

Relationship between Stock Market Development and Economic Growth in Kenya: A Case of Firms Listed in Nairobi Securities Exchange

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Abstract: This study aimed at finding the relationship between stock market development and economic growth in Kenya. The stock market development is the independent variable and is determined variables such as market capitalization, liquidity, and stock market index. The control variable was financial depth with economic growth as the dependent variable determined by the real gross domestic product (GDP). The Kenyan stock market has made various strides in improving some of the aspects that are deemed to result in the development of the stock market and this has seen the increase in the number of listed firms on the bourse and also the improvement of regulatory laws that govern riding and disclosures. The study utilized the exploratory research design. The study targeted 65 listed firms at the Nairobi Securities Exchange but a sample of 35 listed companies was selected for the study through simple random sampling technique. This study covered the period between 2006-2015. Primary data was collected through the administration of the questionnaires. A pilot study was also conducted to test the reliability and validity of the questionnaire. The results of the study indicated that stock market capitalization, stock market liquidity, stock market index and financial depth are positively related with economic growth. Stock market capitalization, stock market liquidity, stock market index were found to be satisfactory variables in explaining economic growth. This is supported by coefficient of determination also known as the R square of 46.1%. Further, the results imply that the independent variables are good predictors of economic growth. This was supported by an F statistic of 15.550 and the reported p value (0.002) which was less than the conventional 0.05 significance level. Regression of coefficients results showed that stock market capitalization and economic growth are positively and significantly related ($r=0.047$, $p=0.003$), stock market liquidity and economic growth are significantly related ($r=0.030$, $p=0.048$), stock market index and economic growth are also significantly related ($r=0.023$, $p=0.021$). Results further indicates that financial depth and economic growth are significantly related ($r=0.052$, $p=0.007$). The study concluded that stock market capitalization, stock market liquidity, stock market index and financial depth influences economic growth. This study recommends that stock market development factors should be encouraged to investors from the aspect of being correlated and having causality to the economic growth.

Keywords: Gross Domestic Product (GDP), Economic Growth, Stock Market.

1. INTRODUCTION

Background of the Study:

Stock markets have become the central focus of development for economists and policy makers because of the perceived benefits they provide to the economy either directly or indirectly. These benefits include savings mobilization, risk diversification and management, facilitating the exchange of goods and services, and ensuring corporate governance and control (Zivengwa, 2011).

Global Perspective on Stock Market Development on Economic Growth:

Capital markets play critical role in facilitating countries' economic growth and prosperity. Proper functioning capital markets are vital for mobilizing investments capital and providing efficient avenue for foreign investments. The rapid expansion of the stock exchanges in the continent has contributed to economic development in various ways such as facilitating long term capital mobilization, the provision of alternative investment opportunities, attracting foreign capital inflows and serving as a signal of economic performance, (Kumo, 2009). China's stock market has experienced tremendous growth and development in the past years since the inceptions of the Shanghai Stock Exchange. The number of listed companies reached 1,200 at the end of 2015 up from only 10 companies in the early 1990s — with a total market capitalization of more than 525.6 billion USD, (Dow Jones, 2015). Foreign investor risk appetite for securities in emerging and frontier markets has reduced following the expected path of monetary policy tightening in the US that has made the US market more attractive, (Cyttonn, 2016).

In Belgium, France, Portugal, Netherlands, Bangladesh and United Kingdom, stock market development has been positively linked to the economic growth especially due to the stock market being liquid and highly active, thus there is a significant influence in economic growth, (Jin *et al.*, 2010; Sharif *et al.*, 2010). In African countries like Ghana and Nigeria, non-causal relationships between stock markets and economic growth are due to markets domination by a single sector, and the often mono product economy. Often, the stocks of this sector that account for the greater percent of the GDP are not listed in the domestic stock market, hence, a divorce between the actual performance of the stock market and economic growth. In Ghana, only AngloGold Ashanti, accounts for 70% of market capitalization, (Osaze, 2007) while in Nigeria, over 60% of the total market capitalization is accounted for by the Banking sector. The oil and gas sector of the economy of Nigeria and the agricultural sector (cocoa) of that of Ghana are not in their stock markets.

Stock markets in Africa are inefficient in allocating resources to the real sectors of the economy for productive ventures that can lead to economic growth. This therefore calls for a much needed effort on the part of policy maker and regulatory bodies to improve the efficiency of the stock markets. The government and other regulatory bodies should encourage companies operating in the domestic economy to be listed on the domestic stock exchanges. The regulatory bodies should remove impediments to listing and increase its public awareness campaign through every trading floor of the exchanges and capital trading points, (Osamwonyi & Kasimu, 2013).

Pakistan has three stocks exchange namely Karachi stock exchange, Lahore stock exchange and Islamabad stock exchange. The Karachi stock exchange is the oldest, most liquidate and benchmark stock exchange of Pakistan established in 1947 after two month of independence. KSE announced the best performing stock exchange in the world in 2002. Currently KSE-100 index is increased by 155% points from 11348 to 28913 points within two years (Jan-2012 to April-2014). Its Market capitalization increased from 32.9 billion US dollar to 72.2 billion US dollar during the same time period. The total listed capital is rose from 1048.44 billion PK. rupees to 1153.18 billion rupee during the above said period. The second largest stock market of Pakistan is Lahore stock exchange that came into being in 1970. The LSE-25 index also recorded the positive growth; the index point was 4370.7 in June-2013 and 5131.1 points at end of March 2014. The total listed capital in LSE-25 index increased from 1042.2 billion rupees to 1092.1 billion rupee. The market capitalization during 2013-2014 is rupee 6258.2 billion. The third stock exchange of Pakistan is Islamabad stock exchange that also contributing its share in the stock market of Pakistan. ISE-10 index was increased from 3,904.6 to 4440 points on jan-2013 to march-2014 which is almost increased by 14%. Total listed capital of ISE-10 index increased from 871.1 billion rupee to 890.9 billion during the same period. The addition of 994.5 billion rupee is made in the market capitalization in the same period, (Awan & Usman, 2015).

Following the Brexit the US market suffered losses which erased Usd 800 billion in US market value as measured by Wilshire 5000 index. This has made the impact more severe as Japan's Nikkei 225 dropped 7.9% in volatile trading, which was the steepest drop in 16 years. In Europe, London's FTSE 100 fell 12.5%, German DAX 6.8%, Broad stock Europe 600 index fell 7% and France CAC 40 by 8%. (Dow Jones 2016). The losses were due to the uncertainty which would likely to hold back investment. The Brexit might affect the economic growth negatively, (Craig *et al.*, 2016). Investors gaped at this major refashioning of the global landscape and decided it looked perilous or at least so pockmarked with uncertainty that they preferred to pull their money out of riskier corners like stock markets, (Goodman, 2016)

2. STOCK MARKET PERFORMANCE AND ECONOMIC GROWTH IN KENYA

Kenya has one stock market, known as the Nairobi Securities Exchange formerly the Nairobi Stock Exchange which currently holds 65 listed companies, (NSE 2016). It is one of the most developed among those of the Eastern and Central African countries and it is rated the second largest stock market in Africa, though still young and developing by international standards. The role of capital markets framework has been appreciated by numerous policy frameworks including the Kenya Vision 2030 blueprint. In the recent years, Kenya's capital markets have grown in leaps and bounds to become an integral component of the country's financial system and a key driver of economic growth, (Gakuyu, 2015). There is diversification in capital market following Stanlib Investments Kshs 3.6 billion REIT that started trading at the NSE, and expect other property developers to issue more REITS in the future. This will thus increase asset allocation towards the equities market, (Cytton, 2016). In the 1980s, the Kenyan Government embarked on a reform process in order to promote the growth and development of the Kenyan financial sector which focused on both the banking sector and the stock market. The results of these wide-ranging reforms include the modernization and improved performance of the stock exchange, (NSE, 2015). Kenya's economic blue print "Kenya Vision 2030" envisions "A vibrant and globally competitive financial sector driving high levels of savings and financing Kenya's investment needs". A well-functioning financial system according to Kenya vision 2030 is critical to accelerating economic growth as will ensure macroeconomic stability and promote private sector development, which in turn will generate employment opportunities and reduce poverty, (Ikikii & Nzomoi, 2013).

The vision's goal is to increase savings and investment rates from 14% to between 25% and 30% of gross domestic product and raise capitalization from 50% to 90% of gross domestic product, hence providing an avenue for the corporations/companies and the government to raise funds for the purpose of business expansion and development of projects. In the endogenous growth literature, the link between either stock market liquidity or development and economic growth for developed economies has received much attention, (CMA, 2016). Despite the importance of the stock market in the economic growth process of Kenya, this area has not been fully explored. A lot of work has been done on the bank-based segment of the financial sector in Kenya leaving the stock market with very little coverage, (Beck *et al.*, 2010). According to Olweny and Kimani, (2011), the stock market plays a major role as an economic institution which enhances the efficiency in capital formation and allocation. It enables both corporations and the government to raise long-term capital which enables them to finance new projects and expand other operations. Medium tier firms are the engine of economic growth and poverty eradication in the country, cutting across all sectors of the economy and sustaining majority of our households. Most companies have plans to grow their business and increase sales and profits, however, these companies require a lot capital to be able to execute their growth strategies. The NSE plans to increase listing in the Growth Enterprise Market Segment (GEMS) to 19 by 2017 as per the Capital Markets Master Plan and to 39 listings by 2023, (NSE, 2016).

Economic Growth:

Economic growth is an increase in the capacity of an economy to produce goods and services, compared from one period of time to another. The two common theories on growth are the Sollow-Swan model (Exogenous growth model) and the Endogenous growth model. The major drivers of economic growth includes growth in physical capital stock leading to capital deepening, growth in the size of the active labour force available for production, growth in the quality of human capital, technological progress and innovation driving productivity improvements and rising demand for goods and services either led by domestic demand or from external trade, (Anyanwuocha, 2008). Gross Domestic Product (GDP) is the broadest quantitative measure of a nation's total economic activity. It represents the monetary value of all goods and services produced within a nation's geographic borders over a specified period of time, (Callen, 2012). The lack of timeliness of GDP is a problem as updates are done on a quarterly basis therefore resulting in large revisions that can at any point in time significantly change the percentage change in GDP hence economic growth outlook. GDP does not take into account the inflation factor which may inflate the extent of the growth of the economy hence real GDP is mostly seen as the more reliable measure of economic growth, (Barnes, 2013).

Stock Market Development in Kenya:

Stock Market development is the expansion of the total market in a country by entering new segments of the market, converting non users into users, and/or increasing usage per user through diversification. The importance of stock market is to raise capital through primary and secondary markets, mobilize savings for investment, facilitate growth of the company through merger and acquisitions giving the opportunity to expand the product lines, increase the market

distribution channels, hedge against the risks, and increase the market. Stock market also redistribute wealth through investing and receive dividends and capital gain as a reward, enhance corporate governance through government policies to the companies which help to increase and improve the management of the companies and profit level to satisfy the demands of the stakeholders. It creates the investment facilities not only to large investors but also to middle and SME for instance GEMS in Kenya, and also is a barometer of the economy, (Koirala, 2011). The stock index will rise during economic stability and tend to fall when there is recession. The movement of stock index can be the better barometer for the economy because the overall growth of the performance depends on how efficiently the market performs. The governmental policies that pursue the development of stock market helps the growth of the country, (Alile 1997; Osinubi 2003). The Bullish and Bearish investors take advantage of the movement in stock prices and to maximize their profit accordingly. The movement in stock prices is directly related to some fundamentals like performance of the company, movement in key macroeconomic variables and government actions, (Karitie, 2010; Mehwish, 2013).

Stock Market Development and Economic Growth:

Stock markets provide an alternative channel for savings mobilization and better resource allocation, (N'Zué, 2006). Stock market liquidity is a reliable indicator of future long-term growth and can retard the economic growth, (Levine, 1996; Adjasi & Biekpe, 2006). A link of stock market development on the economy is based on the premise that the presence of stock markets would mitigate the principal agent problem, thus promoting efficient resource allocation and growth, (Adjasi & Biekpe, 2006). Given that the stock price at any time is mirror of firm performance, weakening corporate governance would be reflected as a fall in share price. The role of equity markets in providing portfolio diversification, enabling individual firms to engage in specialized production is bound to result in efficiency gains, (Capasso, 2008). An efficient stock market contributes to attract more investment by financing productive projects that lead to economic growth, mobilize domestic savings, allocate capital proficiency, reduce risk by diversifying, and facilitate exchange of goods and services, (Mishkin, 2001; Caporale *et al.*, 2004).

Liquid Financial markets allow investors to save and invest in long term projects that have pay outs in the long term. As there is ease of entry and exit, an investor can sell equity at any time and thereby increasing investor confidence in investing in long term projects. Due to this stimulating role of the stock market in the economy, the government and monetary authorities are keeping a close watch on going activities on stock market. It is because the large number of studies supports that development of stock market helps to enhance the economic growth, (Fofana, 2006). The business institutions can easily collect the needed capital in less time by issuing the shares, when the business institutions want to collect the capital for the expansion of the business, usually they can issue the shares in the market. In recent days, stock market is playing a primary source for raising the capital. So stock market is important for both the industry's point as well as investors' point of view, (Paudel, 2006). According to Fofana (2006), stock markets have got the high potential for creating the good and quality jobs. The study further analyzed that the stock market needs to have the well-organized markets, a good and attractive environment for investment, good telecommunication for proper flow of market information and well developed banking sectors. The study concluded that all those elements needed for development of stock markets help to create the more jobs due to involvement of challenging works.

Challenges Facing the Stock Market Development in Kenya:

Kenya's stock market is faced with challenges such as lack of awareness, low investor confidence, a lack of competitive pressure in the local market, vulnerability to shocks, and the low level of the capital market liquidity. Many Kenyans throughout the country have scanty information about the NSE and the CMA; and the market does not seem to market itself adequately to potential investors, or to provide a variety of products to attract companies. This may be attributed to financial and human resource constraints, this is also evidenced by the recent slow listing at the GEMS segment that was aimed at increasing the listing of the SMEs at the bourse, (CMA, 2015).

Although the NSE is generally considered a more liquid and active market than most of its East African counterparts in sub-Saharan Africa, by international standards it is small, less liquid and volatile with regard to price and returns. Low liquidity is particularly evident in the secondary bonds and in the equity markets where there is a high incidence of "buy and hold" particularly among institutional investors, who dominate the market. Generally, the main factors limiting the supply of shares include the reluctance of small, family-owned businesses to dilute ownership, the costly and tedious process of making public offers, and the perception by many eligible companies that the risks associated with additional disclosure are not adequately compensated for by additional returns. High real short-term interest rates have reduced the demand for capital market instruments and crowded out substantial domestic savings to short-term government securities,

(CMA, 2015). The stock market in Kenya is vulnerable to market shocks, as the method of determining share prices may result in the market capitalization of a counter being heavily affected by a small lot deal. People and businesses have low confidence in the performance of capital markets. They also have a perception of low standards of corporate governance, since neither the NSE nor the brokers publish their corporate governance report. As a result, players in such a market are limited; and any efforts to innovate the market are not well-cultivated, thereby leading to another challenge, which is the slow pace of innovation and the flexibility and limited access to capital. Deep markets are constantly developing products, such as securities, derivatives and options – for both funding and risk management. The capital markets in Kenya have been slow in developing products; and they have left companies to depend on the short-term money markets, (CMA, 2015).

Statement of the Problem:

Stock market liquidity is a problem in stock markets characterized by market inefficiencies leading to thin trading thus low levels of liquidity. This therefore impedes the growth of African markets and also the level of per capita income hence economic growth, (Yartey & Adjasi, 2007). Studies done had conflicting result such that the expected relation or direction of causality has been different from one study to the other. The economy follows the stock market in terms of capitalization and there is somehow lack of consensus on liquidity, (Owiti, 2012). Nguyen and Hanh, (2012) examined stock market development found that economic growth, saving rate, banking sector development and stock market liquidity had positive impact on stock market development, while inflation and financial crises had negative impact on stock market development. Researchers fail to consider other macroeconomic determinants of stock market development leading to positive relationship and negative causality, (Donwa & Odia, 2010; Salisu & Ajide, 2010). Inconsistency in these researches leaves the researchers with insufficient conclusion of the determinants of stock market development thus the stake holders are left without a solution of the negative causality which might be due to investors behaviors like herd behaviors in investments. Also, the measures should include more variables in comparison because their effect in economic growth might vary depending on the preference of the investors. This notion needs to confirm that there is a big role that capital markets play in boosting economic activity through provision of long-term capital for projects and risk diversification, (Aboudou, 2010).

Empirical studies sought to understand various ways in which economic growth can be enhanced but there is some consensus on the positive relationship between stock market development and economic growth but disagreement on the direction of causal relationship. (Owiti, 2012; Donwa & Odia, 2010; Salisu & Ajide, 2010;) found that market capitalization and value of transaction had positive but insignificant impact on the GDP whereas the total new issues had a negative influence on GDP. The direction of causality was from market capitalization to economic growth and no causal linkage between total value traded ratio and economic growth, while a bidirectional causality was found between turnover ratio and economic growth in (Wahome, 2010; Olweny & Kimani, 2011). These studies have looked at the NSE 20-Share index except, (Wahome, 2010) who used the NSE All Share Index, suggesting the opposite that the link is bidirectional. Some contend that there is no link between stock market development and economic development, (Sililo, 2010).

However, the causal relationship between the indicators of stock market development and economic growth in the developing countries is still in controversy particularly in the Sub-Saharan region. Aboudou, (2010) examined the impact of stock market development on growth in West African Monetary Union using Stock Market Size (Market Capitalisation to GDP) and Liquidity (Volume of shares traded over GDP). The results showed that Liquidity has greater impact on Growth than size. Suliman and Hala, (2011) examined the causal relationship between stock market development and economic growth in Sudan using Granger causality approach. Market capitalization indicated a bivariate causal relationship while liquidity showed unidirectional causal relationship. Hossain and Kamal, (2010) examined the causal relationship between stock market development and economic growth in Bangladesh and the results suggested a long-run equilibrium relationship between stock market development and economic growth in Bangladesh and unidirectional causality from stock market development and economic growth. El-Nader and Alraimony, (2013) investigated the fundamental determinants of stock market development using Johansen co integration and variance decomposition and found that banking sector development, domestic investment, consumer price index and stock market liquidity had positive impact on stock market development, while nominal GDP and net remittances had negative impact on stock market development. This study therefore examined the relationship between stock market performance and the economic growth in Kenya determining the presence of causal linkage if any which can hinder the capital market deepening in Kenya. The study explored how the development of the market capitalization, liquidity and stock index impact on economic growth in Kenya or they co-evolve together. Also, from the challenges facing the stock market today, this study established possible solutions and give the stake holders more information on stock market development and possible impact to the economic growth. This study sealed the gaps between positive correlation and the no causality effect.

Objectives of the Study:

General Objective:

The main objective of this study was to determine the relationship between the stock market development and economic growth in Kenya.

3. LITERATURE REVIEW

Introduction:

This chapter covers the theoretical and literature review upon which the study will be based. The chapter covers theoretical framework, conceptual framework, empirical literature review, a critique of the existing literature, the research gap that the study seeks to fill in and lastly the summary of the literature.

Theoretical Framework:

The classical and Neo classical revolution to economic growth sorts the idea of capital market performance. Theories such as new growth theory some time called Endogenous growth theory, explains the idea of capital market and economic performance. Within this study we cite a number of theories that relate to economic growth and stock market as well.

Neoclassical Growth Theory:

According to Solow and Swan (1956), the neoclassical exogenous growth theory also known as the Solow growth model is built upon the basic neoclassical frameworks of long run economic growth. This growth model explains economic growth using four main components namely, productivity, capital accumulation, population growth and technological progress. This theory states that the long run economic growth is exogenously determined, that is, economic growth is determined by factors outside the basic model specifications. The basic building block of this theory is the production function which has constant labor (L) and capital (K) which are reproducible. Therefore the equation is Output (Y) being a function of capital (K). The crucial aspect of the production function is the assumption of diminishing returns of capital accumulation. This means giving labor more capital goods without technological inventions will result in redundant investment of the new capital at a certain point. Another basic premise of the neoclassical growth model is that there tends to be a convergence to a steady state in the long run depending on the technological progress and rate of labor force growth. It states that a country that has higher savings than other will tend to grow faster than those with low savings. In the very long run the role of capital accumulation plays a smaller role in this model than technological progress as nations move to the steady state. The neoclassical growth model emphasizes mostly on the importance of technological innovation in the long run growth to offset the effects of diminishing returns that affect both capital accumulation and labor increases in the economy.

The Endogenous Growth Theory:

Romer (2011), stated that in this economic growth is seen to be as a result of internal and not external forces, this means that households, investing in human capital and innovation play a significant role in the growth of an economy. This theory focuses on the positive externalities and spillover effects of a knowledge based economy which ultimately leads to economic development. It is in contrast to the exogenous growth model that emphasizes the role of technological processes as a scientific exogenous process that is not determined by economic forces. The main feature of the endogenous growth model is that the broad definition of capital stock is not subject to diminishing returns as with the exogenous growth model, (Fry, 1997). This therefore means that growth is a positive function of the investment ratio. It states that in the long run, economic growth will depend on the policy measures that are taken by different governments. This implies that policies that embrace openness, competition and innovation will promote growth,

4. RESEARCH METHODOLOGY

The chapter covered the research methodology that was adopted by the study. It also covered research design, target population, data collection, data analysis and presentation.

Research Design:

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure (Kothari, 2009). According to Cooper and Schindler, (2011), research design is the plan and structure of investigation so conceived as to obtain answers to research questions. The plan

is the overall scheme or program of the research. It includes an outline of what the investigator will do from writing hypotheses and their operational implications to the final analysis of data. The study utilized the exploratory research design. In this case the study sought to give an in-depth insight into what is the nexus between stock market development and economic growth and explain on whether stock market development causes economic growth and whether economic growth causes stock market development in Kenya. The application of this research design enabled application of granger causality test which is a statistical hypothesis test for determining whether one time series is useful in forecasting another, and regression analysis of stock market development indicators and economic growth in Kenya.

5. RESULTS AND DISCUSSION

This chapter presents study findings and discussions. The findings are presented in line with the study objectives. Analysis of descriptive statistics and inferential statistics has been conducted and the results presented in form of tables and figures.

Stock Market Capitalization and Economic Growth:

The first objective was to establish how market capitalization in stock market affects the economic growth in Kenya. Descriptive results of the study are presented in table 1. The respondents were asked to respond on whether number of securities traded in stock market affects economic growth in Kenya. The responses were rated on a five Likert scale. Results in table 1 revealed that majority of the respondents who were 90.3 percent agreed that the number of securities traded in stock market affects economic growth. The results also showed that majority of the respondents who were 87.1 percent of the respondents agreed that fluctuation in prices in stock market affects Kenyan economic growth. The results also showed that majority of the respondents who were 74.2 percent of the respondents agreed that introduction of tax on interest earned from trading in stock market improves Kenyan economic growth. On a five point scale, the average mean of the responses was 4.1 which means that majority of the respondents were agreeing to the statements in the questionnaire. The standard deviation was 1.0 meaning that the responses were clustered around the mean response.

Table 1: Stock market capitalization and economic growth

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
Number of securities traded in stock market affects economic growth in Kenya	0.0%	3.2%	6.5%	61.3%	29.0%	4.2	0.7
Fluctuation in prices in stock market affects Kenyan economic growth	0.0%	6.5%	6.5%	61.3%	25.8%	4.1	1.1
Introduction of tax on interest earned from trading in stock market Improves Kenyan economic growth	3.2%	3.2%	19.4%	45.2%	29.0%	3.9	1.2
Average						4.1	1.0

Further, respondents were asked to indicate whether stock market capitalization affects the economic growth of the country. Results of the study were presented in figure 4.3. Results showed that majority 94% of the respondents agreed that stock market capitalization affects the economy.

Stock Market Liquidity and Economic Growth:

The second objective was to examine the effect of stock market liquidity in stock market on economic growth in Kenya. Descriptive results of the study are presented in table 2. The respondents were asked to respond on whether volume of securities traded determines the degree of liquidity in circulation in stock market hence economic growth. The responses were rated on a five Likert scale. Results in table 2 revealed that majority of the respondents who were 77.5 percent agreed that the volume of securities traded determines the degree of liquidity in circulation in stock market hence

economic growth. The results also showed that majority of the respondents who were 87.1 percent of the respondents agreed that volume of securities traded in stock market increase lead to growth of Kenyan economy. The results also showed that majority of the respondents who were 80.7 percent of the respondents agreed that more direct investments from investors facilitates growth of the economy. On a five point scale, the average mean of the responses was 4.1 which means that majority of the respondents were agreeing to the statements in the questionnaire. The standard deviation was 0.8 meaning that the responses were clustered around the mean response.

Table 2: Stock market liquidity and economic growth

Statement	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std Dev
Volume of securities traded determines the degree of liquidity in circulation in stock market hence economic growth	0.0%	0.0%	22.6%	58.1%	19.4%	4.0	0.7
When volume of securities traded in stock market increases it will lead to growth of Kenyan economy	3.2%	3.2%	6.5%	51.6%	35.5%	4.1	0.9
When more investors invest in stock market more liquid is pumped into the economy hence lead to economic growth	0.0%	3.2%	16.1%	48.4%	32.3%	4.1	0.8
Average						4.1	0.8

Further, respondents were asked to indicate whether stock market liquidity affects the economic growth of the country. Results of the study were presented in figure 4.4 Results showed that majority 81% of the respondents agreed that stock market liquidity affects the economy.

Inferential statistics:

Correlation matrix:

The study sought to establish the association among the study variables. The results are as presented in Table 4.14. The results in Table 4.14 indicated that stock market capitalization, stock market liquidity, stock market index and financial depth are positively related with economic growth. Results indicated that stock market capitalization ($r = .488, p = 0.005$), stock market liquidity ($.354, p = 0.05$), stock market index ($.379, p = 0.036$) and financial depth ($r = .411, p = 0.022$) are significantly and positively related to economic growth. An increase in either of the above variable leads to increased growth of the economy.

Table 3: Correlation matrix

		Stock Market Capitalization	Stock Market Liquidity	Stock Market Index	Financial Depth	Economic Growth
Stock Market Capitalization	Pearson Correlation	1	0.118	0.011	-0.016	.488
	Sig. (2-tailed)		0.526	0.955	0.932	0.005
Stock Market Liquidity	Pearson Correlation	0.118	1	.411	0.29	0.354
	Sig. (2-tailed)	0.526		0.022	0.113	0.05

Model summary:

The results presented in table 4 present the fitness of model used of the regression model in explaining the study phenomena. Stock market capitalization, stock market liquidity, stock market index and financial depth were found to be

satisfactory variables in explaining economic growth. This is supported by coefficient of determination also known as the R square of 46.1%.

Table 4.: Model summary

Indicator	Coefficient
R	0.697
R Square	0.461

This means that stock market capitalization, stock market liquidity, stock market index and financial depth explains 46.1% of the variations in the dependent variable which is economic growth. This means that we have other factors which affect growth of the economy which are not included in the model. The results further indicate that the model applied to link the relationship of the variables was satisfactory.

6. CONCLUSIONS

This study agrees with Osamwonyi and Kasimu (2013), who indicated bi directional causal relationship between Stock market turnover ratio and GDP in Kenya, that is; GDP is a good predictor of the growth of the stock market turnover ratio and Stock market turnover ratio is a good predictor of GDP growth. Owiti (2012) while examining the relationship between stock market development and economy growth also finds a positive relationship between liquidity indicators and the economic growth in Kenya. Njenga (2012) examined the relationship between stock market development and economic growth, using the Harrod-Domar growth model, also finds that in the short run, equity turnover had positive effect on economic growth. Seetanah et al (2009) using panel Vector auto regression also found positive significant relationship between Market capitalization and liquidity with both having a significant positive relationship with GDP. From the data observation it can be seen that in the periods covered by disputed election period such as 2007-2009 had the lowest economic growth since investors were uncertain about the stock market which reduced market capitalization, and the liquidity was also affected and might have not been fostered in resource allocation in the economy.

Stock Market Capitalization:

Based on the findings the study concluded that stock market capitalization influences economic growth in Kenya with a positive correlation and significantly related. Stock market capitalization is the total outstanding shares measured by number of shares multiplied by price per share. Market capitalization identifies companies to be large, mid or small cap companies that are having large, medium or small capitalization respectively. Large cap companies are considered to be less risky in terms of investments which are components of GDP compared to small cap which have fewer resources are more sensitive to economic slowdowns. The greater the stock market capitalization, the higher the economic growth.

Stock Market Liquidity:

The study concludes that stock market liquidity and economic growth are positively correlated. Stock traded value measures the volume and the degree of liquidity of the stock market. It shows that the value of equity transaction relative to size of economy. After implementation of ATS in the Nairobi Securities Exchange in 2006, the liquidity of the bourse increased tremendously raising market efficiency thus economic growth.

7. RECOMMENDATIONS

Given the significant contribution on the relationship between the Stock Market Development and the economy growth, the government should improve dealings in the market capitalization by encouraging more foreign investors to participate in the market, provide tax incentives to investors in order to facilitate more investors' to pool their savings in stocks. Regulation of market operations and operators through code of conduct, ethics and governance is important to ensure investor protection and enhance market efficiency. The government should also improve basic infrastructures such as communication and information network. This will enhance transactions between parties of the market (issuing house, stock brokers, investors etc), reduce insider dealings and thus ensure further development of stock market. The government should also discourage Kenyan investors' attitude of buy and hold Securities instead of trading in the stock market and also provide incentives to Small and Medium Enterprises in order for them to list on the Stock Market. The recent launch of the Growth Enterprises Market Segment (GEMS) was a step forward in terms of bringing in more

companies to list in the stock market but the requirements are still stringent especially for startups, more should be done in order to encourage startup companies to raise capital in the market. The government should also restore confidence to the market through regulatory authorities such as the C.M.A being empowered in its oversight capacity so as to portray transparency, fair trading transactions and dealing in the stock exchange to protect investors and instill confidence in the capital market since some stock brokerage firms such as Francis Thuo and partners, Discount securities collapsed running the reputation of the investors on the capital market. Derivative Market trading should be encouraged, though yet to be launched in NSE its major benefit is price discovery, improve market efficiency of underlying asset, reduce market transaction costs and hedge risk. For example in case of equity swap which is an exchange of future cash flows between two parties that allows each party to diversify its income (dividend), for a specified period of time while still holding its original assets and allows large institutions to hedge specific assets or positions in their portfolios. Other related regulatory bodies like SASRA and IRA who have pools of investors fund and invest on their behalf to earn dividends also should be encouraged more in the stock market.

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