THE EFFECT OF TAX PAYMENTS ON STOCK RETURNS OF COMPANIES LISTED AT NAIROBI SECURITIES EXCHANGE

BY

GABRIEL MBUTHIA NGANGA

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DECLARATION

I hereby declare that this research project is my original work and has not been submitted for a degree in any other university.

Signed ..... Date .....

D61/60454/2013

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

Signed ..... Date .....

Dr. Cyrus Iraya

Senior Lecturer, School of Business,

University of Nairobi

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DEDICATION

I dedicate this study to my wife Mary Wanjiku and son Jayson Nganga. May God bless you for standing with me in the entire period of my studies.

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LIST OF ABBREVIATIONS

CAPM - Capital Asset Pricing Model

CGT - Capital Gains Taxes

EMH- Efficient Market Hypothesis

IPO - Initial Public Offering

NSE- Nairobi Securities Exchange

PAYE - Pay As You Earn

RIVM - Residual Income Valuation Model

VAT - Value Added Tax

ABSTRACT

Investors consider a number of factors before making their decisions to invest in a particular firm. One of the most important factors to consider is stock returns by individual firm. The researcher in this study therefore, looks at the effects of tax payments on stock returns for firms listed at the Nairobi Securities Exchange. The researcher conducted a census study for all companies listed at the NSE by the year 2014. Data on total tax paid, total assets, and volume of shares traded daily were collected for the years 2010-2014 for these companies. Descriptive research design was used where data was analyzed by the use of SPSS. There was a mild positive correlation between tax paid and stock return with a total Pearson's Correlation of 0.094. There was a negative relationship of size and stock return with a significant Pearson's Correlation of -.062. A positive relationship was found between volume of shares traded and stock return with a Pearson's Correlation of 0.03. The regression analysis had a coefficient of determination of 0.019 with an estimate of 0.138. The study found a mild positive relationship between tax payments and stock returns.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Hassert and Hubbard (1976) define tax as a compulsory contribution to state revenue which is levied by the government on workers' income and business profits or added to the cost of some goods, services and transactions. Stock return on the other hand is a measure of performance of different companies stocks and shares over time. It combines share price appreciation and dividends paid to show the total return to the shareholder, which is expressed as an annualized percentage. Total tax paid by a company is the independent variable that influences the dependent variable, stock return to the shareholder of the company.

Efficient Market Hypothesis by Fama (1970), Tax differential theory by Litzenberg and Ramaswamy (1982) and clientele effect theory by Miller & Modigliani (1961) are among the theories that seek to explain distortions and their effects on tax and stock returns.

The Nairobi Securities Exchange is the only exchange in Kenya which trades listed equities. The Exchange has been a private operation until 1991, and in the year 1994 it allowed investors to open and settle electronic accounts and trade regular hours. NSE has been regulated by Capital Markets Authority (CMA) since 1989. It has now self listed, and lists fixed-income securities and small-cap shares as well as cross-listing equities with neighbouring countries. NSE has two benchmarks which measure the performance of its listed equities: NSE 20 share index that captures 20 best performing blue chip listing and NSE All Share Index that captures all the overall market.

1.1.1 Tax Payments

Tax was defined by Hassert and Hubbard (1976) as the compulsory contribution that is made by firms to state revenue. This contribution is levied from business profits, added to costs on goods and services and other transactions. In Kenya tax is comprised of direct and indirect taxes. Direct taxation in Kenya is covered under Income Tax Act Cap 470 of the laws of Kenya. Income tax is broadly grouped into individual, corporate, withholding and other income taxes. It is charged on gains or profits from businesses, employment or services rendered dividends or interest, pension, charge or annuity, and withdrawals from registered home ownership savings plan. The Income Tax Act 2012 made some amendments that took into consideration the foreign exchange gains or losses in computing the amount of revenue reserves. Withholding tax is tax which is deducted at source from the following sources of income: interest, dividends, royalties, management or professional fees, commissions, pension or retirement annuity, rent, appearance or performance fees for entertaining, sporting or diverting an audience. Other direct taxes are advance tax applicable to commercial vehicles and Capital Gains Tax (CGT) which had been reintroduced after a 30 year absence.

Indirect Taxes include VAT, excise duty and trade taxes. VAT is an indirect tax levied on the consumption of goods and services. It is the tax on the difference between what a producer pays for inputs (raw materials and services such as advertising) and what the producer charges for finished or final goods and services. Excise duty on the other hand is applied selectively on particular goods and services. The tax is directly paid by the manufacturers although the tax burden is passed to the consumers through an increase in prices. It has been used in Kenya on beers, spirits, tobacco and others in order to increase their prices hence discourage their consumption. Trade taxes are applicable when importing and exporting goods and services (Karingi et al., 2005).

The total amount of tax payable by a company varies with the core operations of the firm, the capital structure, profitability, tax compliance by a particular firm which determines penalties and fines among others. I will measure tax payments by calculating total annual taxes paid and determining the natural logarithm.

1.1.2 Stock Returns

Sebastian et al. (2013) defines stock returns as the gain or loss of a security in a particular period. The return consists of the income and the capital gains relative on an investment. It is usually quoted as a percentage. It is simply the measure of performance of different companies stocks and shares over time. The most common form of generating stock market return is through trading in the secondary market. In this case an investor earns stock market returns by buying a stock at a lower price and selling it at a higher price. Stock Market Returns are however not fixed ensured returns since they are subject to market risks. They are not homogeneous and may change from investor to investor depending on the amount of risk each individual investor is willing to take and the quality of his/her stock market analysis.

The Capital Asset Price Model (CAPM) is considered the foundation of modern finance theory. The single period CAPM shows linear relationships between stock return and market risk of a security. This means that there is no other factor outside market risk, which is explained by the slope coefficient (beta), should explain stock returns. However, studies have shown factors such as tax, size among others to have positive or negative relationship with stock returns (Chowdhury & Sharmin, 2013).

Pan (2012) determined stock returns by the use of the formula

$$\mathrm{R} = \frac{P1 - P0 + D}{P0}$$

Whereas:

R represents stock returns

P1 is the market price of the share at the end of the year

P0 is the market price of the share at the beginning of the year

D is the total dividends per share given out during the year

1.1.3 Tax Payments and Stock Returns

Litzenberger and Ramaswamy, (1982) singled out tax differential theory, modern finance theory, efficient market hypothesis among others as theories that may impact tax payments and stock returns. Investors consider the effects of tax as they are cautious about their total shares returns. They therefore require increased returns to compensate them for the loss due to tax paid. This means that stocks that have tendencies of facing increased taxes, will have less returns since investors will expect more returns to compensate for the amount of taxes paid.

Sharpe (1964) and Lintner (1965) developed CAPM. The main and only influence of stock return as far as CAPM is concerned is market risk. Recent studies by scholars such as Kipngetich (2011), Wairimu (2002) and Pan (2012) gives conflicting information with other factors such as tax, size, liquidity among others affecting stock returns as well. The total relationship of these factors on stock returns also varies with scholars such as Pan (2012) suggesting zero relationship between Price to Earnings Ratio and stock returns.

Waithaka et al. (2012) found a positive relationship between firm's stock trading volume and stock returns. Similarly, the results by Kipngetich (2011) on his study on tax effects on levels of investment, showed a high positive correlation between the variables.

1.1.4 Nairobi Securities Exchange

Nairobi Stock Exchange was constituted in 1954 as a voluntary association of stockbrokers registered under the Societies Act. The business of dealing in shares was confined to the resident European community before the year 1963, since Africans and Asians were not permitted to trade in securities. At the dawn of independence, stock market activity slumped; due to uncertainty about the future of independent Kenya. 1988 saw the first privatization through the NSE, of the successful sale of a 20% government stake in Kenya Commercial Bank. The sale left the Government of Kenya and affiliated institutions retaining 80% ownership of the bank (Mutua, 2011).

Ngugi (2003) identifies three phases in development process of stock markets that are identified and distinguished by their unique institutional and policy environment characteristics. The initial stage is characterized by domination of foreign investors in share trading and spontaneous growth. Nairobi Securities Exchange after the first stage went to the formalization stage that shows the adoption of self regulatory framework. The efforts were meant to increase the participation of local citizens in share trading. It is in this period that the government adopted a controlled policy regime and implemented tax policies that penalized share returns more than returns from other financial assets. The break -up of the East African Community led the market to lose part of its market share and therefore entering into a dormancy state. The last stage is the revitalization stage in which efforts were made to strengthen the institutional infrastructure and enhance the policy environment in order to facilitate growth of the stock market.

The development path of Nairobi Securities Exchange as well as other markets in both developing and developed nations, indicate an evolutionary process where changes in institutional infrastructure and policy environment are witnessed as efforts to facilitate the growth of these markets. Regulatory authorities such as the Capital Market Authority (CMA)

have been established in order to enhance investors' confidence. Increasing investors' confidence in a market enhances their participation in the market. It is however debatable whether increasing their confidence increases the market efficiency (Ngugi, 2003).

Companies listed at the NSE are distributed in all the sectors of Kenyan economy. These sectors are faced with varying tax requirements, with tax incentives being introduced in various sectors such as the agricultural sector, manufacturing sector for firms that manufacture products for exports, among other sectors. This is largely attributed to the need of encouraging investment and growth in these sectors (Mutua, 2011).

Mwangangi (2013) found out that performance of shares at The Nairobi Securities Exchange are highly influenced by the economic factors such as inflation, economic growth, interest lending rate, and fluctuations in exchange rate. These are challenges that affect performance of stocks at the exchange.

1.2 Research Problem

Firms listed at the NSE pay fines, penalties, interest accrued and tax to the regulator. These taxes are either direct taxes or indirect taxes. Some corporations face higher tax burdens and higher penalties than other corporations or rather lack tax incentives while others have numerous tax incentives. Stock returns on the other hand have been affected by dividends pay out ratio, and size of the firms listed at the Nairobi Securities Exchange. It is quite inaccurate to state that these are the only factors that influence stock returns at Nairobi Securities Exchange. In this study, Tax payment is the independent variable that influences stock return which is the dependent variable (Mutua, 2011).

Nairobi Securities Exchange has faced setbacks and improvements since its establishment in 1954. The government involvement in trying to increase the investor confidence has worked to increase the participation of the investors. Technological improvement that involves the

embracing of automated trading practices has also gone a long way to increase participation in the stock exchange. However, it has not yet been established whether these have increased market efficiency. The various challenges that these stock market has encountered include, the rigorous process required for listing a firm at the NSE, the high stakes involved and dilution of ownership. There are also representations problems in that the percentage of firms listed at the NSE are very few compared to the total number of firms registered in the country. High illiteracy levels among the investors who actively participate at the NSE also become a major challenge they may therefore not be aware of financial models that would help them maximize their returns. The cost of obtaining information is relatively high, hence hindering professional and objective investment (Ngugi, 2003).

Studies by Kipngetich (2011), Wairimu (2002), Oliech (2014) and Mwangangi (2013) all look at the response of Nairobi Securities Exchange to changes on factors such as tax paid, corporation tax, and dividend policy on investment. Toerien and Marcus (2014), Tarazi and Gallato (2012) conducted international studies on various markets to determine effects of stock returns, capital gains taxes on dividends on various international markets. There is not a single study to the best of the researcher's knowledge that looked specifically into the effects of tax payments on stock returns at the Nairobi Securities Exchange. This leads the researcher to pose the question; what is the effect of tax payments on stock returns at the Nairobi Securities Exchange?

1.3 Research Objectives

The research objective is to determine the effects of tax payments on stock returns of firms listed at the Nairobi Securities Exchange.

1.4 Value of Study

The study result is significant either in support or in contradiction to tax differential theory, Clientele theory and efficient market hypothesis theory. It further shows how responsive the NSE is to changes in information as per the proposition by Fama (1970) on weak, semi-strong or strong form of EMH.

The research results are of fundamental importance to government in helping them create a suitable taxation policy which will increase local and foreign investments and at the same time does not affect the government negatively on revenue collection. Corporations also benefit from research results, since they give a basis for decision making and policy formulation on issues affecting investment in various sectors.

The study adds value to academics and gives significant help to future researchers. This is because it acts as a source of information which adds to the existing knowledge in the field of taxation and stock market returns.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter summarizes different contributions by other people in relation to tax payments and stock returns. It looks on different theories and empirical studies that have been conducted in this field.

2.2 Theoretical Review

This will cover Clientele Effect Theory, Tax Differential Theory and Efficient Market Hypothesis, as major theories that look into the relationship between tax payments and stock returns.

2.2.1 Clientele Effect Theory

Since dividends and capital gains generally face different tax rates and these rates vary across individuals, an equity security provides different after-tax returns for individuals facing different tax rates. Miller and Modigliani (1961) hypothesize that such heterogeneity leads to what they called dividend clientele effect, which means investors naturally sort into equity holding classes based on their dividend payout ratios. According to the dividend clientele hypothesis, firms with high (low) dividend-payout ratios attract investors with low (high) marginal tax rates. In the aggregate, an individual's portfolio dividend yield, i.e., the ratio of dividend income to the value of equity holdings, should decrease with income.

This theory explains stock price movement resulting from investor reactions to changes in company policies. When a company that previously adopted a high dividend payout policy changes this policy and reduces the dividend payout, investors preferring to receive high dividends will most likely sell their shares in the company thus reducing the prices of the company shares.

The same effect is experienced when taxes are imposed on dividends receivable. Investors will tend to hold more shares for companies that have a policy which reduces the impact of taxes payable on their returns which increases their market prices hence have higher stock returns.

2.2.2 Efficient Market Hypothesis Theory

The Efficient Market Hypothesis (EMH) states that it is not possible to arbitrate in a financial market or rather beat the market. This is because stock market efficiency will cause existing share prices to incorporate and reflect all relevant information. The theory thus claims that stocks always trade at their fair value on stock exchanges and thus the investors may not either purchase undervalued stocks or sell stocks for inflated prices. The theory was first proposed by Professor Eugene Fama in the early 1960s.

Fama (1970) identified three forms of EMH that he referred to as Weak form semi strong form and strong form of EMH. When all past publicly available information is reflected in the stock prices, this is known as weak form of hypothesis. Semi-strong form on the other hand claims that prices reflect both past publicly available information and that price instantly change to reflect new public information. The strong form of EMH claims that prices reflects even the private information or hidden insider information. This theory strongly relates to the study variable as it will help determine how responsive the Nairobi Securities Exchange is, to information about tax payments (Fama, 1970).

2.2.3 Tax Differential Theory

The theory is from the idea that capital gains are better than dividends because the tax rate on capital gains is lower than the tax rate on dividends. This theory was first proposed by Litzenberg and Ramaswamy (1982). It generally claims that investors prefer lower payout companies for tax reasons.

The theory was based on observation of American stock market where three reasons were given to justify this theory. Unlike dividends long-term capital gains allow the investor to differ tax payment until they decide to sell the stock in future which is cheaper than paying taxes immediately due to time effects. Capital gains also attract lower taxes than dividends themselves and also in case of death of individual investor, no capital gains is collected when the shares are transferred to the next of kin (Litzenberger & Ramaswamy, 1982).

This theory shows that investors are wary of taxes. It insinuates that companies that pay high taxes will have low demand of its shares that may lead to low share return. Investors will therefore choose companies that have less tax obligations to companies with high tax obligations.

2.3 Determinants of Stock Returns

Stock returns are influenced or determined by several factors. Tax payments, size of the firm, number of shares traded and price to earnings ratio. Below I discuss each of these factors.

2.3.1 Tax Payments

Tax payment is a function of the profitability of an organization. Some taxes such as withholding tax on dividends directly affect stock returns. Seyhun & Skinner (1994) in their study discovered that taxes were insignificant in determining stock returns, while Kipngetich (2011) found significant relationship between tax paid and investments.

2.3.2 Size of the Firm

Schwert (1983) suggests that average returns to small firms' stocks are substantially higher than any known capital asset pricing model predicts. The high returns have been proven to occur in most cases in the first few days of January. This has been observed both in the United States and in Australia. Small firms' stocks tend to have lower prices and higher bid-ask spreads, therefore the transaction costs are relatively high for these stocks.

The stocks of small firms are traded less frequently than the stocks of a bigger firm. This implies that the estimates of systematic risk from daily stock returns will be biased downwards.

2.3.3 Trading Volume

Trading volume is the number of shares traded each day and is an important indicator in technical analysis since it is used to measure the work of stock price movement either up or down. The higher the trading volume the higher the stock returns. The relationship between trading volume and stock returns is therefore positive and highly significant (Yonis, 2013).

2.4 Empirical Review

Tarazi and Gallato (2012) looked on whether the company's stock returns in Malaysia and Thailand could be predicted by financial ratios. They investigated the ability of price to earnings, book-to-market ratios, and returns on asset, inflation, exchange rate and interest rate to predict future stock market returns in both Malaysia and Thailand stock market. They applied the standard dummy variable decomposition method to financial data from two emerging markets from the year 2000 to 2011 and applied linear regression analysis for 1176 companies out of possible 1761 companies. They found out that inflation, change in interest rate and change in exchange rate significantly influenced stock returns.

Litzenberger and Ramaswamy (1982) studied the effects of dividends on common stock prices and whether or not the positive association between common stock returns and dividend yields can be attributed entirely to information effects or tax effects. Their study showed that there is a positive and non-linear relationship between common stock returns and expected dividend yield. The prediction rule for expected dividends was based solely on information that would have been available to the investor ex-ante. They therefore concluded that these results could not be attributed to the favorable or unfavorable information that

would be present in a proxy for expected dividend yield that anticipated the occurrence (or lack thereof) of a dividend. Despite the fact that this study shows there is a positive relationship between the common stock returns and dividend yield, the researcher qualifies the fact that such positive relationship cannot be attributed to the known factors that would affect the dividend yield such as tax effects or other information effects.

Ellis et al. (2006) had an interesting observation when they studied the effect of capital gains taxes on security prices. They examined whether returns for initial public offerings (IPOs) reflect tax capitalization and/or lock-in. They sampled 5,534 IPOs from the year 1987 to 2004 using Thompson Financials Database SDC Global New issues Databases. They controlled economic factors commonly believed to influence IPO underpricing and they found out that short-term capital gains rates are positively associated with IPO underpricing, while long-term capital gains rates are negatively associated with IPO underpricing. In addition they found out that IPO underpricing is positively associated with the spread between individual short term and long term capital gains tax rates.

The study done by Toerien and Marcus (2014) in their study to examine the effect of South African taxes, specifically the secondary tax on companies and the dividends tax (which replaced Secondary tax on companies), on investor measures of expected return and firm value seems to be consistent with results obtained by Ellis et al (2006). They modeled the relationship between CGT and expected return and use this relationship to formulate an hypothesis of the expected behavior of ex-ante measures of implied cost of capital for a sample of South African Companies. These measures were calculated by formulating a unique South African version of the residual income valuation model (RIVM) and regressed derived measures of the implied equity premium on historical measures of dividend yield. They found out that investors appeared to recognize the net tax benefit of dividends and capitalized these benefits into stock prices.

Taxable individual investors can use realized capital losses to reduce taxes on realized gains or to offset a limited amount of non gain income. Since taxes are computed on income within a calendar year, realizing a capital loss before year end can accelerate the tax benefits of the loss by as much as twelve months. Taxable investor thus have an incentive to sell shares with accrued losses at the year end, which may result in a decline in prices at year end, followed by rising prices and abnormally high returns after the turn of the year. This concept was studied by Porteba and Weisbenner (2001) by looking whether changes in the capital gains tax rules facing individual investors may affect the incentives for "window dressing" by either the institutional investors or individual investors. They looked into the empirical evidence for the period 1963 to 1996 which suggested that when the tax law encouraged taxable investors who accrued losses early in the year to realize their losses before year end, the correlation between early year losses and turn-of-the-year returns was weaker than when the law did not provide such an early realization incentive. They concluded that tax loss trading contributed to turn-of-the-year return patterns.

Seyhun and Skinner (1994) looked into the direct evidence on the importance of tax-reduction strategies. They utilized a large panel of individual tax-return data which was made available by the Internal Revenue Service in the United States. They linked the tax data to the prices of stock and closed – end mutual funds. They found out that relatively few investors trade securities to reduce their taxes and that tax induced trading has little effect on stock prices. The findings suggested that holding all things constant, stocks prices are likely to be insensitive to capital gains tax rates.

Waithaka et al. (2012) studied the effects of dividend policy on share prices at the NSE. The study targeted the 46 listed and trading companies in the NSE with the target respondents being the staff members working for the companies, the study used a random sample of 35 members to represent three levels of the firms' structure. A multiple regression analysis was

conducted so as to determine the relationship among variables on the effect of dividend policy on share prices. The study found out that higher pre-tax risk adjusted returns associated with higher dividend yield stocks to compensate investors for the tax disadvantages and that investors whose portfolios had low systematic risk preferred high-pay-out stocks. They also found out that an increase in firm's stocks trading volume affected the share price.

Kipngetich (2011) studied the relationship between tax paid and the level of investment for the companies quoted at the Nairobi Securities Exchange. He analyzed data for the year 2006 to the year 2010 and used descriptive statistics. He concluded that there is a relatively strong relationship between tax paid and investment made which was more pronounced in the agricultural and the financial sector.

The results of the study conducted by Wairimu (2002) were consistent with results by Kipngetich. The study was on empirical relationship between dividends and investment decisions of firms quoted at the Nairobi Stock Exchange. She analyzed data of companies listed at NSE for 21 years from 1981 to 2000 by the use of linear regression model. She also concluded that there was a significant relationship between investment and dividend decisions (Wairimu, 2002).

Oliech (2012) sought to determine the effect of corporate taxes on investment decisions of companies listed at the Nairobi Securities Exchange. She analyzed data for the year 2008 to the year 2012 and conducted t-test to establish the significance of the independent variable. She found out that there was significant relationship between corporate taxes and investment decisions.

Mwangangi (2013) studied economic performance indicators and stock returns at the Nairobi Securities Exchange. He employed a census methodology of all the 62 listed firms at the NSE

where he carried out an explanatory research design from the year 2008-2012. Regression analysis was used to demonstrate the relationship between the macroeconomic factors and stock returns at the NSE. The study showed a positive relationship between stock returns and underlying inflation, economic growth, and interest lending rate. A negative relationship was found between stock returns and exchange rate. The study variables that were statistically significant were economic growth and exchange rate.

2.5 Summary of Literature Review

Theory of Clientele effect holds that different investors hold to different securities depending with their dividend payout ratio. Different classes of investors have different preferences in regard to cash dividends or capital gains. This difference is brought out by tax payable on dividends which is more than tax on capital gains.

The theory of EMH suggests that all information in the market is reflected in the share prices. This means that share prices also reflect information about taxes paid by various corporations as well, thus affecting the stock return. Tax differential theory suggests more the same as the theory of clientele effect where taxes on dividends reduces the stock returns for companies that have a high dividend payout ratio.

The study by Tarazi and Gallato (2012) concentrated on determining effect of stock returns on financial ratios in markets in Malaysia and Thailand. They found positive relationship between the variables that is consistent with findings from Ellis et al. (2006) and Toerien and Marcus (2014). Studies by Litzenberger and Ramaswamy (1982) and Seyhun and Skinner (1994) however, showed a zero relationship between the variables. These studies therefore have contradictory results and it would be interesting to note the results in the context of firms listed at the Nairobi Securities Exchange.

Local studies cited all found positive relationship between their variables in the context of Nairobi Securities Exchange. The data collected however relates to different and varying period and the variables under study differs significantly with the study variables I want to study.

Waithaka et al. (2012) studied dividend policy on stock returns, Kipngetich (2011) studied tax paid and levels of investment, Wairimu (2002) studied dividends and investments decisions, Oliech (2012) studied corporate taxes and investment decisions while Mwangangi (2013) studied economic performance indicators on stock returns. The studies therefore fail to address the issue of all the different taxes paid by the individual firm and the effect of the same on its market stock return.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter explains the way in which the research study was conducted. It outlines the research design, the targeted population, study sample, data collection analysis and model specification.

3.2 Research Design

Research design constitutes the blue print for the collection, measurement and analysis of data. In this study, descriptive research design was used to look at the effects of tax payments on stock returns at the NSE. Descriptive design studies are those studies that are concerned with describing the characteristics of a particular individual or a group (Kothari, 2004). It is conducted to demonstrate the relationship between variables under study.

3.3 Population

The research study conducted a census on all 64 companies listed at the NSE as at 31st December 2014. Data for these companies were collected for the years 2010 to the year 2014 (See Appendix 1).

3.4 Data Collection Technique

The study used secondary data. The information was collected from the year-end financial statements of companies listed at the NSE for the years 2010 to the year 2014. The NSE handbook for the year 2015 was used to obtain past data from the companies listed at the NSE.

3.5 Data Analysis Techniques

From the data collected, multiple regression analysis was used to establish the effect of tax payments on stock returns over the stated period. Data was presented using tables and worksheets where analysis by SPSS was carried out.

3.5.1 Analytical Model

The model used to analyze the data was as follows:

Model $Y=b_0+b_1X_1+b_2X_2+b_3X_3+u$

Y is the dependent variable which in this case represents stock returns for each individual company. The stock returns was measured as suggested in the model $R = (P_1-P_0+D)/P_0$

R is the stock return

P_1 is stock market price at the end of the year.

P_0 is the stock market price at the beginning of the year

D represents the total declared dividends per share.

X_1, X_2, and X_3 represents the independent variables.

X_1 is our study variable (tax payments) that represented total Kenya Shilling amount of tax paid divided by total revenue (See Appendix 2).

X_2 represents size of the firm. This was obtained by finding the natural logarithm of total amount of assets of a company in the end of year.

X_3 represents Trading volume. It was computed by looking at the total daily average amount of shares traded by each company in the five year period, divided by the total number of shares issued by the company.

u represents the Error term.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

The chapter will present the quantitative analysis of secondary data that has been obtained from listed companies at NSE from the year 2010 to year 2014. Stock prices, total tax paid and total shares traded by a company were the data of interest to the researcher, for the companies listed at the Nairobi Securities Exchange.

There were 64 listed companies at the NSE by end of the year 2014. However, data of 15 of these companies was not used in the analysis, due to the fact that it was not complete. The incompleteness of the data was due to the reasons that the shares for the company had stopped trading at the NSE such as Hutchings Biemer Ltd, or others were listed within the course of the study period, such as the Nairobi Securities Exchange, CIC Insurance Ltd, among others.

The data obtained was analyzed using Microsoft Excel worksheets and SPSS. Data analysis involves descriptive statistics, correlation analysis and regression analysis.

4.2 Analysis of Descriptive Statistics

The study findings were described in mean and standard deviation as indicated in the table below.

Table 4.1 Summary of Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Effective_Tax_paid	245	-.35	.41	.0900	.11298
Size	245	11.90	20.01	16.1712	1.96248
Effective_Volume_Traded	245	.00	16.78	.5375	1.62584
Stock Return	245	-8.00	7.52	.0849	1.51677
Valid N (listwise)	245				

Source: Author (2015)

The study looks at the effects of tax payments on stock returns for companies listed at the NSE. The effective tax paid is the total tax paid divided by the total revenue, the mean of this ratio is 0.09 with a standard deviation of 0.11298.

Size on the other hand was defined by the natural logarithms of total assets of the companies. The mean for this variable was found to be 16.1712 with a standard deviation of 1.96248.

Volume of shares traded daily was the other variable. The average of total shares traded per day by each company were calculated and divided by the total number of shares issued by the company. This ratio represented this variable and had a mean of 0.5375 with a standard deviation of 1.62584.

The mean for stock return, our dependent variable, was found to be 0.0849 with a standard deviation of 1.51677.

4.3 Correlation Analysis

The researcher used Pearson's Correlation analysis in order to establish whether linear relationships existed between the variables. The correlation analysis was done at 99% confidence level. Kindly see table 4.2

Table 4.2 Correlation Analysis Table

		X_1	X_2	X_3	Y
Effective Tax paid (X_1)	Pearson Correlation	1			
Size (X_2)	Pearson Correlation	.353**	1		
Shares Volume Traded (X_3)	Pearson Correlation	.098	-.186**	1	
Share Return 14 (Y)	Pearson Correlation	.094	-.062	.030	1

**. Correlation is significant at the 0.01 level (2-tailed).

Source: Author (2015)

4.4 Regression Analysis

Linear regression analysis was conducted on the model.

Model $Y=b_0+b_1X_1+b_2X_2+b_3X_3+u$

4.4.1 Regression Model Summary

The table below shows the summary of the regression model. The coefficient of determination (R Square) gives the variation in the dependent variable that was due to change in the independent variable. Changes in stock return are only explained by the variables to the extent of 1.9%. An estimate of 0.138 shows a mild positive linear relationship between the dependent and independent variables.

Table 4.3 Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.138[a]	.019	.007	1.51151

a. Predictors: (Constant), Effective Tax paid, Size, Effective Volume Traded

Source: Author (2015)

4.4.2 Analysis of Variance

Analysis of variance was done to show whether there was a significant mean difference between dependent and independent variables. It was conducted at 99% confidence level and the results are as shown in table 4.4 below.

Table 4.4 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
	Regression	10.739	3	3.580	1.567	.198[a]
	Residual	550.605	241	2.285		
	Total	561.344	244			

a. Predictors: (Constant), Effective_Tax_paid, Size, Effective Volume Traded

b. Dependent Variable: Stock Return

Source: Author (2015)

4.4.3 Regression Coefficients

The table below summarizes the results for regression coefficients

Table 4.5: Regression Coefficient Results

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1.294	.863		1.500	.135
Effective_Tax_paid	1.783	.931	.133	1.917	.056
Size	-.085	.054	-.109	-1.559	.120
Effective_Volume_Traded	-.003	.062	-.003	-.052	.959

a. Dependent Variable: Stock Return

Source: Author (2015)

The Multiple regression models thus become

$$\mathbf{Y= 1.294 + 1.783X_1-0.085X_2-0.003X_3}$$

The model suggests that when all the independent variables are held constant at zero, then the share return is 1.294. When the other variables are held constant, a unit increase of the ratio of tax paid and total revenue results to an increase of the stock return by 1.783. On the other hand, holding other factors constant at zero, increasing the natural logarithm of total assets by one, reduces the share return by 0.08 while the same is reduced by 0.003 when one increases the ratio of the total shares traded daily to total issued shares by one unit.

4.5 Discussion of Findings

The ratio of tax paid and total revenue had a mean of 0.09 and a standard deviation of 0.11298. The total natural logarithm of total assets that were used to measure size of the company had a mean of 16.17 with a standard deviation of 1.96248. The ratio of average daily shares traded with the total number of shares issued that the researcher used to measure

volume traded had a mean of 0.5375 and a standard deviation of 1.62584. Stock return which was our dependent variable had a mean of 0.0849 and a standard deviation of 1.51677.

The Pearson's correlation for tax payment against share return was 0.094. This suggests that an increase in the tax ratio by one per cent would result to an increase in share return by 9.4%. The result findings suggest that tax payments are mildly positively related to stock returns. The study results are not consistent with results by Kipngetich (2011) who found a strong relationship between tax payments and level of investment income. Wairimu (2002) found out that there was a strong relationship between dividends and investment decisions of firms quoted at the Nairobi Stock Exchange.

The results were however consistent with study results by Seyhun and Skinner (1994) who found out that relatively few investors trade securities to reduce their taxes and that tax induced trading has little effect on stock prices. Litzenberger and Ramaswamy (1982) found out that there is a positive and non-linear relationship between common stock returns and expected dividend yield. This study is consistent with the study results that show a mild positive relationship between tax paid and stock returns.

The study also found out that there is a negative relationship between size of a company and stock return. The study suggests that when the natural logarithms of company assets are increased by 1%, the stock return decreases by 8.5%. This might be due to the reason of diseconomies of scale, and the principle of diminishing rate of return, where an increase in an asset does not increase the marginal output of the asset. These findings are consistent with findings by Okada (2006) who found out that size effect was also evident in Japan where small firms were experiencing better returns than big firms.

The results also indicated that an increase in daily trading volume of shares would result to an increase of stock returns. The Pearson's correlation was equal to .034 which means that an increase of trading volume by 1% would result to an increase of 3.4% of stock return.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter gives a summary of the findings, conclusion of the study and necessary recommendations for further research. It is in this chapter that conclusions on effects of tax payments on stock returns for firms listed at NSE will be made.

5.2 Summary of Findings

When firms pay taxes, the total amount that would be attributable to shareholders is reduced. On the contrary, taxes are only payable when a firm makes profit. Fama (1970) suggests that dividends are only paid by profitable firms. Increase in profitability thereby increases the total amount of tax payable by a firm and at the same time increases stock return either by means of increasing dividends or capital gains.

The research findings indicated that a mild relationship exists between tax payments and stock returns. When taxes are increased, the stock returns on the other hand are increased albeit on a smaller proportion. This shows that investors are not sensitive to taxes paid by the individual company to influence their decision of investing in a company. The increase in stock returns due to increase in tax payments is only explained by the coefficient of determination which was at 0.019. This means that it is only 1.9% change in share return that would be explained by tax payments.

The size effect on the other hand with correlation analysis being at -0.085 for size, indicates that with an increase in size of a company, the stock return decreases by 8.5%. The negative relationship is significant and supports claims on the small firm effect.

The volumes of shares traded had a negative relationship with share return of a company. The relationship was mild with Pearson's Correlation being -0.003. This would mean that when a

firm at NSE trades a high volume of shares, this does not automatically mean that investors in that particular share will have a higher share return. There is in fact a mild relationship between the two variables that may be supported by use of herd instincts while investing, inadequate professional knowledge in investment, and high rate of ignorance in the market.

5.3 Conclusion of Findings

The market efficiency at Nairobi Securities Exchange may not be the strong form, but there exists information pathways that help the existing information be reflected in the stocks markets. Tax payments have been found to have a mild positive relationship with stock returns, and the size effect is also highly evident at the NSE. The number of shares traded by a particular firm has also been found to have a significant effect on stock returns.

A mild negative relationship between the volumes of shares traded with share returns suggests that the market has inadequate information and therefore many investors in the market invest in shares that have low stock returns.

Tax paid by the company was found to have a positive mild relationship with stock returns. This suggests that when a company pays more tax, investors are likely to have a higher stock return. This might be due to the reasons that taxes are paid on profits. In fact when a company makes a loss, the total amount of taxes payable may be less than the total amount the company may claim from the government, hence receiving a refund from the government. The research revealed that companies that pay high taxes make high profits that may translate to high stock returns. This may explain the positive relationship between tax payments and stock returns.

The study also found out that size had a significant negative relationship with stock returns. This is in tandem with proposition of small firm effect. According to this proposition, small firms tend to have higher returns than large firms (Okada, 2006).

5.4 Policy Recommendations

The study gives insight into the relationship which exists between tax payments, size of the firm, volumes of shares traded and stock returns. This information is necessary to policy makers on making informed decisions that will help in achieving a desired effect.

There is a mild relationship between tax payments by a firm and stock returns. This shows that the government should ensure that all companies pay taxes, and issues of tax evasion are highly punished. Payment of taxes does not significantly affect the stock returns and therefore there is low chance of discouraging investment in a company when such company complies to the existing tax regulations.

Size also affects stock return. Policy makers need to balance the growth of the company with objectives of the shareholders. This means that assets deployed in a firm should be done to an optimum level so as to reduce adverse effects of increase in size that results to decrease in stock returns. Issues of agency conflict should be addressed that would ensure that the investor gets value for the total investment made in a company.

The study also provided insightful information on the responsiveness of the markets to changes in information. There is low responsiveness which means that the Nairobi Securities Exchange needs to educate investors and provide information that will help investors make informed decisions before investing in a company. The regulator will need to be careful on how it sets regulation to protect the uninformed investor from malpractices such as inside information among others.

The study shows that there needs to be more input by the government and other stake holders in supporting further growth and development of the market. Challenges facing the market should be addressed to ensure that more products are featured and traded in the market.

5.5 Limitations of the Study

Three stocks had been suspended from trading either through the entire period of the study or during part of the study period. Some stocks were also listed during the study period. Some stocks had also experienced share splits within the period of the study and as such affected the values of the model for share returns.

The stocks include Kenya Orchards Ltd, Hutchings Biemer Ltd and A. Baumann Company Ltd. There were no stock returns for the entire period of suspension of these stocks.

The researcher relied entirely on data from financial statements of individual firms which are subject to material misstatement, errors or omissions. Figures are sometimes restated which reduces accuracy and reliability of such information.

Time was also another limitation in which the researcher did not have enough time to visit each and every firm listed at the securities exchange to collect data. Data collected from secondary data may be misleading and erroneous, the lack of a way to measure the truthfulness and correctness of the data collected from secondary sources is another limitation to this study.

The researcher only used three variables to explain the changes in Stock returns. This is a limitation since there are other variables that affect stock returns. These variables may not necessarily be empirically measurable. Such variables may include the perception of the investors on these companies among other variables.

5.6 Areas for Further Research

The researcher suggests that similar studies be carried out to cover firms that are not listed at the NSE. Special emphasis may be given to SMEs, which have become an important aspect of the economy for both developing and developed countries.

The effects of tax payments on stock returns should also be studied in other exchanges around the world. Statistical differences should be analyzed for studies conducted in both developed and developing countries. The results of such studies should be compared to results in this study.

There are other factors that may be affected by tax payments. Therefore studies of tax payments in relationship to other factors such as corporate governance should be studied and results of such study compared to results of this study.

The study results showed that only 1.9% of the changes in stock returns are explained by study variables. Studies should be conducted to explain other factors that influence changes in stock returns.

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APPENDIX

A. List of Companies Listed at Nairobi Securities Exchange

1. Access Kenya Group Ltd
2. ARM Cement Ltd
3. British American Tobacco Kenya Ltd
4. A.Baumann & Co Ltd
5. Barclays Bank of Kenya Ltd
6. Crown Paints Kenya Ltd
7. B.O.C Kenya Ltd
8. British American Investments CO. Kenya Ltd
9. Car & General (K) Ltd
10. East African Cables Ltd
11. Carbacid Investments Ltd
12. CFC Stanbic of Kenya Holdings Ltd
13. Liberty Kenya Holdings Ltd
14. CIC Insurance Group Ltd
15. CMC Holdings Ltd
16. Co-operative Bank of Kenya Ltd
17. Diamond Trust Bank Kenya Ltd
18. East African Breweries Ltd
19. Eaagads Ltd
20. Equity Bank Ltd
21. Eveready East Africa Ltd
22. Sameer Africa Ltd
23. Flame Tree Group Holdings Ltd
24. Home Africa Ltd
25. Hutchings Biemer Ltd
26. Housing Finance Co. Kenya Ltd
27. I & M Holdings Ltd
28. Centum Investments Co Ltd
29. Jubilee Holdings Ltd
30. Kapchoria Tea Company Ltd
31. Kenya Commercial Bank Ltd
32. KenGen Company Ltd
33. KenolKobil Ltd
34. Kenya Re Insurance Corporation Ltd
35. Kenya Power & Lighting Co. Ltd
36. Kenya Airways Ltd
37. Kakuzi Ltd
38. Kurwitu Ventures Ltd
39. Limuru Tea Company Ltd
40. Longhorn Kenya Ltd
41. Marshalls East Africa Ltd
42. Mumias Sugar Co. Ltd
43. National Bank of Kenya Ltd
44. NIC Bank Ltd
45. Nation Media Group Ltd
46. Nairobi Securities Exchange Ltd
47. Olympia Capital Holdings Ltd

48. Kenya Orchards Ltd
49. Pan Africa Insurance Holdings Ltd
50. East African Portland Cement Co. Ltd
51. Rea Vipingo Plantations Ltd
52. Sasini Ltd
53. Scangroup Ltd
54. Standard Chartered Bank Kenya Ltd
55. Safaricom Ltd
56. Standard Group Ltd
57. Trans-Century Ltd
58. Total Kenya Ltd
59. TPS Eastern Africa Ltd
60. Uchumi Supermarket Ltd
61. Umeme Ltd
62. Unga Group Ltd
63. Williamson Tea Kenya Ltd
64. Express Kenya Ltd

B. Data Used

	Tax 14	Tax 13	Tax 12	Tax 11	Tax 10		Stock Return 14	Stock Return 13	Stock Return 12	Stock Return 11	Stock Return 10
Eaagads Ltd	(16,992)	(24,008)	14,373	29,696	4,992		0.14	-0.25	-0.49	0.97	0.00
Kakuzi Ltd	72,594	74,278	159,150	275,696	169,963		0.13	0.32	0.37	-0.10	1.65
Kapchorua Tea Co. Ltd	(6,751)	56,088	34,608	81,388	60,286		-6.90	0.26	0.12	-0.13	1.24
The Limuru Tea Co. Ltd	2,409	13,043	44,787	19,365	29,488		0.54	0.17	0.29	0.14	0.01
Rea Vipingo Plantations Ltd	179,874	206,531	174,860	211,650	36,555		0.04	0.68	0.23	-0.12	0.69
Sasini Ltd	16,372	66,718	(38,888)	563,792	388,646		7.52	0.24	-0.03	-0.03	1.28
Williamson Tea Kenya Ltd	335,868	485,160	308,759	409,305	347,226		0.32	0.04	0.28	-0.11	3.84
Car & General (K) Ltd	56,088	34,608	87,962	139,220	90,941		0.27	-0.04	-0.31	0.11	0.19
CMC Holdings Ltd	72,594	159,150	125,789	(28,424)	178,216		1.85	0.01	0.36	-0.19	0.21
Sameer Africa Ltd	(2,528)	55,332	110,307	51,498	4,803		1.40	1.50	1.00	-0.95	0.28
Barclays Bank of Kenya Ltd	3,906	3,511	4,279	3,940	2,954		0.00	0.17	0.28	-0.77	0.02
CFC Stanbic of Kenya Holdings Ltd	2,013,585	2,096,849	1,578,197	1,159,744	598,324		0.46	1.20	0.06	-0.47	0.70
Diamond Trust Bank Kenya Ltd	2,812,856	2,004,249	1,959,921	1,310,687	980,829		0.24	0.69	0.29	-0.32	0.95
Equity Bank Ltd	5,213,000	5,726,000	5,339,152	2,509,000	1,913,000		0.69	0.36	0.52	-0.36	0.92
Housing Finance Co.Kenya Ltd	335,868	485,160	164,297	353,517	181,497		0.48	1.13	0.36	-0.49	0.51
Kenya Commercial Bank Ltd	6,482,777	5,319,517	5,004,612	4,148,328	2,619,998		0.25	0.66	0.88	-0.14	0.53
National Bank of Kenya Ltd	432,429	699,365	420,490	897,737	675,904		-0.14	0.69	-0.14	-0.47	0.01
NIC Bank Ltd	2,113,976	1,772,270	1,481,173	897,811	744,474		-1.69	0.57	0.64	-0.47	0.01
Standard Chartered Bank Kenya Ltd	3,909,801	4,092,044	3,486,658	2,418,314	2,305,693		0.15	0.36	0.55	-0.34	0.69
The Co-operative Bank of	2,901,214	1,764,259	2,260,000	997,000	1,191,000		0.45	0.07	-0.33	0.02	0.08

Kenya Ltd											
Express Kenya Ltd	917	(1,924)	(26,264)	6,733	13,222		0.67	0.11	-0.10	-0.50	-0.03
Kenya Airways Ltd	(1,479,000)	(2,962,000)	486,000	1,464,000	636,000		-8.00	-0.10	-0.54	-0.44	2.09
Nation Media Group Ltd	1,163,500	1,053,900	994,300	803,500	608,200		-0.15	0.23	0.95	-0.11	0.48
Scangroup Ltd	286,801	131,766	317,557	368,984	197,811		-4.15	-0.29	0.67	-0.31	1.44
Standard Group Ltd	105,569	111,187	82,057	84,752	173,866		0.36	0.22	-0.13	-0.45	0.21
TPS Eastern Africa Ltd	54,318	304,706	227,928	237,242	176,549		-0.18	0.17	-0.25	-0.18	0.55
Uchumi Supermarket Ltd	68,461	128,892	129,366	124,408	(431,907)		-0.27	0.01	0.61	-0.21	0.00
Athi River Mining	524,740	651,257	544,658	212,414	37,694		-7.67	1.04	-0.72	-0.13	0.66
Bamburi Cement Ltd	1,898,000	1,843,000	2,294,000	2,607,000	2,265,000		-0.31	0.15	0.56	-0.28	0.25
Crown Paints Kenya Ltd	131,766	119,599	90,627	71,537	78,063		0.50	0.81	1.13	-0.40	0.49
E.A.Cables Ltd	166,334	187,198	231,183	150,026	74,795		-2.99	0.52	0.20	-0.30	-0.15
E.A.Portland Cement Co. Ltd	12,931	(355,905)	(60,199)	(680,314)	(46,169)		0.39	-0.03	-0.25	-0.30	0.02
KenGen Co. Ltd	1,331,625	(1,197,780)	1,222,590	1,571,186	(801,534)		-0.25	0.83	-0.32	-0.18	0.21
KenolKobil Ltd	429,536	5,499	(2,680,089)	1,659,952	921,183		-4.76	-0.29	0.36	0.10	-0.79
Kenya Power & Lighting Co Ltd	3,742,193	2,072,175	3,889,557	2,035,185	1,916,587		-7.93	-0.05	-0.27	-0.89	0.04
Total Kenya Ltd	851,917	772,240	137,841	129,286	472,220		-1.23	0.81	-0.05	-0.49	0.01
Jubilee Holdings Ltd	845,632	648,371	408,802	233,501	214,163		0.41	0.91	0.16	-0.13	0.65
Kenya Re Insurance Corporation Ltd	782,560	476,337	142,743	122,193	118,625		0.30	0.33	0.54	-0.31	-0.03
Pan Africa Insurance Holdings Ltd	281,408	266,021	234,406	109,030	75,942		0.38	1.35	1.08	-0.31	0.09
Centum Investment Co Ltd	48,323	36,850	177,270	2,046	(12,967)		0.85	0.51	0.00	-0.39	0.38
Olympia Capital Holdings Ltd	(16,683)	2,966	17,487	(3,258)	19,001		0.25	0.00	-0.20	-0.17	0.00
B.O.C Kenya Ltd	48,359	105,756	89,318	64,344	35,344		4.16	0.31	0.05	-0.19	-0.06
British American Tobacco Kenya Ltd	1,840,105	1,746,264	1,483,450	1,386,361	955,336		0.58	0.28	1.14	0.02	0.62

Carbacid Investments Ltd	106,621	159,145	146,157	72,015	130,649		6.93	0.17	0.43	-0.38	0.56
East African Breweries Ltd	3,548,011	4,592,719	4,066,936	3,235,329	3,730,527		-7.97	0.46	0.19	0.13	0.26
Eveready East Africa Ltd	(70,424)	15,021	(1,170)	(49,214)	6,043		0.35	0.35	0.14	-0.42	0.00
Mumias Sugar Co. Ltd	(698,451)	(562,293)	(248,650)	713,350	607,491		-0.32	-0.31	-0.08	-0.41	1.21
Unga Group Ltd	184,968	124,685	164,374	190,027	98,928		0.19	-0.50	0.95	0.01	2.70
Safaricom Ltd	11,966,890	7,910,755	4,741,793	5,202,390	5,818,632		1.13	0.97	-0.10	-0.28	0.92