using market capitalization as a proportion of GDP. This measure equals the value of listed shares divided by GDP. The assumption behind this measure is that the overall market size is positively correlated with the ability to mobilize capital and diversify risk on an economy wide basis. Market capitalization (also known as market value) is the share price times the number of shares outstanding (including their several classes) for listed domestic companies, was the dependent variable of the study. The table below shows the market capitalization ratio for 2006 to 2015 with descriptive statistics;

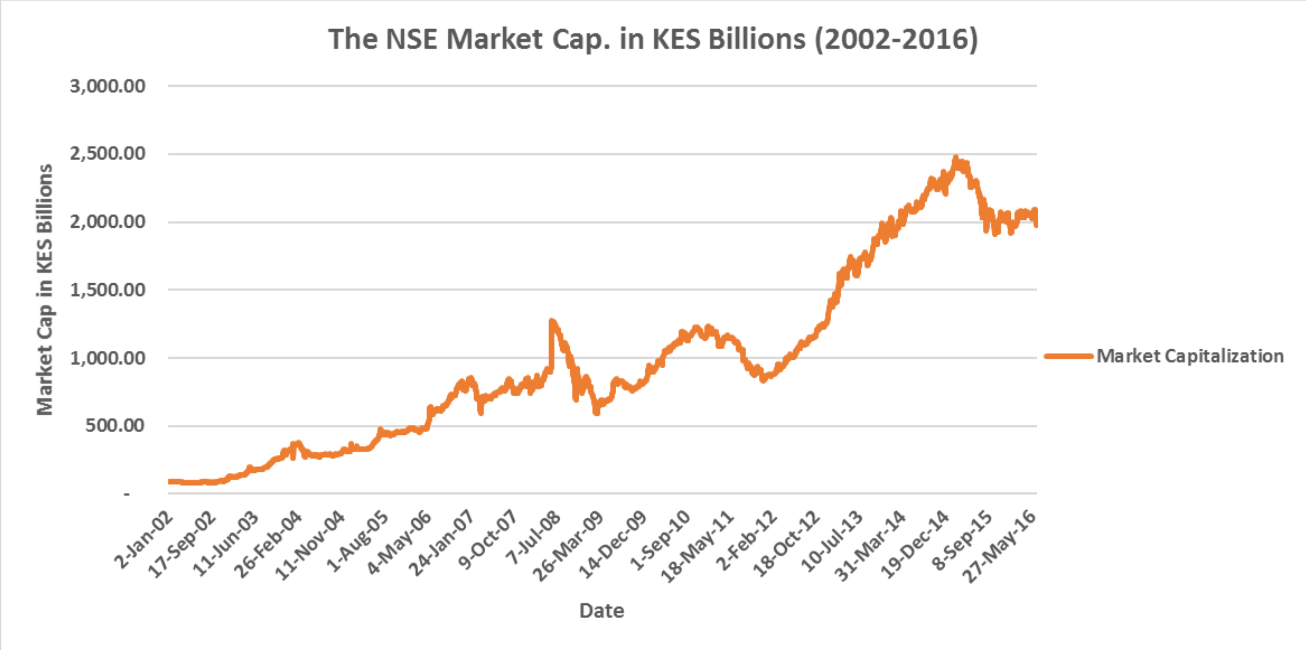
Table 4.5.0-1: Market Capitalization Ratio

Year	Stock Market capitalization (KShs Bns)	GDP (kshs Bns)	Stock Market Capitalization, Percentage of GDP
2006	791.58	1,622.57	48.79%
2007	851.13	1,833.51	46.42%
2008	853.88	2,111.17	40.45%
2009	834.17	2,365.45	35.26%
2010	1,166.99	2,553.73	45.70%
2011	868.24	3,048.87	28.48%
2012	1,272.00	4,261.37	29.85%
2013	1,920.72	4,745.14	40.48%
2014	2,300.05	5,402.41	42.57%
2015	2,049.54	6,260.65	32.74%
Mean	1,290.83	3,420.49	39.07%
Standard Deviation	550.20	1546.74	6.78%

Source: Research Data 2016

The above table shows that the Nairobi securities exchange has been performing well some years and other years dismally. One of the contributing factors for its performance are the independent variables for this study which were market information, market efficiency, market transparency, market openness, transaction processing system and operating processing cost and legal and regulatory framework. From the data collected, the highest market capitalization ratio was in 2006 at 48.79% with the lowest being in 2011 at 28.48%. The mean was 39.07% indicating that the market has been having an average performance; with a low standard deviation at 6.78%, the range of performance hasn't been fluctuating a lot. The figure below shows a graphical representation of Kenya's monthly Capitalization levels for the period under study;

Figure 4.5.1: Kenya's Monthly Market Capitalization Levels 2002 – 2016



Source: NSE/CMA

4.6 Correlation Analysis

The table below displays the value of the correlation coefficient and the significance value for each pair of variables used in the Paired Samples T Test procedure.

Table 4.6.1: Correlation Analysis

		Market Information	Market Efficiency	Market Transparency	Market Openness	TPS and Operating/ Transaction Cost	Legal and Regulatory Framework
Market Information	Pearson Correlation	1	0.239**	0.0389**	0.429 **	0.136**	0.528**
	Sig (2 tailed)	-	0.001	0.002	0.001	0.049	0.045
	N	34	34	34	34	34	34
Market Efficiency	Pearson Correlation	0.239**	1	0.495**	0.370 **	0.815**	0.612**
	Sig (2 tailed)	0.001	-	0.001	0	0.021	0.002
	N	34	34	34	34	34	34

Market Transparency	Pearson Correlation	0.0389**	0.495**	1	0.648**	0.635**	0.095**
	Sig (2 tailed)	0.002	0.001	-	0.002	0.001	0.0341
	N	34	34	34	34	34	34
Market Openness	Pearson Correlation	0.429**	0.370**	0.648**	1	0.348**	0.536**
	Sig (2 tailed)	0.001	0	0.002	-	0.002	0.001
	N	34	34	34	34	34	34
TPS and Operating/ Transaction Cost	Pearson Correlation	0.136**	0.815**	0.635**	0.348**	1	0.476**
	Sig (2 tailed)	0.049	0.021	0.001	0.002	-	0
	N	34	34	34	34	34	34
Legal and Regulatory Framework	Pearson Correlation	0.528**	0.612**	0.095**	0.536**	0.476**	1
	Sig (2 tailed)	0.045	0.002	0.0341	0.001	0	-
	N	34	34	34	34	34	34

*** *Correlation is significant at the 0.05 level (2-tailed).***Source: Research Data 2016*

The results suggest a strong correlation between TPS and operating/ Transaction cost and market efficiency with a rho of 0.815 and a p value of 0.021. The results also suggest that the relationship between market information and legal and regulatory framework (rho = 0528, p = 0.045) is statistically significant. Legal and regulatory framework and TPS and Operating/Transaction cost had a Rho of 0.476 and a p value of 0.000therefore denoting statistical significance. Similarly, the legal and regulatory framework and market efficiency posted a rho of 0.612 with a p value of 0.000 therefore providing a statistical significance. Market transparency and TPS operating/ transaction cost had a rho of 0.635, p=0.001 further pointing to a statistical significance. On the same note, the market efficiency and market transparency correlated at rho=0.495 and p=0.001;this therefore is statistically significant. Market information and market efficiency had a Rho of 0.239 and a p value of 0.001, market information and market transparency had a Rho of 0.0389 and a p value of 0.002.Market openness and market efficiency correlated at Rho=0.370 and p=0.000 implying statistical significance. Finally, the legal and regulatory framework market transparency were at a correlation of rho=0.095 and p= 0.0341 revealing statistical significance.

Thus generally, the above table shows that there is a very positive correlation between legal and regulatory framework, market efficiency, market transparency, TPS operating/transaction cost market openness and market information at 95% which are statistically significant at confidence level.

4.7 Multiple Regression Analysis

4.7.1 Regression Analysis

A multiple regression analysis was conducted to find out the effect of market information, market efficiency, market openness, market transparency, transaction processing system and transaction/operating cost and legal and regulatory framework on the development of NSE as a proxy for market infrastructure factors. Model summary table below shows the coefficient of determination (R^2) which explains the percentage of the variation in the development of NSE.

Table 4.7.1: Model Summary

Model	R	R square	Adjusted R square	Standard Error
1	0.8955[b]	0.8019	0.64306	0.4452
b. Dependent variable: Development of the NSE				

From the results of the table above, the regression model containing market information, market efficiency, market transparency, market openness, transaction processing system and operating/transaction cost and legal and regulatory framework as the predictor variables explains 80.19% of the variation in development of the NSE while the remainder (19.81%) can be explained by other factors not included in this model. R is the correlation coefficient which shows the relationship between the study variables, from the findings shown in the table above there was a strong positive relationship between the study variables as shown by 0.8955.

Adjusted R squared is coefficient of determination which tell us the variation in the dependent variable due to changes in the independent variable, from the findings in the above table the value of adjusted R squared was 0.64306 an indication that there was variation of

64.306% on development of the NSE due to changes in the independent variables which are market information, market efficiency, market transparency, market openness, transaction processing system and operating/transaction cost and legal and regulatory framework at 95% confidence interval. This shows that 64.306% of development in the NSE could be attributed to market information, market efficiency, market transparency, market openness, transaction processing system and operating/transaction cost and legal and regulatory framework. The table below displays ANOVA results that test the significance of the R^2 for the model:

Table 4.7. 2: ANOVA

	Ds	*SS*	*MS*	*F*	*Significance F*
Regression	6	9963.12	1660.52	56.0036	0.017[a]
Residual	3	88.9507	29.6502		
Total	9	10052.1			

a. Predictors (Constant), Market information,
b. Dependent variable: Development of the NSE

The ANOVA test was used to determine the impact independent variables have on the dependent variable in a regression analysis. ANOVA provides a statistical test of whether or not the means of several groups are equal. ANOVAs are useful in comparing (testing) three or more means (groups or variables) for statistical significance.

The significance value is 0.017 is less than 0.05 thus the model is statistically significant in predicting how market information, market efficiency, market transparency, market openness, transaction processing system and operating/transaction cost and legal and regulatory framework influences development of the Nairobi Securities Exchange. An F statistic of 56.004 with a p value less than the conventional 5% indicates that the overall model was significant at 95% confidence level.

Table of coefficients below presents the unstandardized and standardized coefficients of the model, the t-statistic for each coefficient and the associated p-values. The predictor variables had significant positive relationship with development of the NSE.

Table 4.7. 3: Regression coefficients results

	Unstandardized Coefficients		*Standardized Coefficients*		
	B	*Std Error*	*Beta*	*t Stat*	*P-value*
1 (constant)	0.252	0.013		0	0
Market information	0.382	0.1645	0.264	1.02097	0.03824
Market efficiency	0.0966	0.1448	0.0751	0.1148	0.01159
Market transparency	0.3483	0.1326	0.3129	2.0986	0.01267
Market openness	0.3684	0.1241	0.3287	0.5517	0.00619
TPS and Operating/transaction cost	0.5074	0.1949	0.4765	0.5512	0.00199
Legal and regulatory framework	0.2266	0.1187	0.1908	1.4029	0.02552

The findings confirm that there is a statistically significant influence of Market information, Market efficiency, Market transparency, Market openness, Transaction processing system and Operating/transaction cost and Legal and regulatory framework on the development of the NSE. This implies that a unit increase in the predictor variables leads to a significant increase on the development of the NSE as demonstrated in the equation below:

$Y = 0.252 + 0.382X_1 + 0.097X_2 + 0.348X_3 + 0.368X_4 + 0.507X_5 + 0.226X_6$

From the significance column of the provided table, at 5% level of significance, it was observed that Market information, Market efficiency, Market transparency, Market openness, Transaction processing system and Operating/transaction cost and Legal and regulatory framework are the main variables that explain the development of the NSE. From the above regression equation, a unit increase in market information leads to a 0.382 increase in NSE development, a unit increase in Market efficiency leads to a 0.097 increase in NSE development, a unit increase in Market transparency leads to a 0.348 increase in NSE development, a unit increase in Market openness leads to a 0.368 increase in NSE development, a unit increase in Transaction processing system and Operating/transaction cost leads to a 0.507 increase in NSE development and a unit increase in Legal and regulatory framework leads to a 0.226 increase in NSE development.

4.7.2 Hypothesis Testing

H_{O1}: Market information does not significantly affect the development of Nairobi Securities Exchange

This null hypothesis was tested at 5% significant level and rejected since the p-value was less than 5% with t=1.02097 as shown in table 4.7.3 above. This implies that market information does significantly affect NSE development. The results are similar to Osei (1998) who analysed the factors affecting the development of an emerging capital market with a specific focus on the Ghana stock market with a focus on institutional factors. The study found that the most significant factors impinging on the development of the Ghana stock market is lack of national awareness and lack of knowledge about stock markets.Kimura and Amoro (1999) in their study on impediments to the growth of Nairobi Stock Exchange found that there was a poor degree of correlation between economic growth and growth of the stock exchange with the major factor being general lack of awareness and information on the role, functions and operations of the stock exchange.

H_{O2}: Market efficiency does not significantly affect the development of Nairobi Securities Exchange

The second nullwas tested at 5% significant level and rejected sinceas indicated in table 4.7.3 above the p-value was less than 5% with t=0.1148.This implies that market efficiency does significantly affect NSE development. According to Demirguc-Kant and Levine (1996), they observed that economies with strong information and unrestricted international capital flow tend have more liquid markets. Developing markets are characterized as having a low level of liquidity, high information asymmetry and thin trading because of their weak institutional infrastructure.

H_{O3}: Market transparency does not significantly affect the development of Nairobi Securities Exchange

The third null hypothesis was tested at 5% significant level and rejected at 5% since the p-value was less than 5% with t=2.0986 as shown in table 4.7.3 above. This implies that market transparency does significantly affect the development of NSE. This results are in line with Sejjaaka (2011) in challenges to the growth of capital markets in underdeveloped economies, the case for Uganda, who concluded that there is a need to improve levels of disclosure by firms because these firms occupy an important place in the business space. As firms' disclosure improves, so will their readiness to go IPO and firms need to legitimize their business so as to increase their acceptability as investment vehicles for mobilising private savings.

H_{O4}: Market openness does not significantly affect the development of Nairobi Securities Exchange

This null hypothesis was tested at 5% significant level and rejected since the p-value was less than 5% with t=0.5517 as shown in table 4.7.3 above. This implies that market openness does significantly affect development of NSE. Similarly,Bruner et al (2003) in the study on investing in emerging markets to ascertain the extend of market openness in those countries. Using regression analysis, they found that the level of openness contributes to stock market development

And in their review only 18 out of 33 listed as emerging markets are 100% open to foreign investment and the remaining 15 markets are either closed to foreign investment or having varying restrictions on foreign ownership. El-Wassal (2005) also investigated the relationship between stock market growth foreign portfolio investment in 40 emerging markets between 1980 and 2000and the results showed that economic foreign portfolio investments were one of the leading factors of the emerging stock markets growth.

H_{O5}: Transaction processing system and operating/ transaction cost does not significantly affect the development of Nairobi Securities Exchange

This null hypothesis was tested at 5% significant level and rejected at 5% since the p-value was less than 5% with t=0.5512 as indicated in table 4.7.3 above. This implies that transaction processing system and cost does significantly affect NSE development. This results are in line with Osei (1998) who found out that transactions costs are a hindrance to stock market development.

H_{O6}: Legal and regulatory framework does not significantly affect the development of Nairobi Securities Exchange

This null hypothesis was also tested at 5% significant level and rejected at 5% since from the table 4.7.3 abovethe p-value was less than 5% with t=1.4029.This implies that the legal and regulatory framework does significantly affect NSE development. The results are in line with the study done by Pagano (1993) in financial markets and growth, which shows that regulatory and institutional factors may influence the efficient functioning of stock markets. For example, mandatory disclosure of reliable information and regulations that instil investor's confidence. Yartey and Adjasi (2007) in their study on macroeconomic and institutional determinants of stock market development in Africa found that a percentage point increase in the quality of legal and political institutions tends to increase stock market development in Africa. Yartey (2008) on examining the macroeconomic and institutional determinants of stock market development, provides evidence that institutional factors such as law and order, political risk, and bureaucracy quality are important determinants of stock market development.

In conclusion, the hypothesis that market infrastructure factors have no significant effect on the development of the NSE was rejected since of the predictor variables of the model were significant at 5% significant level. The results agree with previous studies by Basweti (2002) in the study on factors limiting the development of emerging stock markets found that market (legal, regulatory and institutional) factors have constrained the development of the Kenyan stock market; Chepkoiwo (2011) who examined the factors affecting the development of emerging capital markets, the case of Nairobi Stock Exchange and found that institutional quality, domestic savings and private capital flows are some factors that affect NSE development; and Aduda, Masila & Onsongo, (2012) investigated the determinants of development in the Nairobi Stock Exchange using regression analysis and found that institutional quality and domestic savings were important determinants of stock market development.

However, the results contrast Cherif and Gazdar (2010) who studied the influence of macroeconomic environment and institutional quality on stock market development and found that the institutional environment as captured by a composite policy risk index does not appear to be a driving force for the stock market capitalization in MENA region.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary of the main findings of the study, study conclusions and gives recommendations. The general objective of this study was to determine the effect of selected factors on the development of Nairobi Securities exchange. Specifically, the study sought to determine the effect of Market information on the development of the Nairobi Securities Exchange, the effect of Market efficiency on the development of the Nairobi Securities Exchange, the effect of Market transparency on the development of the Nairobi Securities Exchange, the effect of Market openness on the development of the Nairobi Securities Exchange, the effect of Transaction processing system and Operating/transaction cost on the development of the Nairobi Securities Exchange and the effect of Legal and regulatory framework on the development of the Nairobi Securities Exchange; and give recommendations on the above objectives.

This chapter is organized as follows: first the summary and implications of the study are presented and secondly conclusion and recommendations for action and areas of further study are made.

5.1 Summary of Findings and Discussion

The objective of this study was to determine the effect of selected factors on the development of Nairobi Securities exchange. Based on this objective, the following are the summary findings of the results from the data analyzed.

5.1.1 Market Information and the Development of the NSE

The first objective of this study was to find out the effect of market information on the development of NSE. The result of the study indicated that market information affects the development of Nairobi Securities Exchange by 76%. Respondents agreed that since there are still some barriers to dissemination of information, unsuspecting investors can be harmed by those with access to information not available to the public at large and that the managers of a firm and financial market professionals know more about that firm's market prospects and investment opportunities than do outsiders as they often have access to information that is not widely available therefore disclosure will facilitate increased investors’ confidence in the stock markets. Due to this listed companies trading in NSE should be subjected to additional disclosure requirements imposed as listing rules.

5.1.2 Market Efficiency and the Development of the NSE

The second objective of this study was to find out the effect of market efficiency on the development of NSE. The result of the study indicated that market efficiency affects the development of Nairobi Securities Exchange by 67.8%. According to the study there are some information asymmetries, under-pricing of securities and prices of securities listed at the NSE do not reflect all available information and thus public disclosure of relevant information about securities is important for pricing efficiency and market confidence.

5.1.3 Market Transparency and the Development of the NSE

Another objective of the study was to determine the effect of market transparency on the development of the NSE. The result of the study indicated that market transparency affects the development of Nairobi Securities Exchange by 75.9%. From the results of the study, some transactions are not made known to the public as some trading is conducted privately outside the NSE. Emerging markets are likely to be less transparent than developed market and the degree of market transparency affects investors' ability to gain information and develop performance expectations since transparency in dealings enhance the market confidence.

Fragmented or privately conducted trading with limited disclosure leads to relatively expensive search costs and there is a risk of the transaction going out of line with prevailing prices and that transparency of trading and other procedures allows efficient price setting and confidence in the fairness of the market.Opaque trading procedures engender suspicion of market manipulation and may reduce the rate of investment. Dealings through brokers can enhance limited disclosure of some vital information as market intermediaries in Kenya lead to market manipulation.

5.1.4 Market Openness and the Development of the NSE

Another objective for this study was to find out the effect of market openness on the development of the NSE. The result of the study indicated that market openness affects the development of Nairobi Securities Exchange by 59.6%. According to the study, NSE is not open to all investors, local and foreign and respondents and there are restrictions on foreign ownership at the NSE. Excessive barriers to foreign investors including the Kenyan 25% rule, hamper the development of NSE.

5.1.5 Transaction Processing System, Operating/Transaction Cost and the Development of the NSE

The effect of transaction processing system and operating/transaction cost on the development of the NSE was also another objective. The result of the study indicated that transaction processing system and operating/transaction cost affects the development of Nairobi Securities Exchange by 68.6%. The results indicated that the clearance and settlement system used at the NSE is fast and effective with a good number of transactions being processed on time and this has led to increased turnover at the NSE. The processing system guarantee that the prices obtained by buyers and sellers are good. Investors' usually aim at minimizing cost to increase their returns and thus unreasonably high costs of transactions affect market development. It is cheaper to raise capital through private placement than through public issue though the cost of going public as percentage of capital raised decreases as more capital is raised.

5.1.6 Legal and Regulatory Framework and the Development of the NSE

Another objective of the study was to find out the effect of legal and regulatory framework on the development of the NSE. The study indicated that legal and regulatory environment plays an important role in the development of the securities markets and affects the development of the NSE by 73.8%. Favourable legal environment facilitates stock market development hence the law and enforcement mechanisms that protect creditors and minority investors the NSE should be put in place, as lack of this could be an impediment to the NSE. Proactive, creative and supportive regulations assist in the creation of a more vibrant and forward looking capital market environment.

5.2 Conclusion

Theoretically, a growing literature argues that securities market development boost economic growth. Greenwood and Smith (1997) show that large stock markets can decrease the cost of mobilizing savings thus facilitate investment in most productive technologies; because in principle a well-developed securities market should increase savings and efficiently allocate capital to productive investments which leads to an increase in the rate of economic growth. The NSE has experienced growth over the previous years; however, the rate of growth has been dismal. Enhancing NSE growth and performance poses greatest challenges and key factors that impinge on the development of NSE include the market infrastructure factors.

In analysing the collected data, the results revealed that there is a relationship between Nairobi Securities Exchange development and market information, market efficiency, market openness, market transparency, transaction processing system and transaction/operating cost and legal and regulatory framework. We can therefore say that Nairobi securities Exchange development is positively correlated to market information, market efficiency, market openness, market transparency, transaction processing system and transaction/operating cost and legal and regulatory framework. The results of this study suggests that the Capital Market Authority, Nairobi securities Exchange and other participants should play a more positive role in order to foster securities market development.

5.3 Recommendations

The objective of this study was to determine the effect of selected factors on the development of Nairobi Securities exchange. Based on this objective, a number of research recommendations spring from the findings of this study.

5.3.1 Market Information and the Development of the NSE

Information in the market should be made readily available to all investors, current and potential. Since one of the greatest impediment to investment in the NSE is the level of knowledge of the local investors, then the Capital Markets Authority in collaboration with other market stakeholders should implement a compressive public education awareness programme. Media like televisions, radio and newspapers can be used to reach out to more people, particularly in explaining the significance of investing in securities. Dissemination of market information can also be done through other institutions such as secondary schools, colleges, universities, cooperative societies, community gathering or any other institution. This is expected to enlighten and encourage the bigger population to invest in the market, which will lead to a higher market capitalization and hence development at the Nairobi securities exchange.

5.3.2 Market Efficiency and the Development of the NSE

The regulators at the Nairobi securities exchange should ensure that prices of securities traded in the market reflect all available information, public and private, as public disclosure of relevant information about securities is important for pricing efficiency and market confidence. Punitive penalties should be imposed for insider trading so that unsuspecting investors are not harmed by those with access to information not available to the public at large. When the prices of securities reflect all available information, the market is said to be efficient which in turn encourages trading in the market.

5.3.3 Market Transparency and the Development of the NSE

Though emerging markets are less transparent than developed markets, all market transactions should be made known to the public as transparency of trading and other procedures allows efficient price setting, reduction of search costs and confidence in the fairness of the market. This is recommended so as to increase investors' confidence in the market which in turn increases their participation and trading in the market, and this is expected to impact the NSE development positively.

5.3.4 Market Openness and the Development of the NSE

The policy makers should consider reducing impediments to Securities market development by easing restrictions on international capital flows by making the market open. An efficient capital market requires a stable environment to encourage both local and foreign investors and as such, the government should adopt prudent policies to keep the market open to all investors, local and foreign. Therefore, excessive barriers to the market should also be reduced or eliminated altogether in order to increase the development of Nairobi securities Exchange.

5.3.5 Transaction Processing System, Operating/Transaction Cost and the Development of the NSE

Given that participants in the stock market are largely those in high income bracket, the success of NSE depends on how the masses can be empowered in order to participate. Therefore, the government should create an enabling environment to encourage the masses to invest in the securities exchange. This can be done by further reducing the transaction/operating costs to encourage those in the low income bracket to participate. When the investment in the market increases, market capitalization increases indicating development in the securities market.The transaction processing system used should also be upgraded periodically to ensure efficiency and effectiveness in the market.

5.3.6 Legal and Regulatory Framework and the Development of the NSE

The findings in this study have important policy implications for developing countries. It is important to initiate policies to foster growth and development as countries liberalize their financial systems and further enhance domestic resource mobilization. To promote securities market development, emerging markets countries like Kenya can encourage investments by use of appropriate policies. The government through its agencies should continue developing tax regimes that are geared towards stimulating companies to be listed in the stock market. The government should also provide tax incentives including provision of tax differential in favour of listed companies. Legal and regulatory environment should be made favourable and mechanisms that protect creditors and minority investors in the NSE should be put in place so as to lead to the development of the market.

Given all this impact, the government should improve the market infrastructure which is the center on which financial market revolves. More research on the stock market should also be conducted on continuous basis and such studies should contain aspects of comparison with other stock markets, as this will facilitate innovation and development in the NSE.

5.4 Suggestions for Further Research

Since no economy today exists in a vacuum but they interact with regional and global markets it would therefore be of interest to study several countries in different stages of economic development. The present study used only licensed brokerage firms excluding other stakeholders, more studies can be done with the study population being the other stakeholders like the Capital Markets authorities, management of the Nairobi Securities Exchange or even the listed companies.

The present study uses market capitalization ratio as the indicator for Nairobi Securities development, further studies can be done either by using number of listed companies, stock market liquidity, stock market performance/volatility, stock market concentration and stock market linkage to real sector performance, market traded value, market turnover or by constructing a composite index of securities market development.

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APPENDICES

APPENDIX I: INTRODUCTORY LETTER

Egerton University

Faculty of Commerce

Nairobi.

Dear sir/madam,

RE; REQUEST TO COLLECT DATA FOR RESEARCH PROJECT

I am a Masters of Business Administration student at Egerton University. Pursuant to the pre – requisite course work; I would like to conduct a research project on: "**The effect of selected factors on the development of Nairobi Securities Exchange".** The focus of my research will be on all the brokerage firms at the NSE and this will involve use of questionnaires administered to company's Finance managers, Investment managers and risk Managers.

You have been selected to take part in this study. I would be grateful if you would assist me by responding to all items in the attached questionnaire. The information will be kept confidential and will be used for academic research purpose only. Your assistance and cooperation will be greatly appreciated. Thanks in advance.

Yours Sincerely,

Lucy Kalekye Musya

APPENDIX II: QUESTIONNAIRE

THE EFFECT OF SELECTED FACTORS ON THE DEVELOPMENT OF NAIROBI SECURITIES EXCHANGE

The researcher is conducting a study about **the effect of selected factors on the development of Nairobi Securities Exchange**. The study targets all the 21 licensed brokerage firms at the NSE and to achieve its objectives, this questionnaire has been developed.

Please read and answer the questions carefully. Complete the questions by putting a tick (√) against the preferred responses. All information provided will be held in confidence and for research purpose only.

Thanks for your cooperation

SECTION A: DEMOGRAPHIC INFORMATION

I. Name of your brokerage firm..

II. Please indicate your gender.

Male [ ] Female [ ]

III. How long have you worked in the firm?

Below 2 years [ ] 2-6 years [ ] 7-10 years [ ] Above 10 years [ ]

IV. How long have you worked in the current position?

Below 5 years [ ] 5-10 years [ ] 10-15 years [ ] 15-20 years [ ]

V. Please indicate your highest level of education:

PhD [ ] Masters [ ] Bachelors [ ] Diploma [ ] Certificate [ ]

SECTION B: EFFECTS OF SELECTED FACTORS ON THE DEVELOPMENT OF NAIROBI SECURITIES EXCHANGE

1. **Market information**

Please evaluate the degree of your agreement with the following statements about market information and the NSE development

(Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5)

	1	2	3	4	5
Unsuspecting investors can be harmed by those with access to information not available to the public at large.					
The managers of a firm know more about that firm's market prospects and investment opportunities than do outsiders.					
Financial market professionals often have access to information that is not widely available.					
Investor access to information pertaining to their prospective investments is more limited than that of professional intermediaries.					
Disclosure will facilitate increased investors' confidence in the stock markets.					
Listed companies trading in NSE are subjected to additional disclosure requirements imposed as listing rules.					
Information asymmetries are the basic justification for the large number of regulations at the NSE.					
There are many barriers to the dissemination of information in the NSE					

2. Market efficiency

Please evaluate the degree of your agreement with the following statements about market efficiency and the NSE development

(Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5)

	1	2	3	4	5
Prices of securities listed at the NSE reflect all available information					
Public disclosure of relevant information about securities is important for pricing efficiency and market confidence.					
There are information asymmetries in the NSE					
There is under-pricing of securities by investment banks in Kenya					

3. Market transparency

To what extent do you agree with the following statements? Please tick appropriately

(Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5)

	1	2	3	4	5
Every transaction is made known to the public at the NSE					
Some trading is conducted privately outside the NSE					
Emerging markets are likely to be less transparent than developed market.					
Transparency in dealings enhance the market confidence					
The degree of market transparency and competitive affect investors' ability to gain information and develop performance expectations.					
Transparency of trading and other procedures allows efficient price setting and confidence in the fairness of the market.					

Fragmented or privately conducted trading with limited disclosure leads to relatively expensive search costs and there is a risk of the transaction going out of line with prevailing prices.					
Dealings done through brokers can enhance limited disclosure of some vital information					
Market intermediaries in Kenya lead to market manipulation.					
Opaque trading procedures engender suspicion of market manipulation and may reduce the rate of investment.					

4. Market openness

What is your level of agreement on statements below regarding market openness at the NSE?

(Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5)

	1	2	3	4	5
NSE is open to all investors, local and foreign					
There are restrictions on foreign ownership at the NSE					
There are excessive barriers to foreign investors at the NSE					
Restriction placed on foreign investors constrains the performance of the capital market.					
The Kenyan 25% rule affects the development of the NSE					

5. Transaction processing system and Operating/transaction cost

What is your level of agreement on the statements below on the transaction processing system and operating/transaction cost at the NSE? Please tick appropriately.

(Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5)

	1	2	3	4	5
The clearance and settlement system used at the NSE is fast					
The CDS is very effective and has led to increased turnover at the NSE					
The processing system guarantee that the prices obtained by buyers and sellers are best					
Transactions are processed on time at the NSE					
Investors aim at minimizing cost to increase their returns					
Unreasonably high costs of transactions affect market development					
The cost of going public as percentage of capital raised decreases as more capital is raised.					
It is cheaper to raise capital through private placement than through public issue.					
For individuals buying and selling shares on the stock exchange, the main cost is brokerage commissions.					

6. Legal and regulatory framework

What is your level of agreement with the following statements regarding the legal and regulatory framework at the NSE?

(Strongly Disagree=1, Disagree=2, Neutral=3, Agree=4, Strongly Agree=5)

	1	2	3	4	5
Legal and regulatory environment plays an important role in the development of the securities markets.					
Legal environment is an impediment to financial system development.					
A favourable legal environment facilitates stock market development					
There are law and enforcement mechanisms that protect investors at the NSE					
There are regulations that protect creditors and minority investors at the NSE					
laws and regulations at the NSE are not prohibitive in nature					
Regulatory bodies enact policies that affect the development of the stock Market.					
Regulatory authorities for the NSE use a heavy-handed type of control					
Proactive, creative and supportive regulations assist in the creation of a more vibrant and forward looking capital market environment.					
CMA is a catalyst in development rather than a traditional regulator of NSE					

End of questionnaire

Thank you very much for your participation.

APPENDIX III: LIST OF BROKERS AT THE NSE

1. Dyer & Blair Investment Bank Ltd
2. Francis Drummond & Company Limited
3. Suntra Investment Bank Ltd
4. Old Mutual Securities Ltd
5. SBG Securities Ltd
6. Kingdom Securities Ltd
7. Afrika Investment Bank Ltd
8. Sterling Capital Ltd
9. ABC Capital Ltd
10. Apex Africa Capital Ltd
11. Faida Investment Bank Ltd
12. NIC Securities Limited
13. Standard Investment Bank Ltd
14. Kestrel Capital (EA) Limited
15. African Alliance Kenya Investment Bank Ltd
16. Renaissance Capital (Kenya) Ltd
17. Genghis Capital Ltd
18. CBA Capital Limited
19. Equity Investment Bank Limited
20. KCB Capital
21. Barclays Financial Services Limited
22. NgenyeKariuki& Co. Ltd. (Under Statutory Management)
23. Discount Securities Ltd. (Under Statutory management)

APPENDIX IV: DATA COLLECTION SHEET

Year	Stock Market capitalization (KShs Bns)	GDP (kshs Bns)	Stock Market Capitalization, Percentage of GDP	Turnover (Kshs Bn)	Stock Market Turnover ratio (Turnover/Mkt Cap)
2006					
2007					
2008					
2009					
2010					
2011					
2012					
2013					
2014					
2015					

APPENDIX V: DATA COLLECTED

Year	Stock Market capitalization (KShs Bns)	GDP (kshs Bns)	Stock Market Capitalization, Percentage of GDP	Turnover (Kshs Bn)	Stock Market Turnover ratio(Turnover/Mkt Cap)
2006	791.58	1,622.57	48.79%	94.95	11.99%
2007	851.13	1,833.51	46.42%	88.62	10.41%
2008	853.88	2,111.17	40.45%	97.52	11.42%
2009	834.17	2,365.45	35.26%	38.16	4.57%
2010	1,166.99	2,553.73	45.70%	110.32	9.45%
2011	868.24	3,048.87	28.48%	78.06	8.99%
2012	1,272.00	4,261.37	29.85%	86.79	6.82%
2013	1,920.72	4,745.14	40.48%	155.75	8.11%
2014	2,300.05	5,402.41	42.57%	215.73	9.38%
2015	2,049.54	6,260.65	32.74%	209.38	10.22%

Source; NSE, Economic Survey 2011, 2013,2017

APPENDIX VII: SCHEDULE OF RESEARCH ACTIVITY

	February 2016	March- April 2016	May 2016	June- July 2016	August-September 2016	October-November 2016
Coming up with a Researchable Topic						
Writing Chapter One						
Writing Chapter Two and Three						
Finalizing on the Research Proposal						
Research Proposal Compilation and Presentation						
Data Collection and analysis						
Presentation of final research project						

APPENDIX VIII: RESEARCH BUDGET

No.	ITEM	COST (Ksh)
1.	Transport Expenses	20,000/=
2.	Typing Expenses	15,000/=
3.	Printing, Photocopy and Binding Charges	18,000/=
4.	Library and Internet Expenses	15,000/=
5.	Research Assistant	12,000/=
	Sub Total	80,000/=
6.	Contingencies (10 % of Sub-Total)	8,000/=
	TOTAL COST	**88,000 /=**