EFFECT OF FINANCIAL PERFORMANCE ON CORPORATE TAXES AMONG FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

Declaration by Candidate

I declare that this thesis is my original work and has not been presented to any other institution. No part of this thesis may be reproduced without prior permission of the author and / or Moi University.

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Declaration by the Supervisors

This thesis has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

I wish to dedicate this project to my family for their support without which this project would not have been possible.

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ABSTRACT

This study sought to determine the effect of financial performance on corporate taxes among firms listed at the NSE. The population for the study was all the 65 companies listed at NSE as at 31st December 2018. Data was obtained from 56 firms that were consistently listed for the five years (2014 to 2018) giving the researcher 280 data points. The independent variables for the study were profitability as measured by return on equity, firm value as measured by market value of equity to book value of equity and firm efficiency as measured by the ratio of total revenue to total assets whereas corporate taxes as measured by effective tax rate was the dependent variable. The study used secondary data that was collected over the period of study of five year (2014-2018) on annual basis. The research design was cross sectional design while the data was analyzed using multiple linear regression so as to find out the association amongst the variables. Stata version 13 was used for data analysis purposes. The study found that profitability (β=0.032, p=0.029), firm value (β=0.095, p=0.000) and firm efficiency (β=0.082, p=0.001) had a positive and significant relationship with corporate taxes among NSE listed firms. The results also indicated R^2 of 0.1468 which implied that profitability, firm value and firm efficiency contributed 14.68% to variations in corporate taxes. It was shown by the ANOVA outcomes that the F statistic is significant at 5 % significance level with P=0.000. It was therefore appropriate to use this model in explaining the relationship. Further the results exhibited that all the independent variable profitability, firm value and firm efficiency produced positive and statistically significant values for this study. The study recommends government through the policy makers should create a conducive environment for the firms listed at the NSE which translates to more profitability leading to more corporate taxes and consequently triggering economic growth. Firms should also seek ways of increasing their assets base which would translate to more corporate taxes and consequently leading to a better environment. The study further recommends the need for listed firms to hire managers that are dedicated and competent enough to enhance firm efficiency and firm value as these two were also found to enhance the level of corporate taxes. To achieve this, firms might have to incur agency costs with an aim of aligning the goals of managers with those of shareholders.

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OPERATIONAL DEFINITION OF TERMS

Corporate Tax: These are taxes that are levied on the company profits. Corporate are distinct legal entities from their owners. Therefore they are taxed on their own independent of their owners. A corporate tax is similar to the income tax changed to individuals (Alworth & Arachi, 2001).

Firm Efficiency: The firms' capacity of eliminating waste and at the same time ensuring resources are utilized optimally so as to offer to its customer's quality products and services (Kalluru & Bhat, 2009)

Firm Value: Refers to the discounted cash flows from assets and future growth, discounted using the cost of capital (Damadoran, 2002)

Listed Companies: Refers to a company whose shares are traded on an official stock exchange. In this case the companies listed at the Nairobi Securities Exchange (NSE), (CMA, 2015)

Profitability: This denotes the capability of a company to generate profit. Profit is the remainder of the revenue generated by a firm after deducting the relevant expenses incurred for the purpose of revenue generation (Pandey, 2010).

Return on Equity: This refers to profitability measure which is calculated as the profits against the shareholders equity (Sujata, 2009).

ABBREVIATIONS

AIMS	Alternative Investment Market Segment
ANOVA	Analysis of Variance
DEA	Data Envelopment Analysis
ETR	Effective Tax Rate
GDP	Gross Domestic Product
IRS	Internal Revenue Service
NSE	Nairobi Securities Exchange
OECD	Organization for Economic Co-operation and Development
ROA	Return on Assets
ROE	Return on Assets
SPSS	Statistical Package for Social Sciences
US	United States
VAT	Value Added Tax

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Corporate taxes differ among different countries, for instance in the US, taxes are levied by both the federal government as well as the state. Advocates of the corporate tax contend that it protects from too much profits that may come from illegal or unethical corporate practices whereas antagonists argue that corporate basically shift the tax to their clients. In most countries, the corporation tax is pegged on the income. Normally, this tax is charged at a specified percentage or a range of percentages on the income taxable as stipulated by the system. In some countries there are different body or different provisions dealing with corporation taxation. In such instances, the law may only be applicable to corporations and fail to be applicable to individuals running a business or trade. Those kind of laws may segregate among broad kinds of income earned by corporation and charge tax differently depending on the income type. However, in most of the systems across the world all the income taxable on corporation are applied in the same way (Hassett & Hubbard, 2002).

Taxation forms the main revenue source for most government across the world and it is used in funding provision of public services to citizenry. They are several kinds of taxes in Kenya namely Value Added tax, rental income tax, Income tax, Excise duty, Capital gain tax and Agency revenue (KRA, 2019). Alworth and Arachi (2001) defined corporate tax as tax charged on corporations' income. Corporations are legal entities distinct from their proprietors. They are subjected to taxation as if they are individuals. This therefore means that corporate entities are taxed on their capacities depending on their activities. Corporation tax is the same as the individual incomes tax, the only difference is that it is charged on companies and as opposed to individual

income tax it does not follow the graduated scale but rather follows a prescribed rate by the government (Lederman, 2002).

Corporations whether domestic or foreign are taxed by most systems. Mostly the domestic corporations are taxed on all its income whether its local or international income while on the other hand foreign corporations are taxed on the income earned from the country it operates. Most countries that levy income tax do so on permanent establishment within the country. Corporations are subjected to different kind of taxes which include payroll tax, property tax, excise tax, withholding tax, customs duties, VAT, and other collective taxes, normally in the same way as other tax payers. The said tax differs with corporate tax (Hassett & Hubbard, 2002). Corporation tax in Kenya is a kind of income tax that is charged on companies. Corporation tax in Kenya is charged on the basis of whether they are resident or non-resident Resident companies. They are taxed on their year-end income on a specified rate of 30% for residents and 37.5 for non-resident companies (Kenya Revenue Authority, 2017).

Financial performance and Corporates taxes are inseparables as taxes are levied based on the profits of a company. Taxing corporates is normally viewed as a better way of raising revenue for the government. However, economists contend that when firms are subjected to higher tax rates, this is likely to result to the pulling out their investment, and relocating to other region with lower tax rate. As a consequence, corporate tax burdens are pushed to employees in form of lower wages, higher prices to consumer or other (Suarez et al., 2007).

According to Kumi and Amaniampong (2018) corporate taxes negatively influences the profitability of firms whereas the size of a firm influences the corporate taxes positively and significantly. The leverage of company negatively impacts the

corporate taxes of a firm. On the contrary Ezugwu and Akubo (2014), Chude and Chude (2015) stipulate that there is a positive association amongst the corporate taxes and profitability of firms.

Corporate taxation and capital structure are inseparable concepts in the sense that taxation of company profits apparently relies on the kind of capital. In this regard, the differences in the taxation of equity financing with regard to debt financing are expected to influence the choices of capital structure. At the shareholders level it is important to consider dividend taxation and corporate tax as far as equity capital is concerned. It is necessary to understand that investors receive interest payments as income even though there is corporate tax that results for deducting interest payment on debt. This therefore means that when the investor receives the interest they a taxed now as individuals hence the personal tax is negative. Consequently, tax is a major factor when making decisions to finance capital structures that can impact on the value of the fire and share prices (Shay, Fleming & Peroni, 2002).

1.1.1 Financial Performance

This is as defined by Almajali, Alamro and Al-Soub (2012) as a firm's ability to achieve the range of set financial goals such as profitability. Financial performance is a degree of the extent to which a firm's financial benchmarks has been achieved or surpassed. It shows the extent at which financial objectives are being accomplished. As outlined by Baba and Nasieku (2016) financial performance show how a company utilizes assets in the generation of revenues and thus it gives direction to the stakeholder in their decision making. Nzuve (2016) asserts that the health of the bank industry largely depends on its financial performance that is used in indicating the

individual banks weaknesses and strengths. Moreover, the government and regulatory agencies are interested on how banks perform for the regulation purposes.

The focus of financial performance is majorly on items that directly alter the statements of finance or the firm's reports (Omondi & Muturi, 2013). The firm's performance is the main external parties' tool of appraisal (Bonn, 2000). Hence this explains why firm's performance is used as the gauge. The attainment level of the objectives of the firm describes its performance. The results obtained from achieving objectives of a firm both internal and external, is the financial performance (Lin, 2008). Several names are given to performance, including growth, competitiveness and survival (Nyamita, 2014).

Measurements of financial performance take different forms that have to be consolidated. Ngatia (2012) stated that Return on Assets (ROA), firm size, Return on Equity (ROE) and Return on Sales (ROS) as financial performance measures. Carter (2010) measured financial performance by use of Tobin's Q and ROA while Wang and Clift (2009) used ROA and ROE. Efficiency measures such as total asset turnover ratio, fixed asset turnover and Data Envelopment Analysis (DEA) are also used in measuring performance. The two widely known measurements of performance are ROA and efficiency; hence, in this study listed firm's performance will be calculated using the two measures. ROA indicates the profitability of the companies in relation to its total assets and efficiency as measured by DEA indicates the ratio of total outputs to total inputs (Mwangi & Murigu, 2015).

1.1.2 Corporate Taxes

Alworth and Arachi (2001) referred corporate taxes as taxes levied on the profits of corporations. A corporation is a legal entity separate from its owners. It might be

taxed as though it was a person. Corporate taxes equate to the income taxes for normal people. A corporate tax varies from nation to nation, in the US, it is levied at the levels of federal and state. Corporate taxes may be seen as either taxes on corporate capital (as capital's opportunity cost that shareholders supply is incorporated in the tax base) or as taxes on profits (as the tax base is obtained by subtracting production costs from gross corporate incomes therefore being left with only "profits") (Rosen, 1995).

Proponents of the corporate tax posit that corporate tax serves to guard against excessive profits which might be caused by corporate practices that are illegal or unethical whereas opponents argue that the tax is simply passed on by corporations to their customers. Many jurisdictions tax corporations on their income. In general, corporate taxes are imposed at a rate that is specific or range of rates on income that is taxable as the system defines. Some systems have separate provisions or body of law which relate to corporate taxation. During such cases, the law might apply to only entities and not to people who operate a trade. Such laws may differentiate between income types that are broad which corporations earn and tax such income types in a different manner. Although, most such systems tax all corporation's income in a similar way (Hassett & Hubbard, 2002).

Majority of systems tax the domestic as well as the foreign corporations. Most of the time, only income that is generated from the jurisdiction of operations is taxed for foreign corporations, whereas domestic corporations are taxed on worldwide income. Most jurisdictions which impose an income tax do so on permanent establishment within the jurisdiction. A corporation is further subjected to excise tax, payroll tax, customs duties, property tax, withholding tax, VAT as well as other common taxes, in

general in the same way as other tax payers. Different form of corporate tax exists (Hassett & Hubbard, 2002). In Kenya corporate are change a type of income tax referred to as corporation tax. For resident corporate in Kenya they are charge 30 percent of the profit they make per year whereas nonresident companies are charges a tax of 37.5 percent of the net income generated (Kenya Revenue Authority, 2017).

1.1.3 Nairobi Securities Exchange

The NSE which was established in 1954 and registered under the Companies Act in 1991, is an organized financial market where various securities of listed firms are issued, bought and sold by individual and institutions both local and foreign through the services of stockbrokers or dealers. The Exchange is the fourth-largest in the sub-Saharan Africa's. It focuses in the exchange of securities issued by the Government and listed firms. It's mandated to provide a trading platform for listed securities while at the same time overseeing its member. The NSE provides the main hub for trading in the secondary market. It provides a trading floor which though available is not commonly in use after being replaced by the automated trading system. Through a wide area network, members trade at the comfort of their offices. The system is efficient, transparent and can handle large volumes of transactions at the same time (NSE, 2018).

NSE has gained a lot of popularity as an investment company recently because of its high return on investments. It has become a part of the economy whereby its fluctuations in stocks listed in the market majorly influences the economy. Currently there are 65 firms that are listed at the NSE. These firms are categorized into five segments; Agriculture, Commercial and services, Financial and investments, Industrial and Allied and finally Alternative Investment Market Segment (AIMS).

Investors expect their investment returns and, given a certain level of risk, a prudent investor expects to maximize their returns (NSE, 2017).

The exchange plays an important part in the Kenyan economy through promoting savings and investments and also assisting both local and foreign companies obtain cost effective capital. NSE was the founding member of the both the African Securities Exchanges and the East Africa Exchanges Association. The NSE is also a partner in the United-nation led sustainable stock exchange initiative and more so a member of Association of Future markets. The Capital Market Authority regulates the NSE. The mandate of the NSE is to oversee trading of financial assets like shares, list and delist company. As indicated by My Stock (2014), it has been chosen and decided that the NSE 20-Share index is the index for use in benchmarking securities traded in Kenya. Firms at the NSE are chosen on the basis of market capitalization, the quantity of offers exchanged, the quantity of arrangements developed and the total turnover (Buigut, Soi, Koskei & Kibet, 2013).

1.2 Statement of the Problem

The areas of corporate taxes attract a lot of attention from many corporates and investors since it is a major determinant of doing business. In addition, the government and other policy makers are interested on the determinants of corporate taxes as increased revenue collection implies availability of more resources to undertake development while at the same time meeting recurrent expenditure (Chude & Chude, 2015). Kumi and Amaniampong (2018) posit that increased corporate profitability leads to increased tax revenue which in turn enhances economic growth leading into even better financial performance of firms and long-term corporate tax

performance. Ezugwu and Akubo (2014) on the contrary posit that firms are likely to record low profitability to lower their corporate tax obligations.

Business dynamic as well as economic conditions affect the various sectors of firms as per the NSE categorization. For example, following the introduction of green houses, irrigation schemes and mechanized farming as new ways of farming a lot of continued growth has been noted in the agricultural sector recently. In some instance in the Telecommunication and Technology sector we have seen Safaricom record supernormal profits. In other sectors such as construction and allied industries, manufacturing, automobile and accessories we have seen manufacturing plants being set up, the mining activities and development of infrastructure have also increased. It is therefore imperative to understand whether the financial performance of the different firms listed at the NSE influences the corporate taxes.

Numerous studies have attempted to discuss the aspect of corporate taxes. Kariuki (2017) analyzed the effect of corporate tax planning on financial performance of listed firms in Kenya but rather did not focus on the concept of corporate taxes. The study thus presented a conceptual gap. Omedore and Ogbonnaya (2018) conducted a study so as to establish the impact of corporate tax on profitability of Deposit Money Banks in Nigeria. The study presented a contextual gap since it was in a Nigerian context. Lemein (2018) likewise sought to look into the effects of capital structure on corporate taxes of companies quoted at NSE. However, no local study has looked at the relationship between financial performance and corporate taxes. Thus, it is worthwhile for the study to fill the gap by establishing the relationship between financial performance and corporate taxes among firms listed at the NSE, Kenya.

1.3 Objective of the Study

1.3.1 General Objective

The general objective of this study was to determine the effect of financial performance on corporate taxes among firms listed at the Nairobi Securities Exchange.

1.3.2 Specific Objectives

i) To determine the effect of profitability on corporate taxes among firms listed at the Nairobi Securities Exchange

ii) To establish the effect of firm value on corporate taxes among firms listed at the Nairobi Securities Exchange

iii) To determine the effect of firm efficiency on corporate taxes among firms listed at the Nairobi Securities Exchange

1.4 Hypothesis of the Study

i) H_0: Profitability has no significant effect on corporate taxes among firms listed at the Nairobi Securities Exchange

ii) H_0: Firm value has no significant effect on corporate taxes among firms listed at the Nairobi Securities Exchange

iii) H_0: Firm efficiency has no significant effect on corporate taxes among firms listed at the Nairobi Securities Exchange

1.5 Significance of the Study

The effect of financial performance on corporate taxes is an interesting area which draws attention not only from the management, but also to other stakeholders. The

finding of this study will provide valuable insights that could be relied on by investors and managers in making more informed decisions in regard to corporate taxes. Noteworthy, the study contributes to the corporate finance literature, by looking at the effects of financial performance on the corporate taxes of firms. Therefore, the finding of this study provides information that can be relied on by policy makers to improve on the taxation regime.

The study results will be used as a reference point by academicians, researchers and students that wish to conduct studies in this or related areas. More so, scholars and researchers will benefit as this study will help them identify other areas of future studies through listing associated topics which needs further studies and gaps that need to be bridged. The study significantly contributes to tax avoidance for listed firms.

The study will also be useful to the government of Kenya in the formulation and implementation of tax policies that will be able to assist firms attain better financial performance and consequently lead to economic growth of the country at large.

1.6 Scope of the Study

The study covered all the 56 firms listed in the different segments of the Nairobi Securities Exchange for the last 5 years (2014-2018) (NSE, 2018). The firms' financial statements and annual reports were used to extract secondary data which helped in achieving the study's research objectives. The independents variable for the study were profitability, firm value and firm efficiency, profitability as measured by return on equity, firm value as measured by market value of equity to book value of equity and firm efficiency measured as total revenue to total assets. Corporate taxes were the dependent variable as measured by the ratio of actual tax paid as reported in

the cash flow statement and earnings of the company. The study was carried out for the last 5 years (January 2014 to December 2018) on an annual basis.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section shows the theories utilized in the study and a review of previous studies undertaken on financial performance and corporate taxes. These include theories reviewed, empirical review, research gaps, a literature summary and the framework.

2.2 Corporate Taxes

Corporate tax is an assessment levied by the state and federal governments on profits made by the business (Arachi & Alworth, 2001). Corporate taxes equate to the taxes imposed on normal people. It is a tax imposed on the firm's net income. A corporation is a legal entity created under the statute or state separate from its owners. Corporate taxes can be said to be either taxes on the profits (gross corporate incomes fewer production costs) or corporate capital (opportunity cost of capital from shareholders) (Rosen, 1995).

The purpose of corporate taxes includes being used as a means of protecting against excessive profits as a result of illegal and unethical corporate practices. Opponents argue that the tax is simply passed on from the corporations to the customers. Corporations in many jurisdictions are taxed based on their income. The corporate taxes are imposed using specific rates on taxable income as defined by the system. Many jurisdictions have a separate body of law or systems that deals with corporate taxation (Hassett & Hubbard, 2002). In such instances, the law might apply to the entity and not to people who are engaged in trading activities. Broad types of incomes will be taxed differently based on what the corporations earn. However, in most instances, income from corporations may be taxed similarly.

Both foreign and domestic corporations are taxed in most jurisdictions. In most cases, taxation of foreign corporations are based on the income earned within their jurisdiction. On the other hand, domestic corporations are taxed based on income earned worldwide. The income tax is imposed in an establishment having permanent jurisdiction. Moreover, corporations are also subjected to other types of indirect taxes under the Income Tax Act Cap. 470 of the laws of Kenya such as payroll tax, excise tax, property tax, custom duties, VAT and withholding tax just in an almost similar manner as other taxpayers. Corporate tax in Kenya is a type of income tax that is imposed on companies per end income. The income tax rate for resident companies is 30% per financial year while the non-resident companies are taxed at the rate of 37.5% per fiscal year of the company (KRA, 2018).

2.3 Financial Performance

Almajali, Alamro and Al-Soub (2012) define financial performance as a firm's ability to achieve the range of set financial goals such as profitability. Financial performance is a degree of the extent to which a firm's financial benchmarks has been achieved or surpassed. It shows the extent at which financial objectives are being accomplished. As outlined by Baba and Nasieku (2016) financial performance show how a company utilizes assets in the generation of revenues and thus it gives direction to the stakeholder in their decision making. Nzuve (2016) asserts that the health of the firms' industry largely depends on its financial performance that is used in indicating the individual banks strengths and weaknesses. Moreover, the government and regulatory agencies are interested on how banks perform for the regulation purposes.

The focus of financial performance is majorly on items that directly alter the statements of finance or the firm's reports (Omondi & Muturi, 2013). The firm's

performance is the main external parties' tool of appraisal (Bonn, 2015). Hence this explains why firm's performance is used as the gauge. The attainment level of the objectives of the firm describes its performance. The results obtained from achieving objectives of a firm both internal and external, is the financial performance (Lin, 2018). Several names are given to performance, including growth, competitiveness and survival (Nyamita, 2014).

Measurements of financial performance take different forms that have to be consolidated. Ngatia (2012) stated that ROS firm size, ROE and Return on Sales (ROS) as financial performance measures. Carter (2010) measured financial performance using Tobin's Q and ROA while Wang and Clift (2009) used ROA and ROE. Efficiency measures such as total asset turnover ratio, fixed asset turnover and Data Envelopment Analysis (DEA) are also used in measuring performance. The three widely known measurements of performance are ROE, efficiency and Tobin Q. ROE indicates profitability in relation to invested equity while efficiency indicates how efficient a firm is in utilizing its assets to generate revenue. Tobin Q indicates the ratio of market value of equity to book value of equity (Mwangi & Murigu, 2015).

2.3.1 Firm Profitability

Profitability refers to the company abilities to generate revenues within a certain period of time (Abernathy & Utterback, 2015). Industry profitability refers to the aggregate profitability of all firms in the industry (Niresh & Velnampy, 2014). Profitability indicates the firm's ability of utilizing its resources to generate revenue (Farah & Nina, 2016). Profitability means that a company, firm or corporation have the capacity to derive benefits from its business activities (Muya & Gathogo, 2016). Normally investors are motivated to invest in a business because of profits which is

their reward on investment. Indeed, profit is an entrepreneur's key motivation of doing business. In business profit is normally used a way of measuring the firms' performance (Ogbadu, 2009). Profit is derived from sales revenue less the total expenses such as labor, materials cost among other expenses (Stierwald, 2010).

The ultimate goal of any business entity is profitability and it can be expressed as either the economic profits of accounting profits (Anene, 2014). Profitability might also show the management's efficiency of converting company assets into profits (Muya & Gathogo, 2016). Therefore, increased profitability will lead more gains to the firms (Niresh & Velnampy, 2014). Profitability is among the key precondition for the success and sustainability of a firm. Investors are mostly attracted by profitability and it can make a business to be a going concern for a long period of time (Farah & Nina, 2016). Most companies are looking to improve their profitability and invest countless hours at meetings in order to find a way to minimize operational expenses and to increase sales (Schreibfeder, 2006).

Firm performance in most cases is measured using profitability. In many organization, profitability is the key element of financial reporting (Farah & Nina, 2016). Profitability is essential for the manager of the company and also for the other stakeholders and those involved or connected with the company as profitability clearly shows the firm's performance. According to Murigu and Mwangi (2015), ROE and Net Profit Margin (NPM) are some of the ratios adopted as measures of profitability. ROE is given by the quotient of operating profit to total equity and it measures the ability of a firm to utilize the shareholders' investment. On the other hand, NPM measures the ability of a bank's sales to generate income. This is calculated as the ratio of net income to total sales (Majed, Said & Firas, 2012).

2.3.2 Firm Value

According to Modigliani and Miller (1961), firm value is a financial measure that indicates its value in the market. It is the sum of all claims made by investors, that is, the secured and unsecured creditors, the preference and common equity holders. Value of the firm can also be defined as the discounted cash flows from assets and future growth, discounted using the cost of capital (Damadoran, 2002). The strategic purpose of any firm is to ensure maximization of the firm's value or shareholder's wealth (Berle & Means, 1932). Dalborg (1999) explained that the value of a firm is generated from the shareholder's earnings, in share price as well as dividend grows and becomes more than the return risk-adjusted rate necessary for the stock market. Copeland (2000) indicated that in the market value is created through earning a yield to the investment (return) more compared to the opportunity of capital cost.

Value of firm explains past, present together with the firm's future performance together with the long-term expectations of the investors who are the stakeholders as well as the shareholders. All the investors, financial institutions appraise the value of firm before investing their money in the firm business. There will be no creation of value for investors when the firm is not capable to make profit for investors. earlier stock price was used in explaining the firm value but in the present world of finance, the focus by researchers and financial experts has been shifted towards studying the firm (enterprise) value to explain firm value (Oladele, 2013).

The value of the firm can be measured using several means for example total assets, net sales, capital employed, paid-up-capital and so on (Sharma, 2011). The expectation is that the firm's value is a reflection of both the tangible and intangible assets. A common tool that gives the measurement of firm value is Tobin's Q. This is

a proportion of a firm's market value to the cost of replacement of its assets. It gives a measure of the value of the firm based on book value compared to market based models. The measure proposes that affirm can create more value if the returns made by the investment are greater than its cost (Taslim, 2013). The current study applied Tobin Q to measure firm value.

2.3.3 Firm Efficiency

Firm efficiency is the ability of a firm to minimize waste and maximize resource capabilities in order to offer to its customer's quality products and services (Kalluru & Bhat, 2009). It entails identifying processes and resources that lead to wastage and influenced the growth of firms profits and productivity. Firm efficiency requires the redesign of new work processes that increase productivity and quality (Darrab & Khan, 2010). According to Cooper and Rhodes (1978), firm efficiency is the maximum ratio of weighted outputs to weighted inputs.

Firm efficiency is determined through calculating the ratio of the actual productivity over the highest anticipated productivity. The highest possible productivity equates to the desired performance. Hackman (2008) posits that the steps involved in analyzing the productivity and efficiency analysis is linked to production economics, which seeks to examine and generalize the description of technology in responding to the questions. One may be curious to determine the firm's efficiency before committing a specific amount of inputs and during the scaling of its operations. It is equally important to understand the trend of the company's capability over time. Finally, one might be curious to compare the performance of the firm against its competitors.

Firms efficiency can be measured using different ratios. Firstly, total asset turnover ratio can be used to measure the firm's ability of generating sales using the firm's

investment in total assets. This ratio is derived by dividing net sales by average total assets. The second ratio which can be used if Fixed asset turnover ratio and it is similar to total assets turnover ratio with the only difference being one consider fixed asset while the other consider total assets. To obtain Fixed asset turnover net sales are divided by average net fixed assets. Revenue turnover is another measure of firm efficiency. This ratio measures the capacity of a firm to spend considering the investment in generating revenue. This ratio is obtained from ratio of total outputs to total inputs. This ratio shows whether the inputs are efficiently managed and this will eventually affect the firm's overall efficiency (Rao & Lakew, 2012). The current study used revenue turnover as a measure of firm efficiency. The outputs was total revenue generated while the inputs was the total assets utilized.

2.4 Theoretical Framework

This section reviews the relevant theories that explain the determinants of corporate taxes. Theoretical reviews covered are; agency theory, tradeoff theory and signaling theory.

2.4.1 Agency Theory

This is the anchor theory of the current study. The theory was proposed and developed by Jensen and Meckling (1976). They define agency as a contractual agreement between a principal and an agent who is mandated to perform services on behalf of the principal. The contractual agreement is then confined to prevailing market dynamics which provide incentives to limit agency problems. The principal occasionally delegates his decision-making authority to the agent with expectation that the agent will be a good steward. According to this theory, conflict between principals and agents may arise due to divergence in risk preferences, moral hazards,

information asymmetry and separation of ownership from control. This theory helps in explaining the relationship between PE and financial performance by positing that managers may manipulate both their reported profitability by exclusively investing in short term profitable projects that helps them meet their performance targets. Investors on the other hand prefer long-term investments promising high sustainable ROI and often rely on published financials for valuing their investment. For principals to manage these conflicts, there is need for them to incur agency costs like monitoring costs, bonding costs and residual loss (Mathuva, 2014).

Subsequent theories that modified this theory included; behavioral agency theory, stewardship theory, stakeholder theory and shareholders theory. The above modifications were built on the assumption of goal congruence between agents and principals by placing agent performance at the center of the agency model and arguing that agents tend to be loss averse subject to a certain reference point. Previous researchers who relied on this theory to explain agency conflicts have strongly backed its assumption that both the principal and the agent are motivated by self-interest. These researchers have highlighted the theory's ability in explaining and managing persisting operational and financial conflicts amongst shareholders and managers (Baños-Caballero et al., 2012; Mathuva, 2014). They posit that for managers to maximize shareholder's wealth, there is need for them to invest only in portfolios that generate positive net present values. Asher et al. (2005) critiques this line of thinking by stating that it is too optimistic to think that firms can readily identify all aspects of the agency problem that maximize the net present value and that the theory emphasizes on the agent at the organizations cost.

The theory's presupposition of existence of information asymmetry between principals and agents remains critical in explaining the association amongst corporate taxes and financial performance. For firms to minimize their agency cost, Jensen and Meckling (1976) advocate for the establishment of an optimal level where agency costs are minimized, and wealth maximization is optimized and by extension an optimum level of corporate taxes which minimizes agency conflicts level.

The agency theory is thus applicable to this study as it tries to align the interests of shareholders and those of the government. Engaging managers whose personal wealth is closely linked to firms' value lead to better investment decision for the firms and these will lead to better financial performance and in essence more corporate taxes. To increase investors returns and ensure better financial performance for these companies, managers can be compensated through performance-based compensation plans as well having close monitoring and where necessary, intervention by the shareholders.

2.4.2 Tradeoff Theory

Proposed by Myers (1984), this theory lays emphasis on the importance of balancing between the risk and return of using debt and equity financing. The balance as advocate by Myers (1984) can only be achieved through a cost-benefit analysis of; tax savings, agency cost, deadweight bankruptcy costs and financial distress. This theory has been extensively used in other fields of finance other than in the study of capital structure and can therefore be extrapolated to explain the existence of an optimum target corporate tax level wherein financial performance is maximized (Ashhari, 2012). Subsequent modifications to this theory advocated for usage of internally generated funds. These theories included; the pecking order theory and Modigliani

and Miller capital structure relevance theory. The above modifications expanded the scope of risk- return analysis to cover a broad range of topics like dividend payments and venture funding.

Proponents of this theory have backed its assumption of existence of an imperfect market with high information asymmetry levels. They further highlight the ability of the theory in explaining the existence of an optimum target level of capital structure that minimizes financing costs and maximizes accrued benefits to firms (Leary & Roberts, 2010; Hennessy & Whited, 2005; Strebulaev, 2007; Sheikh & Wang, 2011) . Critics of the theory on the other hand have argued against its assumption of a positive correlation between funding and performance is an inadequate static model (Awan & Amin, 2014: Chen & Chen, 2011: Frank & Goyal, 2003). It is however important to note that this theory expands and elaborates the tenet of risk and return in finance by alluding to the fact that firms decide what their optimal level of funding should be by comparing the marginal cost and benefits.

In line with the theory's assumptions of optimality, this study hypothesis that firms maintain target corporate taxes level and target financial performance levels with the aim of minimizing the risk of bankruptcy and maximizes firm value. The above hypothesis is supported by the theory's analogy that optimality can only be achieved when there is a match between the costs and benefits of different alternative and where both information asymmetry levels and agency costs are minimized (Frank & Goyal, 2003). The theory's assumption of existence of mean reverting and target adjustments tendencies further expands the need for optimality between corporate taxes and financial performance. This study extrapolates the above constructs by

investigating whether there exists an optimum level of corporate taxes which maximizes financial performance and in essence firm value.

2.4.3 Signaling Theory

Signaling theory contends that in markets where there is asymmetry of information, companies normally send signal of who they are and what they believe (Spence, 1973). Spence (1974) describes the market signals as shifting their belief of any unobserved activity or transmitting knowledge to other groups on the market. It is therefore important to signal information so as to reduce information asymmetry and agency costs amongst markets and firms. On the other hand, the information disclosed by organizations, like tax information, is something between no disclosure and full disclosure, depending on their motivation (Premuroso, 2008). The motivation varies and have diverse impact on disclosure level amongst firms from one country to the other. This is centered on many factors, including rules, tax policy and political costs. Most companies have information disclosure pertaining their prospects so as to send out signal whether they have good investment opportunities or not (Bhattacharya & Ritter, 1980).

Managers might also use signaling theory if they want to reduce the information asymmetry that is available in the market concerning the firm performance. For example, information concerning unobservable qualities of a company decision may act like "signals." if it reflects information (Morris, 1989). In this case, it is possible to differentiate manager of higher quality firms with private information compared to those of lower quality firms using disclosures. In this sense, managers are able to use corporate taxes to relay signals to relevant parties that need tax information that will help them in making decisions. Similarly, manager of firms that are underperforming

might relay signal showing that they are taking actions geared towards improving performance through disclosing decisions associated with outsourcing.

Numerous approaches have been used to assess the disclosure of information by companies through the use of signaling theory. Ross (1977) argued that when managers have insider information, the financial structure of the company for example debt amount signals some information to the market. Cash dividend in another study were seen to send a positive signal of the anticipated cash flows when investors had imperfect information on the profitability of the company (Bhattacharya, 1979). In the recent researches signaling theory has been used when companies that are undervalued announces stock repurchases so as to distinguish themselves from overvalued companies (Utpal and Dittmar, 2003). Considering this examples, it is elaborate on how firms might send signal to stakeholders by the information disclosed in the financial statements.

Similarly, information regarding tax might be sent to the tax revenue authority or other users via corporate taxes. For asymmetric information, Akerlof (1970), who quoted the theory, proposed the use of financial information (including tax information) for companies with excellent results to send signals to the markets, users and IRS. This can hence motivate managers to disclose certain information voluntarily. This is due to the fact that they are needed to send a good signal about form performance in the market and how they can reduce information asymmetry. The signaling theory is therefore relevant to this study since it captures corporate taxes as one of the signals organizations send to relevant stakeholders. Communicating tax information can serve as an indication of good performance and compliance with the tax requirements.

2.5 Empirical Review

The following section reviews previous studies done on profitability, firm value and firm efficiency on corporate taxes of firms. However, some of the studies reviewed are not exactly on the study objectives but were carried out on related areas and so they will inform the current study.

2.5.1 Profitability and Corporate Taxes

Omedore and Ogbonnaya (2018) conducted a study so as to establish how the profitability of Deposit Money Banks in Nigeria is affected by profitability. Establishing the degree to which the profit after tax was affected by income tax of the corporation was the specific objective of the study. Using judgment and availability of data to sample the banks to study 12 banks were chosen out of the total 21 banks while the study used a casual research design. The secondary data on profit after tax which was the dependent variable and company income tax which was the company income tax was the independent variable utilized were extracted from the published accounts on the banks websites. The panel data adopted in this study covered the time frame from 2006 to 2016. The SPSS software facilitated data analysis where t-test and multiple regressions were done. From the findings of the study, it was revealed that profitability of banks had a positive significant impact of company income tax.

Adenjare (2015) examined the revenue profile in Nigeria was affected by corporate tax and further examined how economic growth in Nigeria was impacted by corporate tax revenue. To achieve this study secondary data spanning 20 years from 1992 to 2013 was extracted from the Central Bank of Nigeria. To analyze the relationship amongst the Gross Domestic product which was the dependent variables and inflation, corporate income tax, petroleum profit tax and value added tax that were independent

variable, multiple regression analysis was done. This study concluded that the revenue profile in Nigeria was positively and significantly affected by corporate income tax and this fostered Nigerian economic growth.

Kumi and Amaniampong (2018) examined how Profitability of mining companies at the Ghana Stock Exchange was affected by corporate income tax. Profitability was measured using Returns on Assets (ROA). The independent variable was corporate income tax whereas growth, leverage, liquidity and company size were the dependent variables. The regression findings indicated that profitability is negatively affected by corporate income tax while on the other hand company size was positively related to leverage, liquidity and profitability whereas profitability was negatively affected by growth.

Kariuki (2017) did a study on the corporate tax planning effect on firms listed in NSE Kenya. The study population was all the 64 firms listed at the NSE. The independent variables were Tax planning, liquidity and firm size were whereas the dependent variable was financial performance. Secondary data on the variables was collected for the time frame January 2012 to December 2016. The study used a descriptive cross sectional research design and for data analysis which was facilitated by SPSS multiple regressions was used. The study found that corporate tax planning and liquidity are positively and significantly related to financial performance whereas firm sized was discovered not being a significant determinant of financial performance. Leverage was found out to be negatively but significantly related to financial performance.

Ezugwu and Akubo (2014) aimed on analyzing how profitability of companies in Nigeria is affected by high corporate tax rates. All the corporate selected formed the

study population whereas the sample size was 40 corporate. The study adopted Taro Yamane sampling technique. Different statistical tools such as tables and regression model were used in the data analysis and testing the formulated hypothesis. The findings of the analysis revealed that a direct positive association amongst corporate tax rate and profit realized.

2.5.2 Firm Value and Corporate Taxes

Olarewaju and Olayiwola (2019) investigate the association amongst financial performance of listed non financial firms and corporate tax planning. A sample of 47 non financial firms in the period 2007 to 206 was used and secondary data for the same was utilized. In analyzing the data a panel vector autoregressive approach that comprised of structural analysis like variance decomposition and impulse response function was applied. From the result it was established that financial performance was directly related to tax saving whereas there was negative association amongst financial performance and tax avoidance. The studied financial variable greatly lead to own forecast errors and own shocks. The reactions of financial performance to tax avoidance shocks had expanding effects, which could prevent financial performance whereas financial performance reaction to tax savings shocks would have a contractionary impact and hence could result in improved financial performance. Therefore, it was revealed that corporate tax planning which leads to tax savings to a large extent translates to better performance of non financial firms.

Chen, Sharoja and Abdullah (2018) aimed to study the connection amongst firm value and tax avoidance and find out the moderating impact of corporate governance in the digital generation. For companies it has been considered that corporate tax avoidance activities enhance the value of the firms and to improved quality of corporate

governance has a positive effect on firm value. Top 100 ranked firms that were indentified to have good disclosures in a 2014 report by Malaysian corporate governance were sampled. Cross sectional data was used to analyze the 82 PLCs that were sample each at a time. As indicated by the findings it was shown that the value of the firm was reduced by tax avoidance behavior and also corporate governance was seen to have a moderating effect on the firm value and tax avoidance relationship.

Assidi et al. (2016) sought to examine the firm value and corporate tax optimization relationship in Tunisia. The study period was 11 years. The findings revealed that the firm value was increased by investments, accruals and tax optimization. An analysis of the sample firms that are listed and those are not revealed that listed firms in comparison to non listed firms were positioned well to optimize tax through adopting a tax policy. These findings assist practitioners, decision makers and researcher to appreciate the role of tax optimization in firm management and also in their performance.

Stavroula and Theofanis (2012) conducted an investigation to establish the level that of evasion of corporate tax and how that affects the protection of shareholders and the functioning of capital market. The average evasion rates was approximated at 16% meaning that tax evasion incentive does not become less a firm get listed at the stock exchange. This suggests that the firm tax behavior only change an year before or after issuance of IPO. The type of audit firm a firm uses influences the tax evasion level. It meant that ax evasion is a countrywide disaster that needs to be addressed. As Greece was in a financial crisis at the time, the question of tax evasion was more critical than ever. The role played by the company in detecting fraud was also important since the Greek Tax Bill 2010 grants it the rights to issue tax certificates.

2.5.3 Firm Efficiency and Corporate Taxes

Tyrowicz, Mazurek and Staehr (2018) tested the empirical hypothesis that corporate income taxes are neutral for firm efficiency. They take advantage of the fact that tax definition of cost does not fully relate with the accounting definition and come up with a taxation instrument that depends on the exogenous in this overlap. Over 20 million firms in over 40 countries were sample where the firm level data was use. The period of study spanned 2 decades. They found out that the OLS estimates were highly biased and generated a positive association amongst output/efficiency and taxation. Endogeneity accounting through instrumentation provides strong negative estimates of the impact of taxation on company performance and efficiency. The outcomes were not dependent on the characteristics of the firm, but are varied throughout the countries. In some countries strong negative effects are related with small or no effect in others.

Lazar and Istrate (2018) aimed to examine the effect of general firm specific tax mix on listed firms' performance in Romania. The period of study was 2000 to 2011. General tax mix referred not only to the tax on profits but also all other taxes that are paid by a company for instance real estate taxes, employment related taxes among others. Based on the relevant tax wedge, the interest variable is a first specific effective tax rates which combines al the public finance liabilities using a group of special data obtained from the company reports. Through the fixed effect model the findings revealed that as overall firm specific tax rate increased by 1% the ROA reduced by 0.15%. In addition, leverage, assets and size had a negative impact of firm performance whereas growth, profitability and liquidity showed a positive impact.

Gamze (2020) sought to study the taxation effect on the performance of firms. The study population was 738 firms from 16 countries where extensive panel data set was used. The study period was 2000 to 2016. From the findings there was revealed that there is a negative association of firm performance and corporate taxes which was significant. Further the results reveals firm size, countries development levels and financial crisis have a strong impact on this relationship. The findings are strong in regards to aggregating various grouping of control variables. The findings are beneficial to management of firms as it help in making decision that may lead to improved firm performance hence may assist better implement tax policies.

Chauvet and Ferry (2020) examined that association of firm performance and taxation in developing countries. The study use data collected for government revenue data set as well as from World Bank enterprise surveys and the results indicated that in developing taxation benefits growth of firms more so in lower income countries. This positive contribution of domestic revenue to performance of firms is normally passed through investment in public infrastructures which are important for the operation of these firms. This benefits were also revealed note being present when there is too much corruption, and also when the government accountability is re reduced by source of tax revenue.

2.6 Research Gaps

There are various theoretical frameworks which have sought to discuss the concept on corporate taxes. In this study three theories have been reviewed. They comprise of the signaling theory, agency theory and tradeoff theory. Both locally and globally empirical works have been done on the four objectives of the study and their findings have been explored.

However, the empirical evidence gives mixed reaction. Of importance to this study is that there is an extensive empirical literature on the determinants of corporate taxes but not on the effects of these determinants on the corporates taxes. Although many studies have been done on corporates taxes most of them focused on the capital structure and corporates taxes but none has focused on the effect of financial performance on corporate taxes among the listed firms in Kenya. The current study intends to fill this research gap.

2.7 Conceptual Framework

The conceptual framework below is a representation of the relationship between independent variables of the study which are profitability measured by ROE, Firm value measured by the ratio of market value of equity to book value of equity and firm efficiency measured as a ratio of total revenue divided by total assets and dependent variable of the study which is corporate taxes measured by total tax paid divided by earning of the firm.

Independent variables **Dependent variable**

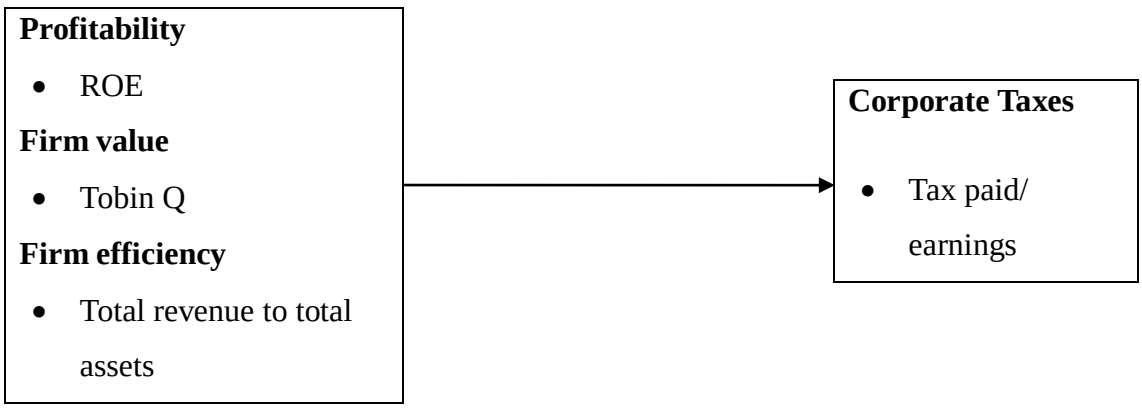

Figure 2.1: The Conceptual Model

Source: Researcher (2020)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covered the following; research design, target population, data collection, data analysis and interpretation, definition and measurement of variables and finally, ethical consideration.

3.2 Research Design

Kothari (2004) refers to research design as the organization of the settings for collecting and analyzing data in a way that seeks to combine the research purpose relevance with the economy in process. In addition, he asserts that a research design is the conceptual framework upon which the research is done. Research design is the entire plan aimed on answering the research questions (Saunders, Lewis & Thornhill, 2007). This study examined the effect of financial performance on corporate taxes among firms listed at the NSE, Kenya. The study adopted explanatory research design. In this study, the explanatory research design enabled the researcher to test and explain the association amongst financial performance and corporate taxes. According to Orodho (2003), an explanatory research design helps in testing the relationship between variables. It is conducted to discover and report some relationships among different aspects of the phenomenon under study (Boru, 2018).

3.3 Target Population and Sampling Design

Target population is the total number of items that are considered of interest any areas of inquiry or research. When all the items in the population are enumerated it is referred to as census study (Kothari, 2004). As per Mugenda and Mugenda (1999) population entails the entire grouping of objects, cases and individuals who have

similar traits that are observable. All the listed firms at the NSE in Kenya for the period of 5 years (2014 to 2018) will form the target population of this study. There were 65 firms trading at the NSE according to Capital Market Authority Website (2018). The choice of firms listed on NSE is pegged on the ease of access to data on the required variables. The firms are required by NSE to publish their audited annual accounts yearly. The secondary data was extracted from the financial statements and other information in the audited annual accounts. The period 2014 – 2015 was also chosen for the study in order to give a current overview of financial performance and its effect on corporate taxes.

Table 3.1 Sampling Frame

Sector	Study Population	Total Observations
Agricultural	6	30
Automobiles & Accessories	1	5
Banking	12	60
Commercial & Services	13	65
Construction & Allied	5	25
Energy & Petroleum	5	25
Insurance	6	30
Investment	5	25
Investment Services	1	5
Manufacturing & Allied	8	40
Telecommunication	1	5
Real Estate Investment	1	5

3.4 Inclusion and Exclusion Criteria

In this study consideration was given to only firms that have traded on the NSE continuously over the 5-year period (2014 to 2018). Any firms that were newly listed or suspended in between the period under review were excluded from the survey. De-listed firms by the regulators of the NSE were also not incorporated in the study. The criteria for inclusion and exclusion of the firms meant that the total number of listed firms that included in the study was 56 for a period of 5 years. The number of observations was 280.

Table 3.2 Sample

Sector	Sample	Total Observations
Agricultural	6	30
Automobiles & Accessories	1	5
Banking	8	40
Commercial & Services	11	55
Construction & Allied	4	20
Energy & Petroleum	5	25
Insurance	6	30
Investment	5	25
Investment Services	1	5
Manufacturing & Allied	8	40
Telecommunication	1	5
Total (5 years)	**56**	**280**

(Author's Construct, 2020)

3.5 Data Collection

The process through which the research data is obtained is referred to as data collection. In this process the research gathers all the information relevant to the study in order to answer the research question, solve the research problem, test the hypotheses and evaluate the outcome (Mcmillan & Gogia, 2017). In this study, panel data was acquired from secondary sources using excel data template as indicated in Appendix I. Data that has already been collected either by an individual or organization is referred to as secondary data. If the data are obtained by someone else and passed through the statistical analysis for his research work, then that is secondary data. Therefore, secondary data denotes data that is obtained from secondary sources and is mainly readily available in various sources. Secondary data has the advantages of being easily accessible and less costly though it has the disadvantage of being authentic meaning its findings might be questioned. Data on study variables was extracted from audited financials of the firms. The audited annual reports were readily available on the NSE and CMA Websites. Data was collected for the 56 firms for a period of five years ranging from 2014 to 2018.

3.6 Definition And Measurement Of Variables

Tables 3.3 Definition and Measurement of Variables

Variable	Measurement	Definition
Corporate taxes	Income tax expense divided by total earnings	An assessment levied by the state on profits made by companies (Arachi & Alworth, 2001)
Profitability	Ratio of net income to total shareholders' equity	The ability of a firm to generate earnings from the use of its equity for a certain period of time (Farah & Nina, 2016)
Firm value	Market value of equity to book value of equity	Refers to the discounted cash flows from assets and future growth, discounted using the cost of capital (Damadoran, 2002)
Firm efficiency	Total revenue divided by total assets	The ability of a firm to minimize waste and maximize resource capabilities so as to offer to its customer's quality products and services (Kalluru & Bhat, 2009).

(Author's Construct, 2020)

3.7 Data Analysis and Interpretation

Mugenda and Mugenda (2003) asserts that data analysis is the method through which volume of data collected is organized and structured in a way that gives meaning to it. Data analysis the transformation of raw data into useful information mostly presented in terms of published analytical article so as to give value of statistical output(OECD, 2013). In this study data was organized and summarized using descriptive statistics. Descriptive statistics enabled finding of the mean, standard deviations and variances and graphical representation of the data of the various variables. Also inferential statistics were used to analyze the data, where both correlation and regression analysis were undertaken. In particular, regression analysis was used to test for the study hypotheses by establishing the relationship between the relationship between

financial performance and corporate taxes. The analysed data was presented using tables and figures. The study used STATA software in analyzing the panel data.

3.7.1 Analytical Model

The Panel model was estimated as follows:

$$Y_{it} = \beta_{oit} + \beta_{1it} X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon_t$$

Where:

Y = Corporate taxes

β_o = Intercept,

β_1, β_2, β_3 and β_4= regression coefficients

X_1 = Profitability

X_2 = Firm value

X_3 = Firm efficiency

i= Firm

t= Time

ε = error term

3.7.2 Diagnostic Tests

Ouma and Muriu (2014) opined that so able to know if a model is suitable there is need for the research to perform various diagnostic test, each being structured in a way that will find out inadequacy in a certain model. This study used the following diagnostic tests to ensure the model was reliable and make sure the regression findings are accurate.

3.7.2.1 Normality Test

Amata (2017) opined that the purpose of a normality test is to establish whether the data set follows the normal distribution. This is done by observing whether a representation of the distribution test findings looks like a bel shaped normal curve. The normality test was done using the Kolmogorov-Smirnov test. The data is said to be normally distributed if the probability is more than 0.05.

3.7.2.2 Multicollinearity

As indicated by Amata (2017), it is necessary for the independent variables to be tested for multicollinearity because if there exist collinearity it may lead to a number of errors in the study findings. If there is correlation amongst the independent variables, then it is said that there is occurrence of multicollinearity. Barnor (2014) pointed out that if two or more independent variables are correlated then only one should be included but not both because this increases the standards errors hence may lead to findings being biased. Multicollinearity was achieved in this analysis using a correlation matrix where it was reported that there was a significant multicollinearity if the correlation value of the independent variables was greater than 0.08.

3.7.2.3 Autocorrelation

Serial or auto correlation is a term used in statistic to refers to a condition where the residual is correlated with lagged values and this condition is undesirable (Ouma & Muriu, 2014). To test if there existed serial correlation, this study used Breusch-Godfrey Serial Correlation LM Test.

3.7.2.4 Heteroscedasticity

Ouma and Muriu (2014), stated that heteroscedasticity is a phrase used in describing a condition where the residual variance from a model is not constant. In this study heteroscedasticity was tested for using Breusch-Pegan-Godfrey test.

3.7.2.5 Linearity Test

In this study, ANOVA was applied to test the linearity of the data and demonstrate visually if two continuous variables had a linear or curvilinear correlation before regression analysis was performed. For the regression models to estimate the relationship of the dependent variable with the independent variables the relationship ought to be linear (Osborne &Waters, 2002).

3.7.3 Stationarity Test

When conducting a panel data analysis, non-stationarity is regarded as a problem. In time series, evidence is constant when it is average; as time changes both the covariance and variance do not change. The non-stationary data result to fake regression due to the non-constant variance and mean (Dimitrova, 2005). Some observations are done trough distinguishing the series through use of differentiating operators. Data differentiated when given as

$$\Delta X_t = X_t - X_{t-1}$$

A series that is (0) or order 0 combined is a series that is stationary without differentiation. However, it is claimed that the sequence is stationary once the first difference is either I (1) or 1 introduced. In establishing whether the data was stationary or non-stationary this study used Levin-Lin Chu unit-root test.

3.7.4 Test for Fixed or Random Effects

It is necessary for model of fixed assets or a model of random effects to be performed when panel data analysis is being undertaken. While this fixed-effect model presumes that such variables are unique to each company and constant over time and are subject to firm-specific intercepting and captured, the random-effect model assumes that a dominant single intercept exists and differs randomly between firms (Baltagi, 2005). Therefore, to begin with it is essential to establish whether correlation amongst the independent variables exists so as to estimate models. In case of nonexistent of correlation, the fixed effect model could give consistent results otherwise it would be effective to use random effect model and it is estimated using generalized least square (Teruel & Solano, 2007).

In establishing the models that is appropriate among the fixed and random effects estimate coefficients Hausman's specification test (1978) was used. If the hypothesis is null, that is. E (μi / xit) = 0 is accepted, then random effect was an efficient estimator otherwise, if the null hypothesis is rejected, a fixed effect estimate provided a better or more efficient beta estimate.

3.7.5 Test for Significance

Both the F statistic and the t test were used in testing for statistical significance. F statistic was used to test significance of the regression model while t-test was used for regression coefficients. In determining the variations the coefficient of determination (R^2) was used.

Table 3.4: Hypotheses

Hypotheses	What is expected	Remarks
Ho_1	Profitability had no significant effect on corporate taxes among firms listed at NSE, Kenya	When the P Value > significance level, we fail to reject H_{01}
Ho_2	Firm value had no significant effect on corporate taxes among firms listed at NSE, Kenya	When the P Value > significance level, we fail to reject H_{02}
Ho_3	Firm efficiency had no significant effect on corporate taxes among firms listed at NSE, Kenya	When the P Value > significance level, we fail to reject H_{03}

3.8 Ethical Consideration

The Science Directorate of the APA has suggested some ways that the researchers can avoid ethical challenges. Some of the ideas are: protection for confidentiality , privacy and ethical tools under informed consent laws (Smith, 2003). In this study, the researcher ensured that the data collected from secondary sources was kept confidential and was secured. Further, the researcher ensured that the information gathered would not be used to harm anyone or any entity and would be for academic purposes only.

CHAPTER FOUR

RESEARCH FINDINGS, PRESENTATION AND DISCUSSION

4.1 Introduction

In this section the data analysis results are presented. This study objective was to determine how financial performance and corporate taxes related among firms listed at the NSE, Kenya. The data analysis is consistent with the specific objectives where trends were analyzed through descriptive analysis and inferential analysis, interpreted and conclusions derived.

4.2 Descriptive Statistics

Table 4.1: Descriptive Results

	N	Minimum	Maximum	Mean	Std. Deviation
Corporate taxes	280	.00000	.78545	.2778999	.12936304
Profitability	280	-.0685	1.1903	.041829	.1923179
Firm value	280	.1403	1463.7663	72.080148	264.6815598
Firm efficiency	280	.0015	.3650	.112517	.0866131

The results indicate that the mean of corporate taxes of firms listed in NSE from 2014 to 2018 is 0.278. In addition, the minimum is 0.000 while the maximum is 0.785. In addition, the standard deviation is 0.129. This implies that corporate taxes are not widely spread from the mean.

The results further indicate that the mean of profitability of firms listed in NSE from 2014 to 2018 is .0418. The minimum is -0.0685 while the maximum is 1.1903. In addition, the standard deviation is 0.192. This implies that profitability is not widely spread from the mean.

The results further indicate that the mean of firm value of firms listed in NSE from 2014 to 2018 was 72.08. In addition, the minimum was 0.14 while the maximum was

1463. In addition, the standard deviation was 264. This implies that firm value is widely spread from the mean.

The results further indicate that the mean of firm efficiency of firms listed in NSE from 2014 to 2018 was 0.113. In addition, the minimum was 0.015 while the maximum was 0.365. Further, the standard deviation was 0.087. This implies that firm efficiency was not widely spread from the mean

4.3 Diagnostic Tests

4.3.1 Normality

The normality test of the data was done using the Kolmogorov-Smirnov test. The threshold was that, if the probability is more than 0.05, in that case the data is normally distributed.

Table 4.2: Test for Normality

	Kolmogorov-Smirnova		
	Statistic	**Df**	**Sig.**
Corporate taxes	0.326	280	0.112
Profitability	0.408	280	0.207
Firm value	0.272	280	0.063
Firm efficiency	0.124	280	0.057

The findings above indicated that data was normality distributed since the p values were greater than 0.05. Therefore, the null hypothesis of normal distribution was accepted meaning the researcher failed to reject the null hypotheses.

4.3.2 Multicollinearity

As indicated by William *et al.* (2013), multicollinearity is a condition where there are two or more independent variables which are correlated. Multicollinearity was tested

for using VIF. As indicated by Field (2009) when the values of VIF are more than 10 it shows that multicollinearity exists.

Table 4.3: Multicollinearity

Variable	VIF	1/VIF
Firm value	1.30	0.771
Firm efficiency	1.27	0.785
Profitability	1.02	0.978
Mean VIF	1.20	

As exhibited in Table 4.3 above the VIF values results revealed that the VIF values was 1.20 that do not exceed 1 hence as indicated by Field (2009) no multicollinearity existed.

4.3.3 Heteroskedasticity test

The error process can be homoskedatic in cross-sectional units, though its variation can vary from one unit to the other: a condition referred as group wise Heteroscedasticity. The hettest command determines Breuch Pagan for the Heteroscedasticity group wise in the residuals. The null hypothesis specifies that $\sigma^2_i = \sigma^2$ for i =1...Ng, where Ng is the number of cross-sectional units.

Table 4.4: Heteroskedasticity Results

Modified Wald test for group wise heteroskedasticity in fixed effect regression model
H0: sigma(i)^2 = sigma^2 for all i
chi2 (280) = 304.56
Prob>chi2 = 0.0567

As exhibited in Table 4.4 above the findings reveal that the null hypothesis of Homoskedastic error terms is not rejected as evidenced by a p-value of 0.0567.

4.3.4 Autocorrelation test

Since serial correlation in models distorts standard errors and results are less efficient, the research applied the Breusch-Godfrey autocorrelation test, that determines serial correlation in the idiosyncratic term of error in the model.

Table 4.5: Test of Autocorrelation

Wooldridge test for autocorrelation in panel data **H0: no first-order autocorrelation**
F(1, 279) = 0.324
Prob> F = 0.5360

According to the results in Table 4.5 above there existed no serial correlation as indicated by the p-value is significant (p-value = 0.5360) hence the null hypothesis not rejected.

4.3.5 Linearity Test

The study ANOVA test was used to test for linearity of the data as shown in Table 4.6.

Table 4.6: ANOVA test of Linearity

Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	42.261	3	14.087	15.742	.000b
	Residual	246.983	276	0.895		
	Total	289.244	279			

a Dependent Variable: Corporate taxes
b Predictors: (Constant), Firm efficiency , Profitability , Firm value

The findings above revealed that the model was statistically significant since the p value of 0.000 was less than conventional p value of 0.05. The results indicated that profitability, firm efficiency and firm value have a linear relationship with corporate taxes.

4.4 Stationarity Test

Table 4.7 shows Levin-Lin Chu unit root test results.

Table 4.7: Levin-Lin Chu unit-root test

Levin-Lin Chu unit-root test			
Variable	**Hypothesis**	**p value**	**Verdict**
Corporate taxes	Ho: Panels contain unit roots Ha: Panels are stationary	0.0000	Reject Ho
Profitability	Ho: Panels contain unit roots Ha: Panels are stationary	0.0000	Reject Ho
Firm value	Ho: Panels contain unit roots Ha: Panels are stationary	0.0000	Reject Ho
Firm efficiency	Ho: Panels contain unit roots Ha: Panels are stationary	0.0001	Reject Ho

Based on the findings in Table 4.7, the null hypotheses that: Panels contain unit roots were rejected for all the variables, because the p values were less than 0.05. This implied that the panel data for all the variables were stationary.

4.5 Hausman Test

Table 4.8: Hausman Test

	(b) Fixed	**(B) random**	**(b-B) Difference**	**sqrt(diag(V_b-V_B)) S.E.**
Profitability	0.05936	0.03198	0.02738	0.01991
Firm value	0.08358	0.09513	-0.0116	0.01184
Firm efficiency	0.09042	0.08157	0.00885	0.01466
B	Ha; obtained from xtreg			
B	Inconsistent	Obtained from xtreg		
Test:	Ho:	difference in	Coefficients	
chi2(3)=	(b-B)'[(V_b-V_B)^(-1)](b-B)=2.44			
Prob>chi2=**0.4869**				

A resultant p value of 0.4869 is higher than the conventional p value of 0.05 leading to the acceptance of the null hypothesis, that is. E (μi / xit) = 0, and thus the random effects model is more appropriate.

4.6 Correlation Results

Table 4.9 presents results on the correlation between the study variables.

Table 4.9: Correlation Results

	Corporate taxes	Profitability	Firm value	Firm efficiency
Corporate taxes	1.000			
Profitability	0.070**	1.000		
Firm value	0.320**	-0.148	1.000	
Firm efficiency	0.303**	-0.070	0.464	1.000

* <.1; **<.05; ***<0.01

The results in Table 4.9 reveal that profitability and corporate taxes are positively and significantly correlated (r=0.070**) at 5% significance level. This implies that both profitability and corporate taxes change in the same direction in that a higher profitability leads to a higher level of corporate taxes. These findings agree with those

of Omedore and Ogbonnaya (2018) who found positive and significant association between profitability and corporate taxes.

In addition, the results show that firm value and corporate taxes are positively and significantly correlated (r=0.320**) at 5 % significance level. This implies that both firm value and corporate taxes change in the same direction in that a larger firm value leads to higher level of corporate taxes. These findings agree with those of Chen, Sharoja and Abdullah (2018) who indicated that firm value correlates with the activity of tax aggressiveness.

Further, results show that firm efficiency and corporate taxes are positively and significantly correlated (r=0.303**) at 5 % significance level. This implies that both firm efficiency and corporate taxes change in the same direction in that a higher proportion of firm efficiency leads to a higher level of corporate tax payments. These findings agree with those of Lazar and Istrate (2018) who found that firm efficiency was positively associated with firm performance.

4.7 Regression Results

Regression results were presented in Table 4.10.

Table 4.10: Regression Results

Corporatetaxes	**Coef.**	**std.err**	**Z**	**P>|z|**	**[95% conf.interval]**	
Profitability	0.032	0.015	2.18	0.029	0.003	0.061
Firmvalue	0.095	0.025	3.81	0.000	0.046	0.144
Firmefficiency	0.082	0.025	3.21	0.001	0.032	0.131
_cons	-0.277	0.126	-2.2	0.028	-0.523	-0.030
R squared =0.1468						
Wald chi2(3)=47.31						
Prob>chi2=0.000						

Corporate taxes= -0.277+ 0.032 Profitability+ 0.095 Firm value+ 0.082 Firm efficiency

Results in Table 4.10 indicate that profitability was positively and significantly related with corporate taxes of firms listed at NSE (β=0.032, p=0.029).These findings agree with those of Omedore and Ogbonnaya (2018) who found positive and significant impact from firm value and firm profitability. However, these findings were inconsistent with those of Kumi and Amaniampong (2018) who found that profitability do not significantly influence corporate taxes.

In addition, results reveal that firm value was positively and significantly related with corporate taxes of firms listed at NSE (β=0.095, p=0.000).These findings agree with those of Chen, Sharoja and Abdullah (2018) who indicated that firm value affects corporate taxes positively and to a significant extent.

The results further show that firm efficiency was positively and significantly related with corporate taxes of firms listed at NSE (β=0.082, p=0.001). These findings agree with those of Lazar and Istrate (2018) who found a positive connection between firm performance and corporate taxes. These findings were however inconsistent with those of Tyrowicz, Mazurek and Staehr (2018) who tested empirically the hypothesis that corporate income tax are neutral for firm efficiency but did not find any influence of firm efficiency on the taxation.

The R squared was 0.1468. This implies that profitability, firm value and firm efficiency contributed 14.68% to variations in corporate taxes. The R squared obtained in this study was relatively small compared to what other studies found for example Gamze (2020) with an R squared of 0.6230 on their study investigating the effects of taxation on firm performance and Kumi and Amaniampong (2018) with an R squared of 0.5628 on their study on corporate income tax and profitability of mining companies listed on the Ghana Stock Exchange. This is an indication that

there are other factors (for example firm size, capital structure among others) influencing corporate taxes apart from the ones included in the study model. The results further indicated that the overall model was significant (p=0.000). This was supported by an F statistic of 47.31.

4.8 Hypothesis Testing

The hypotheses were tested using multiple linear regressions. Table 4.8 shows multiple regression results. The acceptance/rejection criteria was that, if the p value is greater than 0.05, the Ho_1 is not rejected but if it's less than 0.05, the Ho_1 is rejected.

4.8.1 Profitability and Corporate Taxes

The first null hypothesis, H_{01}, stated that: profitability has no significant effect on corporate taxes among firms listed at NSE, Kenya. Results in Table 4.8 show that the p-value was 0.029<0.05. This indicates that the null hypothesis is rejected hence there is a significant effect of profitability on corporate taxes among firms listed at NSE, Kenya. Profitability was positively and significantly related with corporate taxes of firms listed at NSE (β=0.032, p=0.029). The study results show that profitability is a significant factor affecting corporate taxes.

4.8.2 Firm Value and Corporate Taxes

The second null hypothesis, H_{02}, stated that: firm value has no significant effect on corporate taxes among firms listed at NSE, Kenya. Results in Table 4.8 show that the p-value was 0.000<0.05. This indicates that the null hypothesis is rejected hence there is a significant effect of firm value on corporate taxes among firms listed at NSE, Kenya. The results reveal that firm value was positively and significantly related with corporate taxes of firms listed at NSE (β=0.095, p=0.000).

4.8.3 Firm Efficiency and Corporate Taxes

The third null hypothesis, H_{03}, stated that: firm efficiency has no significant effect on corporate taxes among firms listed at NSE, Kenya. Results in Table 4.8 show that the p-value is 0.001<0.05. This indicates that the null hypothesis is rejected hence there is a significant effect of firm efficiency on corporate taxes among firms listed at NSE, Kenya. The results further show that firm efficiency was positively and significantly related with corporate taxes of firms listed at NSE (β=0.082, p=0.001).

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary, conclusion, and recommendations in line with the study objectives. Recommendations for further research and limitations of the study are also presented in this chapter.

5.2 Summary of Findings

5.2.1 Profitability and Corporate Taxes

The first objective was to establish the effect of profitability on corporate taxes among firms listed at NSE, Kenya. Descriptive results show that the mean of profitability among firms listed at NSE was 0.0418. In addition, correlation results (r=0.070) at 5 % significance level show that profitability had a positive correlation with corporate taxes. This implies that improvement in profitability would lead to increase in corporate taxes.

Regression results (β=0.032, p=0.029) show that there was a positive and significant effect between profitability and corporate taxes. In addition, hypothesis results show that there was a significant effect of profitability on corporate taxes among firms listed at NSE, Kenya.

5.2.2 Firm Value and Corporate Taxes

The second objective was to assess the effect of firm value on corporate taxes among firms listed at NSE, Kenya Descriptive results show that the mean of firm value among firms listed at NSE was 72.08. In addition, correlation results (r=0.320) at 5 % significance level show that firm value had a positive correlation with corporate taxes. This implies that improvement in firm value would lead to increase in corporate taxes.

Regression results (β=0.095, p=0.000) show that there was a positive and significant effect between firm value and corporate taxes. In addition, hypothesis results show that there was a significant effect of firm value on corporate taxes among firms listed at NSE, Kenya.

5.2.3 Firm Efficiency and Corporate Taxes

The third objective was to examine the effect of firm efficiency on corporate taxes among firms listed at NSE, Kenya Descriptive results show that the mean of firm efficiency among firms listed at NSE was 0.113. In addition, correlation results (r=0.303) at 5 % significance level show that firm efficiency had a positive correlation with corporate taxes. This implies that improvement in firm efficiency would lead to increase in corporate taxes.

Regression results (β=0.082, p=0.001) show that there was a positive and significant effect between firm efficiency and corporate taxes. In addition, hypothesis results show that there was a significant effect of firm efficiency on corporate taxes among firms listed at NSE, Kenya.

5.3 Conclusions

The study purpose of the study was to find out the relationship between financial performance and corporate taxes. The findings indicated that profitability had a positive and significant effect on corporate taxes. This may imply that listed firms with better profitability tend to pay higher level of corporate tax.

The study results further indicated that firm value had a positive and significant effect on corporate taxes which might mean that large firm value is beneficial in corporate taxes because they have higher market values which also implies more returns that are

taxable. Lower firm value is often associated with firms making losses and therefore do not contribute significantly to corporate taxes.

In addition, the study results showed that firm efficiency had a positive and significant effect on corporate taxes. This may mean that firms that are more efficient in terms of utilizing their assets tend to produce more income as all their assets are well utilized leading to more revenues and consequently, increased corporate taxes.

5.4 Recommendations

The study findings reveal that profitability had a positive and significant effect on corporate taxes. The study therefore recommends that the management of firms listed in NSE should ensure that they strive to enhance their profitability. The study further recommends that government through the policy makers should create a conducive environment for the firms listed at the NSE as well as other firms because when the firms thrives in terms of profits it would mean more corporate taxes are paid and this will trigger growth of the economy.

Further, firm value was found to have a significant and positive impact on corporate taxes. The study therefore recommends that managers and board members of the NSE listed firms should ensure that the investment decisions and other decisions that firm makes are geared towards fulfilling the main goal of a firm which is shareholder wealth maximization and by so doing the level of corporate taxes paid will go up as firm value has been evidenced to significantly influence corporate taxes and in a positive way..

From the study findings, firm efficiency had a significant effect on corporate taxes. Therefore, the study recommends that the Nairobi stock exchange should make it mandatory to all listed firms to account on how efficiently they are managing firm

assets with consequences for those firms that are not efficient. In addition, the research recommends that manufacturing firms should develop best talent management strategies to ensure attraction and retention of talented and dedicated employees as this will go a long way in enhancing overall firm efficiency and in essence lead to enhanced corporate taxes. Some of the talent management practices they should pay keen attention are workforce planning, recruitment, learning and development and employee rewards and compensation.

5.5 Limitations of the Study

The period selected in this study was 5 years that is from 2014-2018. There is no proof that alike outcome will remain the same in a longer period. More so, the findings might not even hold for the period beyond 2018. An extended period will lead to the results being reliable since it will include cases of major economic changes like recessions and booms.

The quality of data was the greatest limitation of this study. This is because it cannot be determined accurately that the secondary data represent the situation as it is in the ground. It is has only been assumed that the data is accurate. This is usually a general problem when dealing with secondary data. The research used secondary data, which was in the public domain had already been obtained, unlike the first-hand information associated with primary data. The study additionally did not exhaust the entire factors affecting corporate taxes of listed firms greatly because of availability of data limitation.

In achieving the analysis of the data, the study used a multiple linear regression model. Because of the restrictions involved when using the model like erroneous and deceptive outcomes that lead to the value of the variable changing, it was therefore

not possible the findings of the study to be generalized with accuracy. More so the result could be different if more data was added in the regression. Hence the model was another limitation.

5.6 Areas of Further Studies

The study findings revealed an R square of 14.68%, which was very low. This suggests other factors which have an affect corporate taxes among the NSE firms exists and they were not addressed by the study. Further studies ought to focus on other factors for example; capital structure, firm size, corporate governance, earnings management among other aspects that affect corporate taxes among the NSE firms.

This study concentrated on financial performance and corporate taxes of firms listed at the NSE and relied on secondary data. A research study that takes into account other unlisted firms in Kenya or firms operating in different sectors of the economy need to be carried out to authenticate or disregard the findings of the current study.

The concentration of the study was on the past five years because it was the most current and readily available data. Additional studies in the future may cover a much larger range for instance from 1970 to date which will be useful in approving or disapproving findings of the study. The advantage of a longer study is that it will enable the researcher to capture effects of business cycles such as booms and recessions.

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APPENDICES

Appendix I: Firms Listed at the Nairobi Securities Exchange

AGRICULTURAL
Eagads Ltd
Kapchorua Tea Co. Ltd
Kakuzi
Rea Vipingo Plantations Ltd
Limuru Tea Co. Ltd
Williamson Tea Kenya Ltd
Sasini Ltd
AUTOMOBILES AND ACCESSORIES
Car and General (K) Ltd
COMMERCIAL AND SERVICES
Express Ltd
Kenya Airways Ltd
Nation Media Group
Sameer Africa PLC
Standard Group Ltd
Scangroup Ltd
Uchumi Supermarket Ltd
TPS Eastern Africa (Serena) Ltd
Longhorn Publishers Ltd
Deacons (East Africa) Plc
Atlas Development and Support Services
Nairobi Business Ventures Ltd
CONSTRUCTION AND ALLIED
Athi River Mining
Bamburi Cement Ltd
Crown Paints Kenya PLC
E.A.Cables Ltd
E.A.Portland Cement Ltd
ENERGY AND PETROLEUM
KenolKobil Ltd
Total Kenya Ltd
KenGen Ltd
Kenya Power & Lighting Co Ltd
Umeme Ltd

INVESTMENT
Olympia Capital Holdings ltd
Centum Investment Co Ltd
Trans-Century Ltd
Home Afrika Ltd
Kurwitu Ventures
INVESTMENT SERVICES
Nairobi Securities Exchange Ltd
MANUFACTURING AND ALLIED
B.O.C Kenya Ltd
British American Tobacco Kenya Ltd
Carbacid Investments Ltd
East African Breweries Ltd
Mumias Sugar Co. Ltd
Unga Group Ltd
Eveready East Africa Ltd
Kenya Orchards Ltd
Flame Tree Group Holdings Ltd
TELECOMMUNICATION AND TECHNOLOGY
Safaricom PLC
REAL ESTATE INVESTMENT TRUST
Stanlib Fahari I-REIT
NSE (2019)

Appendix II: Work Plan

Activity	Month 1	Month 2	Month 3	Month 4	Month 5
Proposal writing					
Pilot Study					
Fieldwork–data collection					
Analysis and project writing					
Final Submission					

Appendix III: Research Budget

Item	Quantity	Days	Unit Cost (Ksh.)	Total Cost (Ksh.)
Research Assistants	2	30	500	30,000
Transport	1	30	300	9,000
Paper Ream	4	N/A	500	2,000
Pens	10	N/A	20	200
Airtime	1	15	100	1,500
			TOTAL	42,700
Contingency (10%)				4,270
GRAND TOTAL				46,970

Appendix IV: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **879639**

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