THE EFFECT OF CAPITAL GAINS TAX ON INVESTMNENT IN SECURITIES AT NAIROBI SECURITIES EXCHANGE

BY

KIMANI PAUL NGARUIYA

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DECLARATION

This project is my original work and has not been presented in any University or institution of higher learning for any academic award.

Signature.............................. Date..........................

Kimani Paul Ngaruiya

Reg. No: D61/79385/2012

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

Signature.............................. Date..........................

Mr. Nicholas Simiyu

Department of Finance & Accounting,

University of Nairobi

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DEDICATION

I dedicate this project to my family and friends. A special gratitude to my loving wife,

Jacinta and my son Irving for their support and understanding.

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LIST OF ABBREVIATIONS

CGT   Capital Gain Taxes

KRA   Kenya Revenue Authority

NSE   Nairobi Securities Exchange

ABSTRACT

The Kenyan government has budget deficit. To meet this deficit, there has been suggestion from various stakeholders. Among the suggestions was to reintroduce capital gain taxes to reduce the budget deficit. CGT tax was suspended in the year 1985 to spur economic growth. This study sought to establish the effects of CGT on investment in securities at NSE. The research adopted a comparative study. In this study, the volume of shares traded before the re-introduction of CGT was compared with the volume of shares traded during the period when CGT was charged. CGT was reintroduced on January 2015 till June 2015. The f-test at 95% confidence level was used to determine statistical significance of the constant terms and coefficients used in the study regression model. The study found that the CGT had negative effects on investment in securities. The correlation between CGT and number of shares traded was found to be negative. Therefore, CGT was attributed to reduced investment in securities at NSE. The model derived by the study indicated that CGT lead to 4.77% changes in the volume of shares traded. The study concluded that CGT reduces the level of investment in securities. The study supports the suspension of the CGT and recommends that the CGT should not be reintroduced. The study further recommends reduction in the rates for CGT in countries where it is already charged. Reduction in CGT rate or its suspension will lead to increased level of investment hence increased economic growth.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Capital Gain Tax (CGT) refers to the tax chargeable on the gains that accrue to an individual or a company on the transfer of property situated in Kenya (Kenya Revenue Authority, 2015). The eight schedule of the Income Tax Act defines properties to include marketable securities, buildings, and land.

Taxation of property transfer has become an issue of great concern in Kenya since it has significant fiscal and economic implication to the government. Most government problems are associated with the budget deficit since cash flows have a narrow tax base. There are also massive reliefs and exemptions from taxation that reduce cash flow from taxation. These factors among other have contributed to a deficit in the Kenyan budget. The budget deficit has attracted excessive attention and studies from international and local persons. For example, the World Bank (2013) has produced an update on Kenya's economy quoting the budget deficit and how it can be financed.

This type of tax is not new in Kenya. The tax was first introduced in Kenya in the year 1975. However, in the year 1985, the tax was suspended. The objective for the suspension of the tax was to spur investment in real estate as well as in the securities market. Its suspension encouraged investors to invest more in real estate and stocks and other securities. According to Earnest and Young (2014), there have been previous attempts to re-introduce the tax system but in vain. The government's objective to reintroduce the tax is to widen the tax base and obtain funds to bridge the budget deficit.

However, this tax system has faced stiff opposition from lawyers and investors community among others. Those opposing the capital gain taxes cite its negative impacts to the investors and the overall Kenyan economy. There is need to shed more light on the impacts of capital gain on investment in an economy. The current study seeks to investigate the impacts that capital gain tax will have on the economy using the case of investment in securities of quoted companies in the Nairobi securities exchange.

1.1.1 Capital Gain Tax

The Kenya Revenue Authority (2015) defines Capital Gain Tax as the tax chargeable on the gains that accrue to an individual or a company on the transfer of property situated in Kenya. The eight schedule of the Income Tax Act defines properties to include marketable securities, buildings, and land.

CGT is significant since it has great effect to the economy. Through the CGT, the government can expand its tax base hence increasing its amount of revenue from taxes. It also influences investment in the property since the profit generated from the exchange of properties is charged tax.

Ricardo and Erosa (2007) argue that the impact of CGT can be measured through the lock in effect and capitalization effect. The lock-in effect concept views the impact of capital gain taxes from the perspective of the seller. The theory seeks to discuss the impacts of capital gain taxes on the supply of properties. The lock-in effect measures how the CGT affects the supply of securities in the securities market. Lock in effect is measured by the reduction in the supply of some securities in the market.

The capitalization effect concept analyzes the capital gain tax effect from the perspective of the buyers. It discusses the impact of capital gain tax on demand for property. Dai, Maydew, Douglas and Zhang (2008) argue that where capital gain taxes are charged, people buying securities will negotiate to acquire the securities at a lower price to be compensated for the future tax liability. This effect is known as the capitalization effect. The increased process of securities due to the presence of capital gain taxes leads to decreased demand of the securities among the buyers. It is measured using the reduction in the demand for securities in the market.

1.1.2 Investment in Securities

Investment in securities involves buying securities such as shares, bonds, debentures, and options. The context of the proposed study involves investment in securities of quoted companies in Kenya. Investment in stocks is significant since quoted companies obtain their capital through floating their securities in the securities exchange market. It also provides investors a chance to own stocks in various companies.

Investment in stocks can be measured based on the rate at which shares are changing hands. Therefore, the number of securities transferred plays a significant role in determining the level of activity in securities investments. Where the transfer of shares is high, the investment in shares is considered to be high. However, where there is a reduction in the transfer of securities, the level of investment in shares are considered to have reduced.

1.1.3 Capital Gain Taxes and Investment in Securities

Capital gain taxes apply to investment in securities. Therefore, it is expected that the introduction of capital gain taxes will have the impact on the investment in securities. The theoretically expected impact of CGT on investment is reduced investment in securities. CGT is expected to affect investment in securities from the perspective of the suppliers and the demand perspective.

From the supply perspective, CGT affects investment in securities through the lock in effect. In this case, those people who hold shares take long before selling them. The frequency of selling shares in the securities exchange is affected negatively. Consequently, the rate at which securities change hands in the securities market reduces, hence reduced investment insecurities.

From the perspective of demand, CGT affects investment in securities through capitalization. The buyers are reluctant to buy the securities as they demand lower prices to be compensated for future tax liability. On the other hand, the suppliers are not willing to sell the securities at a lower price since they also want to be compensated for CGT charged. Therefore, the demand for securities reduces. Consequently, the number of securities exchanged reduces leading to reduced investment in securities.

1.1.4 Nairobi Securities Exchange

The Kenyan securities market is dominated by the NSE as the intermediary between the securities owners (organizations) and investors. The NSE provides a platform where investors float and buy securities of different companies. The securities dealt with at NSE include shares, bonds, and derivatives. Therefore, it provides significant platform

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investors to buy and sell different securities. Investors can trade in the NSE through various stockbrokers. The stock brokers sell and securities in the NSE on behalf of the investors. However, there are brokers who buy securities and sell them. These brokers do not buy on behalf of the investors; however, they buy for speculation.

The NSE provides a market for the existing securities and also shares issued at IPO. It is the main market for securities from quoted companies. Therefore, the context of the current study is based on the NSE. As at September 2015 the number of companies listed on the NSE were 63 (NSE, 2015). The listed companies are classified into various groups that include Agricultural, Automobiles and accessories, banking, Commercial services, Construction and Allied, Energy and Petroleum, Insurance and Investment. The listed companies are grouped based on their industries.

Investment in securities of quoted companies is facilitated through NSE. NSE provides a ready market for buying and selling securities. The capitalization concept and the Lock-in effect concept will, therefore, have an impact on the transfer of securities in the NSE. CGT will affect trading at NSE through the lock-in effect that reduces supply for securities in the market and the capitalization effect that reduces demand for securities in the market.

1.2 Research Problem

Investment in securities is affected by many factors among them CGT. CGT taxes have a significant impact on the investment in securities. CGT affects investment in securities through holding effect and capitalization.

In the past, there have been the debate in Kenya on the re-introduction of CGT. Different parties involved such as scholars, investors and lawyers among others have taken different sides. Some support the re-introduction while others are against it. The heightened debate is caused by lack of adequate knowledge of how the CGT can affect investment in securities. Expressed as a question, the statement problem of the current study is "does capital gain tax lead to a reduction in the transfer of properties hence reduction in investment?"

Investment is significant in the development of a country. Taxes are charged to increase the government's income for the government to meet its expenditure. However, there is a need to assess the impacts of taxing transfer on the property on investment. Ingles (2009) argue that there is a structural deficit in the tax system that lacks Capital Gain Taxes. Ingles (2009) consider CGT as a means to widen the tax base of a government hence increased tax revenue. A similar argument was made in support of CGT tax in the United Kingdom by the HM Revenue and Customs (2014).

However, there are different arguments noted from other scholars. For example, according to Adam Smith Institute (2008) CGT conducted a study and observed that increase in CGT rates does not lead to increase income to the government. Besides, Coleman (2009) also observed that the tax on capital gains had negative impacts on the economy since it discourages investments. As different scholars argue differently, there exists a research gap to identify whether CGT leads to reduced investments.

The current study aims at conducting an empirical study to show that CGT has negative impacts on investment. The current context is the investment in securities in Kenya. Therefore, the case to be considered is the investment in shares in the Nairobi Securities Exchange. This study aims at answering the question as to whether CGT leads to reduced on investments in securities at the NSE.

1.3 Objectives of the Study

The main objective of the study is to establish the relationship between the Capital Gain taxes and the reduction in investment in securities. The specific objectives of the study can be expressed in point form as below.

i. To establish the relationship between the capital gain taxes and the lock-in effect

ii. To establish the relationship between the capital gains and the capitalization effect

iii. To establish the relationship between lock-in effect and reduced transfer of quoted securities

iv. To establish relationship between the capitalization effect and reduced transfer of quoted securities

1.4 Value of the Study

This study will add to the existing body of knowledge about the impacts of various types of taxes on investment. Therefore, scholars will find it useful in advancing their knowledge and identify future gaps for study. By bridging the gap identified in the literature review, the study will add more knowledge in the field of taxation and finance.

The study will also be useful to the Kenyan government in policy formulation regarding capital gain taxes. Currently, the government is faced with a challenge on whether to re-introduce the capital gains or not to re-introduce. The results of this study will be significant in guiding the Kenyan government as well as other governments in making decisions concerning capital gain taxes.

The study will also benefit in spurring investments in securities. Through the identification of the impacts of the CGT on investments, the government can spur investment in securities and other properties through avoiding the introduction of CGT. The governments currently charging the CGT can reduce the rate of CGT to spur growth in investment in their economies.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this section, past pieces of literature about the capital gain tax impacts on investment is discussed. The section analyzes the studies conducted by past scholars and compares them in order to vividly identify the effects that capital gain tax has on investors. Through this literature review, the research gap to be bridged by the current study is identified. The literature review analyzes various theories that are related to CGT and investment in securities. The section also reviews past pieces of literature on determinants of investment. Besides, empirical review on past studies is reviewed in this section. The section summarizes the literature review and identifies the research gap for the proposed study.

2.2 Theoretical Literature Review

There are various theories discussed by past scholars in relation to capital gain taxes. These theories seek to shed more light on the impacts of capital gain taxes and the relationship between the capital gain taxes and investment. The major theories include the Lock in Effect and the Capitalization theories. Dai, Maydew, Shackleford, and Zhang (2008) conducted a study on the capital gain taxes and the assets prices. The study revealed that for equilibrium price of assets to be determined with presence of CGT, the capitalization effect and the lock effect are significant.

2.2.1 Lock In Effect theory

The Lock In Effect theory considers the impacts of the CGT from the perspective of the seller. Ricardo and Erosa (2007) conducted study to test the applicability of this theory on the impacts that CGT has on investment. In their study, Ricardo and Eros (2007) observed that where capital gain taxes were high, people were reluctant to sell their securities. The reason for people being reluctant to sell their securities was the increase in transfer costs which led to reduced net gains from the sale of the securities.

The study conducted by Ricardo and Eros (2007) is similar to a study conducted by Tahar, Soner and Touzi (2005) who observed that capital gain taxes contributed a significant portion of transaction costs hence limiting investors to sell their securities. The increased transaction costs hindered sellers from selling the securities since they incurred the costs while transferring the properties to the buyers. Consequently, the seller obtained lower returns from the sale than they expected.

In addition to increase in cost of transfer that contributes to lock in effect, Jones (2010) noted that the CGT also contributed to the increase in cost of portfolio rebalancing. Jones (2010) noted that those who were holding securities were reluctant to sell them and buy other securities since they did not want to incur the high cost of portfolio rebalancing caused by CGT. Therefore, CGT leads to the lock in effect hence reducing the supply of securities in the market.

Chyz and Oliver (2012) examined the Lock in Effect of CGT on investors. The focus of the study was to establish the relationship between capital gain taxes and the lock in effect on investors' decision making in short term and long term. Chyz and Oliver (2012)

used 1400 institutional investors in this study. The results from the study indicated that increase in capital gain taxes had negative lead to lock in effect. The investors were observed to hold on to their current securities to avoid the high costs of transaction that arise as result of high CGT. However, with reduction of CGT, the investors were willing to sell their current securities and acquire more securities in their portfolio.

2.2.2 Capitalization Effect Theory

This theory views the impacts of CGT from the perspective of the buyer (Dai, Maydew, Douglas & Zhang, 2008). According to this theory, people buying securities will negotiate to acquire the securities at a lower price to be compensated for the future tax liability. Therefore, buyers push for lower process. On the hand, sellers are pushing for higher process to be compensated for the high cost of transfer and the subsequent costs of portfolio rebalancing.

Sialm (2009) conducted a study to investigate on the capitalization effect of capital gain in the United States. The study sought to investigate on the tax burden on equity securities. In this study Sialm analysed the compensation for tax burden between the years 1913 to the year 2006. Results indicated that over this period, the CGT varied over time. A cross section study revealed that increase in capital gain taxes contributed to the capitalization effect. When capital gain taxes were high, buyers were observed to prefer low prices on the securities. The low prices were preferred since buyers wanted to be compensated for the capital gain taxes they would pay while selling the securities later.

2.3 Determinants of Investment in Securities

Investment in securities involves buying securities with an aim to generate returns (Plunkett, 2008). Securities encompass a number of elements that include shares, bonds, debentures and other financial instruments (Plunkett, 2008). Securities can be purchased for resale or as an investment. Securities purchased for resale are usually held for a short period of time and are sold when the prices are high. However, for securities bought as an investment they are considered as properties. The investor does not aim at buying them for resale. However, there are instance where the investor may decide to sell them. Investment in securities is considered to be high when the rate of transfer of securities is high. Where the transfer of securities among investors is low, the investment in securities is also considered to be low (Weber & Stottner, 2011). This section discusses various factors that determine the rate of investment in securities.

2.3.1 Transaction Cost

Transaction cost is among the significant determinants of investing in securities. Investors in securities at NSE aim at making profits. However, transaction costs reduce the profit. Transactions costs are the costs involved when two parties are exchanging properties. These costs include commissions, taxes and other charges. Tahar et al. (2005) argue that where CGT is charged on transfer of securities, it contributes a significant amount of transaction costs. High transaction costs limit investments in securities since it increases the cost of portfolio rebalancing (Jones, 2010). When transaction costs are low, investors are motivated to transfer their securities. Portfolio rebalancing is also enhanced due to low transaction costs.

2.3.2 Capitalization

The market forces play a significant role in determining the investment in securities. The market forces are the demand and supply. Capitalization has great influence on demand for securities. Capitalization effect influences the intention of buyers to buy securities (Sialm, 2009). The buyers prefer to buy securities at a lower price to be compensated for tax and other transactional costs while selling them in the future. Therefore, the demand of the securities is affected. The affected demand for securities reduces the level of trading in securities since there are fewer buyers.

2.3.3 Lock in Effect

Lock in Effect determines investment in securities from the point of view of the sellers (Ricardo & Eros, 2007). In the case of lock in effect the sellers are reluctant to float their securities for exchange. It is caused by increase in transactional costs. Therefore, the sellers hold on their securities since the cost of transfer is high. The high cost of transfer reduces their profits. The sellers are also reluctant to rebalance their portfolio after selling their existing securities. Therefore, the supply for securities in the market reduces. The supply of securities in the securities market is great determinant of investment in securities. When supply is high there is likely to be high investments and vice versa.

2.4 Empirical Review

The significance of the effects of capital gain taxes on the economy has attracted the attention of various scholars to study the various impacts of capital gain tax. This part of the literature review, reviews past studies that seek to discuss the effects of capital gain taxes on the economy. Capital gain taxes have both desirable and undesirable impacts on

the economy. This literature review will review both the negative and positive impacts separately.

In Kenya, Marangu (2011) conducted a qualitative study to explore the introduction of wealth tax transfer in Kenya as one of the means to lead to equal distribution of wealth. In his study Marangu (2011) interviewed 50 Kenyans on their take on introduction of CGT. He also compared the Kenyan tax system and the tax system in other countries such as Japan. The results from the study indicated that the Kenya government could earn more income from the transfer of property. The findings from this study made the researcher to conclude that the introduction of CGT would lead to equal distribution of income in Kenya.

The first positive impact is the viability of Capital gain tax in the control of inflation. Capital gain taxes are effective in the process of controlling inflation in the economy. When the level of inflation in a country is high, the government can introduce the capital gain taxes to reduce the amount of cash circulating in the economy (Cordes, 2005). Capital gain taxes reduce the amount of cash circulating in the economy since the government takes the money in form of taxes from the investors. Consequently, the government reduces the high rate of inflation in the country.

Coleman (2008) studied the impact of CGT on the economy in New Zealand. In his study, Coleman (2008) aimed at understanding how CGT charged on real estate would affect the economy. Coleman (2008) developed a model to analyze long term effect of CGT in New Zealand. In his study Coleman used 400 participants who were house agents. Coleman (2008) observed that as a result of introducing capital gain taxes the

amount of rent increases. Due to increased rent expense individuals prefer to own houses to avoid paying rent. Therefore, it encourages people to own their own homes. However, it also reduces the savings of the tenants due to increased rent expense.

The third positive impact is increased government revenue. There are various sources of income to the government. Among the major sources of income to the government is income generated from taxation (Welch & Welch, 2009). When the government introduces capital gain taxes, it increases its tax base. According to OECD (2009) when the government increases its tax base, it increases its revenue from tax. The government taxes gains arising from the exchange of real estate hence increasing its revenue collected.

Hungerford (2013) studied the impacts of capital gain taxes in various countries to establish how CGT affected the distribution of income. Among the countries studied is the United States. In this study, Hungerford (2013) conducted a trend analysis from the year 1954 to 2010 that compared the rates of CGT taxes and the growth in the GDP. The results from the study indicated high rates of CGT lead to reduction in the GDP. He concluded that high rates of CGT reduce savings to the low income earners hence reducing their level of investment. Besides, the results from the study indicated that a small percentage of high income earners were involved in exchange of properties chargeable to CGT. Therefore, a large percentage of those exchanging properties were the low income earners. Consequently, charging CGT contributes to additional costs to the low income earners. Therefore, the low income earners pay more in terms of capital gain taxes.

Adam Smith Institute (2008) conducted a trend analysis that analysed the capital tax gain rate and the income generated by the USA government. This analysis was conducted for the period between the years 1954 and the year 2004. This analysis indicated that high rates of capital gain taxes did not result to high income to the government from capital gain taxes. This is an indication that, high capital gain taxes do not guarantee the government an increase in income.

Adam Smith Institute (2009) also analysed the relationship between the rates of capital gain taxes in the United Kingdom. In his analysis he collected data on the rates of CGT since 1990 to 2004 and compared it with the government's revenue. It was expected by the government that increase in CGT rates would lead to increase in government's income. However, this was not case. Adam Smith Institute (2008) observed that when the capital gain tax rates reduced in the years 2002 and 2003 the government revenue from capital gain tax increased. Therefore, high rates of CGT do not translate to increased government income from taxation.

Lau and Berlin (2014) conducted a study to establish the impact of CGT on the asset pricing model. Their study involved major institutional investors in Germany. These institutional investors were considered to have high knowledge in taxation and valuation of securities. The study revealed that the flat rate of CGT that had been announced by the Germany government in the year 2009 on the private capital lead to massive increase in trading in securities. The study revealed that the demand for securities increased by 60% within two days after the rate was flat. Results from the study shows that reduced CGT leads to increase in demand for security. Consequently, increase in CGT will lead to reduced demand for securities hence reduced investment in securities.

CGT is attributed to causing reduced value of assets. Huizinga and Wagner (2012) conducted a study to establish the relationship between CGT and the value of assets. In this study, Huizinga and Wagner (2012) used historical data from the United States stock market. The study involved comparing the value of assets at different rates of CGT. The results from the study indicated that an effective capital gain of 4.7% leads to reduced annual return on stock after tax. The reduced return was found to be approximately 0.38%. Therefore, to compensate the investors for the tax liability the securities price has to be higher by 0.38%. Consequently, the cost of capital increases hence impeding investment in securities.

2.5 Summary of the Literature Review

Edwards (2012) asserts that government imposing capital gain tax should abolish it. Edwards (2012) argue that Fisher had advocated for the abolishment of capital gain taxes due to its negative effects on the economy. Capital gain taxes are attributed to causing retardation in the economic growth. In Kenya, the capital gain tax was suspended to spur economic growth. However, there have been attempts by the Kenyan government to re-introduce it has resulted to a heated debate.

There is a research gap identified for this study from the literature review conducted. There is limited knowledge on what the impacts of capital gain taxes would be on investment in Kenya. There is need to carry out the study and establish the relationship between the CGT and reduced investments in Kenya hence the need for the current study.

CHAPTER THREE: METHODOLOGY

3.1 Introduction

This section discusses the steps that were followed in obtaining the answer to the research problem. First, the section discusses the research design that was used for this research. Secondly, this section discusses the types of data that were collected. The data collection techniques used is discussed in this part. The third area of discussion will be the sampling techniques. The fourth part of this chapter discusses the techniques that were used in data analysis.

3.2 Research Design

Creswell (2012) defines a research design as a framework that guides the researcher in answering the problem of the study. It is a blueprint that discusses how the researcher will gather and analyze the data that will be useful in attaining the objectives set for the study. A good research design should assist the researcher in obtaining rational answers for the research questions.

The research design used in the current study is the quantitative design. The quantitative design uses numerical data to draw relationships between variables (Creswell, 2014). There are various statistical procedures employed under the quantitative design; among these procedures is the trend analysis. The study used the trend analysis to compare the level of trading before the CGT, during the period when CGT was applied and after the CGT. According to Lyles and Hummer (2012) trend analysis involves data collection and attempts to establish a pattern in the information. Trend analysis is significant in

predicting the future events. The trend analysis procedure is also reliable in establishing linear or non-linear relationships between two or more quantifiable variables.

Through trend analysis, the researcher established the pattern of capital gain taxes and investment at NSE. In this case, the researcher collected data on the number of shares traded at NSE for three different periods to establish the changes in investment as a result of changes in CGT. Regression analysis was used in investigating the relationship between the CGT and the investments in securities at the NSE.

3.3 Population

The target population comprised shares traded in the 63 companies listed on NSE. The list of the quoted companies was obtained from NSE website on 9th October 2015. The study used data on the number of shares traded at last of the month for the period under consideration. All the shares traded on the identified dates were used for the study. Therefore, all listed organizations at NSE were considered in the study.

3.4 Data Collection

The study used the secondary sources of data. The secondary sources are sources of past data that was collected by other scholars for past studies (Collins, 2010). Therefore, it was not collected solely for the current study. The secondary sources of data were scrutinized for their reliability and relevance to the current topic of study. The data used in the study was obtained from the NSE. Therefore, the data is highly reliable and valid for the current study. The trading volume of shares data used for the study is shown in Appendix I.

The trend analysis was conducted over a period of twenty-one months. The period considered is from January 2014 to September 2015. This period covers twelve months before CGT, six months with CGT and three months after CGT. The study compares the number of shares traded between the periods where CGT was in application and those traded when CGT was not charged.

3.5 Sample Selection

Thompson (2013) defines a sample as some elements drawn from the research population for studying and they represent the whole population of study. A sample selected where the researcher cannot study the whole population. In the case of this study, the researcher used the whole population. The use of the whole population exempted the study from the sampling errors hence increased the reliability of the study. However, not all the historical data was used. The data used was an extract of trading share volumes at the end of the month.

3.6 Data Analysis Techniques

Data analysis techniques are methods that were used in recording, classifying and analyzing the data collected. After the data had been collected from NSE, it was analyzed to answer the research problem. In this section, various techniques that were adopted in the study to analyze the data are documented.

To simplify the process of data analysis, the researcher used computer-aided techniques. I used data analysis software that is reliable in data analysis and interpretation. The software used for the data analysis is the Microsoft Excel. This software is effective in analyzing data and in providing results in different forms for easy understanding

(Winston, 2011). Through the use of Microsoft Excel, the data was analyzed to investigate whether there is a relationship between capital gain taxes and investment in securities at NSE. The software is also reliable in trend analysis. The trend analysis was significant in establishing the relationship between CGT and investment in securities.

3.6.1 Analytical Model

The trend analysis used a regression model. Regression analysis was used to determine how the dependent variable; transfer of quoted securities relates to the capital gain taxes. The regression analysis model used in this study is show below.

$$Y = \alpha + \beta_1 X_1 + €$$

Where

Y= Number of shares traded (the Number of shares traded data was obtained from the NSE)

X_1 = Capital gain taxes (the effect of capital gain taxes on investment in securities will be measured using the lock in effect and the capitalization effect. The lock in effect will determine the reduced number of securities investors are willing to supply while the capitalization effect will be determined by the reduced demand for securities)

α= the constant of regression

β_1= Coefficient of CGT

€= Measure of error

3.6.2 Test of Significance

The t-test at 95% confidence level was used to test the significance of the coefficients terms and the constant term in the model. A two tailed significance values was compared with at the 0.05 level of significance. This was useful in determining the significance of the study variables.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the analysis, results and discussion that have emerged from the study on the impacts of CGT on investment in securities. The researcher obtained secondary data from the NSE. The data collected was mainly on the volume of shares traded before, during and after the CGT that was introduced in the year 2015 for only six months. The data before the 1st January 2015 shows the trading before the CGT was introduced. The 2015 indicates the number of shares after the CGT was suspended. Data collected for the months of January to June 2015 indicates the number of shares traded in the period when CGT was implemented. The data from July 2015 to September This section presents the data validity, descriptive statistics, correlation analysis and a discussion of research of findings. The response rate is not discussed in this section since the data was secondary and was readily available from NSE at a cost.

4.2 Data Validity

The data used in the study was obtained from the NSE. Consequently, it is valid and therefore fit for the study. Besides, the data is credible and obtained from its sources without being tempered with. Therefore, results from the analysis of the data are reliable and credible. The data analysis method used were also adequate since they were statistical, therefore not biased.

4.3 Descriptive Statistics

Descriptive statistics of the study variables are presented in the table 4.1 below:

Table 4.1 Descriptive Statistics

Mean	30716748
Standard Error	3407249
Median	25462950
Standard Deviation	15981414
Sample Variance	2.55E+14
Kurtosis	4.521753
Skewness	1.813069
Range	71588500
Minimum	11052400
Maximum	82640900
Sum	6.76E+08
Count	22

From the data collected the minimum number of shares traded over period under study was 11,052,400 while the maximum number of shares traded was 82,640,900. The standard deviation for the number of shares traded was 15,981,414 while the mean was 30,716,748. The sample variance was 2.55E+14. The skewness of the data is 1.8 meaning that the data is positively skewed. The Kurtosis is 4.52 meaning that the distribution of the data is more peaked than the Gaussian distribution.

4.4 Correlation Analysis

The correlation between CGT and the number of shares traded was -0.129189. This indicates that there was a negative relationship between CGT and the number of shares traded.

4.5 Regression Analysis and Hypotheses Testing

Besides the descriptive analysis and the correlational analysis, the study conducted a regression analysis. The regression analysis sought to investigate the relationship between capital gain taxes and the number of shares traded at NSE.

Table 4.2: Model Summary

Model	Multiple R	R Square	Adjusted R Square	Standard Error	Observations
1	0.218567528	0.047771764	-0.005129804	16453950.01	**22**

The table above shows a summary of the regression model used for the study. The model shows the relationship between CGT and the number of shares traded at the NSE. From the analysis, the value for R was 0.218 while the value for R squared was 0.048. The adjusted value for R squared was -0.005. From these findings, 4.77% percent of the changes in the number of shares traded were as a result of the introduction capital gain taxes.

ANOVA

The analysis of variance is discussed below. The discussion is preceded by a table of findings on ANOVA.

Table 4.3: ANOVA

Model	df	SS	MS	F	Significance F
Regression	1	2.4448E+14	2.4448E+14	0.90303115	0.3545563
Residual	18	4.87318E+15	2.7073E+14		
Total	19	5.11766E+15			

The Analysis of variance conducted using the Microsoft Excel provided the above results. The ANOVA was conducted at a significance level of 0.05. The analysis indicated that the value of F was 0.903. The value of F critical at 5% level of significance with numerator degrees of freedom 1 and denominator degrees of freedom 18 was 0.355. The overall model is significant since the value for F is greater than the value for F critical, that is, 0.903> 0.355.

Model of Coefficients

Data analysis of coefficients is presented in the table below.

Table 4.4: Coefficients

	Coefficients	Standard Error	t Stat	P-value	Lower 95%	Upper 95%
Intercept	32983845	3833929	8.603145	5.6E-08	24959339	41008350
X1 Variable	-0.129	2442297	0.99844	0.330614	-7.6E+07	26733029

The regression model designed for the study was

$$Y = \alpha + \beta_1 X_1 + \epsilon$$

Where

Y= Number of shares traded (the Number of shares traded data was obtained from the NSE)

X_1 = Capital gain taxes

α= the constant of regression

β_1= Coefficient of CGT

ϵ= Measure of error

Therefore, the model from the results is expressed as

$$Y = 32983845 - 0.129\, X_1 + 24{,}422{,}973$$

From the coefficients table above, the results indicates that the constant value is 32,983,845 shares, holding all other factors that affect the number of shares traded constant. The coefficient of CGT is 0.129 and the standard error term was 24,422,973.

4.6 Discussion of Research Findings

The findings from the study support existing theories. Sialm (2009) conducted a study to investigate on the capitalization effect caused by CGT. Results from the study indicated the exchange of securities reduced as a result of increased CGT. Sialm (2009) attributed the reduced of share transfer to capitalization effect theory. People are reluctant to buy

securities when CGT are high hence reduced demand for securities. Decrease in demand for securities reduces the number of shares exchanged hence reducing the level of investment in securities. Similar observations were made by the current study. The reduction in number of shares exchanged is also attributed to low demand for securities arising as a result of the introduction of CGT.

The findings from the current study also support the Lock-in effect theory. Chyz and Oliver (2012) conducted a study to establish the relationship between lock-in effect and reduced investment in securities. This study involved 1,400 institutional investors. Results from the study indicated that increase in CGT led to lock-in effect. The investors were reluctant to sell their securities with increase in rates of CGT. Therefore, the supply for securities reduced leading to reduced exchange of securities. Similarly, the current study notes that with the introduction of CGT, the investors were reluctant to sell their securities. Consequently, the volume of shares traded reduced.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This part of the study presents a summary of findings from the study conducted. Secondly, the section presents a conclusion that discusses the implications of the findings. The third part provides recommendations based on the research findings. Besides, the limitations of the study and suggestions for further studies are also discussed in this part.

5.2 Summary of Findings

The level of investment in securities measured by the number of shares traded. The highest number of shares traded during the period under study was 82,640,900 while the lowest number of shares traded was 11,052,400. The mean value was 30,716,748 shares while the standard deviation was 15,981,414. The sample variance obtained from the findings was 2.55E+14. The data was positively skewed with a skewness coefficient of 1.8. The data distribution was more peaked than the Gaussian distribution since it had Kurtosis of 1.8.

There is a negative correlation of 0.129189 between CGT and the number of shares traded. The value for R was 0.218 while the value for R squared was 0.048. The adjusted value for R squared was -0.005. From these findings, 4.77% percent of the changes in the number of shares traded were as a result of the introduction capital gain taxes. The value

for adjusted R square is negative implying that there are also other factors that affect the volume of shares traded in addition to CGT.

The ANOVA at a confidence level of 95% indicated that the value of F is 0.903. The numerator degree of freedom was 1 and the denominator was 38. With these values of degrees of freedom, the F critical value at 5% level of significance was 0.355. The regression model findings indicate that the constant value in the equation is 32,983,845 shares when all other factors are held constant. The coefficient for Capital gain taxes was obtained to be -0.129. The standard error term was obtained to be 24,422,973.

The graph in Appendix II summarizes the findings of the study. The graph indicates that before the introduction of CGT, the volume of shares traded was higher. However, with the introduction of CGT the volume of shares traded slightly reduced. After the CGT was suspended from 1st July 2015, the volume of shares traded seems to take an upward sloping trend. This indicates that suspension of the CGT resulted to increase in investment in securities.

5.3 Conclusion

The study focused on the impacts of CGT on investment in securities. The study measured investment in securities using the number of shares traded. Reduced number of shares traded indicated a reduction in investment in securities. Secondary data obtained from the NSE was used for the study.

Results from the study indicate there a negative relationship between CGT and the number of shares traded. This implies that CGT leads to reduced number of shares traded hence reducing the level of investment in securities. The model used in the study is

highly reliable. The value for F is greater than the value for F critical, that is, 0.903> 0.355. Consequently, the overall model is significant for the study.

The study concluded that the CGT have negative impacts on the investment in securities. The study established a negative relationship between the number of shares traded and capital gain taxes. CGT is attributed to reduce the number of shares traded through lock-in effect and capitalization effect. It affects both the buyer and the seller of securities hence affecting the supply and the demand for securities. It is worth to note that there are other factors that investment in securities. The study found that CGT causes changes in the number of shares traded by 4.77%.

5.4 Recommendations

Based on the findings from the data analysis and the conclusion the study recommends that the capital gain taxes need not to be re-introduced. Countries that currently do not have CGT should not introduce it since the study has indicated that it impedes investment in securities. To spur growth in the economy through investments, the government should not charge CGT.

In the case for governments that already have CGT in place, it is recommended that the rates for CGT to be reduced. Reduced rate for CGT will reduce the negative impacts of CGT on investment. Consequently, economic growth will be spurred.

5.5 Limitations of the Study

The study used secondary data. This data was meant for other uses; therefore, it was not solely collected for the purposes of the study. The study also faces a limitation since it did

not consider the data for all the days. The study used a sample of the data for one day in each month under analysis. There, there exists a sampling error.

5.6 Suggestions for Further Research

The study put more emphasis on the effects of CGT on investment in securities. The study did not consider whether CGT would have similar effects in other types of investments such as investment in real estate. Therefore, further research is needed to explore the impacts of CGT on real estate and compare it with impacts on investment in securities.

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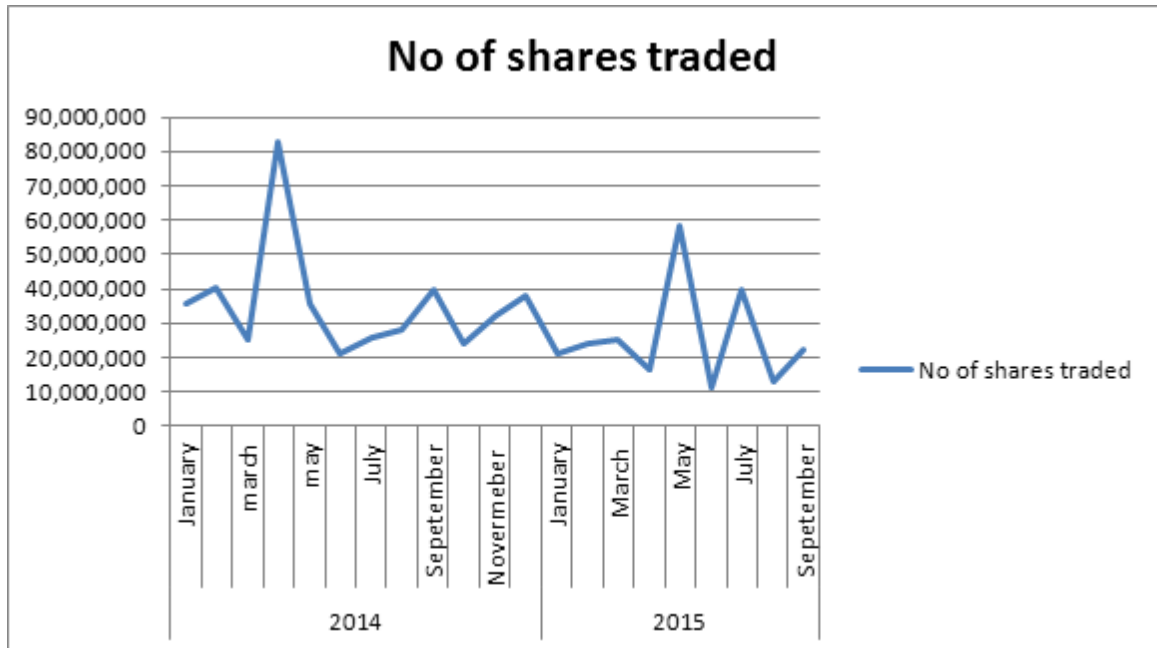
APPENDICES

Appendix I: Number of Shares Traded

Data on the number of shares traded at NSE at the last day of each month since January 2014 to September 2015.

PERIOD		NO OF SHARES TRADED	CGT RATE IN %
2014	January	35,758,400	N/A
	February	40,207,000	N/A
	march	25,046,900	N/A
	April	82,640,900	N/A
	may	35,688,700	N/A
	June	21,101,800	N/A
	July	25,768,400	N/A
	August	28,155,200	N/A
	September	39,816,700	N/A
	October	24,144,000	N/A
	November	31,940,900	N/A
	December	38,242,800	N/A
2015	January	21,405,900	5
	February	23,810,900	5
	March	25,157,500	5
	April	16,632,500	5
	May	58,259,700	5
	June	11,052,400	5
	July	39,525,800	5
	August	12,906,900	5
	September	22,477,900	5

Source: NSE, 2015

Appendix II: Time Series Analysis

A graph showing the time series analysis of the number of shares traded at NSE at the last day of each month for the period from January 2014 to September 2015.

Source, Author (2015)