

**EFFECT OF CORPORATE TAXES ON CAPITAL STRUCTURE
OF COMMERCIAL AND SERVICES FIRMS LISTED AT THE
NAIROBI SECURITIES EXCHANGE**

BY

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**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENT FOR THE DEGREE
OF MASTER OF SCIENCE IN FINANCE, SCHOOL OF
BUSINESS, UNIVERSITY OF NAIROBI**

NOVEMBER, 2018

DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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

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ACKNOWLEDGEMENT

First I am incredibly thankful to God for His guidance, provisions, many blessings and for enabling me to come this far. It is a lifetime achievement, honor, privilege and a great sense of personal satisfaction to finish this management research project.

I wish to recognize that I could not have started and completed this research successfully without the direction of my supervisor, Dr. Winnie Nyamute. Her advice, insightful criticisms, guidance and encouragement aided this whole study writing and completion of this management research report in innumerable ways.

Finally, I acknowledge my family, friends and colleagues who have been cheering me up and a constant source of inspiration and support throughout this research. My deep sense of thanks and gratitude to all those who supported me throughout the course of the study.

DEDICATION

This project is dedicated to my loving parents Mr. and Mrs. Nginges and Kanasa Lemein and my amazing elder brother Mark Maripet your prayers and support have brought me to this moment.

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LIST OF ABBREVIATIONS

AIMS	Alternative Investment Market Segment
ANOVA	Analysis of Variance
ETR	Effective Tax Rate
GDP	Gross Domestic Product
NSE	Nairobi Securities Exchange
ROA	Return on Assets
ROE	Return on Equities
SPSS	Statistical Package for Social Sciences
US	United States
VAT	Value Added Tax

ABSTRACT

Each and every company would want a capital structure which is best fitted to a situation which simultaneously brings about the minimization of capital cost and maximization of the value of the firm. An optimal capital structure selection is at all times a critical matter for every company. Although, in practice, it is almost impossible to establish a capital structure which is perfectly optimal since several variables which some are conflicting, affect capital structure. This study sought to determine the effect of corporate taxes on capital structure of commercial and service firms listed at the NSE. The population for the study was all the 11 commercial and service companies listed at NSE. The independent variables for the study were corporate taxes as measured by effective tax rate, liquidity of a firm as measured by the current ratio, firm size as measured by natural logarithm of total assets and profitability as measured by return on equity. Capital structure was the dependent variable and was measured by long term debt divided by long term debt plus equity. Secondary data was collected for a period of 5 years (January 2013 to December 2017) on an annual basis. The study employed a descriptive cross-sectional research design and a multiple linear regression model was used to analyze the relationship between the variables. Statistical package for social sciences version 22 was used for data analysis purposes. The results of the study produced R-square value of 0.471 which means that about 47.1 percent of the variation in capital structure of listed commercial and service firms at the NSE can be explained by the four selected independent variables while 52.9 percent in the variation of capital structure was associated with other factors not covered in this research. The study also found that the independent variables had a strong correlation with capital structure ($R=0.686$). ANOVA results show that the F statistic was significant at 5% level with a $p=0.000$. Therefore, the model was fit to explain the selected variables relationship. The results further revealed that firm size produced positive and statistically significant values for this study while liquidity produced negative but statistically significant values. Corporate taxes and liquidity were found to be insignificant determiners of capital structure. The study recommends that when firms are setting their capital structure they should pay keen attention to their liquidity levels and their firm sizes as they significantly influence capital structure.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The decision regarding the choice of debt, equity or a mix of the two stems from several factors such as the level of business risk, taxation regulation, economic conditions, the cost of capital as well as the firm's rate of growth (Huang & Song, 2006). According to Gordon and Linter (1962), use of debt has a benefit of tax saving that accrue to firms in form of tax -deductible interest while equity does not attract any tax benefit. Debt is likely to produce efficiency in firms by forcing management to optimize efficiency in conducting its operations (Jensen, 1984). Close supervision by lenders funds that are loanable to firms is another benefit of debt (Jensen & Meckling, 1976). Debt prevents the management from unwanted behavior through imprudent investments through discouraging excess investments (Servaes & Tufano, 2006).

Capital structure theories try to explain whether combination of debt and equity matters, and if it does, what might be the optimal capital structure. They include; the theory of Modigliani and Miller (1958) which proposed that the cost of obtaining capital is not linked to the type of funds that a company uses and there isn't any existence of an optimal capital structure, hence the firm's capital structure is not relevant or has no influence on the firm's value. The trade-off theory's suggestion is that for a firm to realize an optimal capital structure; there must be a tradeoff between benefits-costs of borrowing and equity financing (Jensen & Meckling, 1967). According to the pecking order theory, there exists an information asymmetry problem between the agents of a firm who are managers and shareholders who are the

owners, in order to reduce this problem firm will prefer to use funds generated internally as compared to external funds (Myers & Majluf, 1984).

The issuance of debt finance through the capital market in Kenya is becoming more and more common. Commercial and service firms listed at the NSE are accumulating massive debts in their capital structure as a way of raising fresh finance to funds operations and execute development projects through the capital market (Anyanzwa, 2015). The various sectors placed in categories by Nairobi Securities Exchange experience different economic conditions and business environments. However, regardless of the sector, the listed firms face the same corporate tax rate. Therefore, understanding whether the corporate tax rate affects the capital structure of the firms listed in the different segments of the NSE is of great importance. This current study will focus on commercial and service firms.

1.1.1 Corporate Taxes

Alworth and Arachi (2001) defined 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 included 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 (Hassert & Hubbard, 1976).

Majority of systems tax the domestic as well as the foreign corporations. Most of the time, foreign corporations are taxed only on income from sources within the jurisdiction whereas domestic corporations are taxed on worldwide income. Most jurisdictions which impose an income tax impose such tax on income from an establishment within the jurisdiction that is permanent. A corporation is also subject 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. They are different from corporate tax (Hasset & Hubbard, 1976). Corporation tax in Kenya is a form of income tax which is levied on companies. The taxes on resident companies are at a rate of 30 percent of the year end income, whereas the taxes on non - resident companies are at a rate of 37.5 percent of the year end income (Kenya Revenue Authority, 2017).

1.1.2 Capital Structure

According to Rehman (2013), capital structure is about how entities employ debt and equity as far as financing their assets is concerned. Capital structure is a financial

tactic which encompasses the utilization of additional borrowed funds (fixed-cost debt instruments) for maximization of the return on investment (Al-Otaibi, 2013). Capital structure gives an explanation of the relation between the funds of the owner and borrowed funds which constitutes the financing mix of a firm. It can also be defined as utilization of the funds of a third party in financing a firm that might result in an increase in taxes and operating profit (Barakat, 2014). Debt can take different forms including bond issuance or long term notes payables while shareholders equity might take the form of common stock which has no preference, preference shares and undistributed earnings (Harris & Raviv, 1991).

Debt finance has both the advantages and disadvantages in the growth of companies and expansion of the economy. Debt finance results to benefits such as tax shield and the diminution of free cash flow problems by enhancing managerial behavior while the expenses of debt financing include agency expenses and bankruptcy cost which results from the conflicts between shareholders and debt holders (Fama & French, 2002). Managers therefore, should try to balance these costs and benefits of debt when making debt capital decisions in order to improve performance (Kraus & Litzenberger, 1973).

Capital structure is measured using debt ratios. The debt ratios make comparison of the total debt with the total assets owned by the company. A low ratio indicates that a company depends less on debt while a high percentage indicates that a firm rely more on debt finance. Another measure of capital structure is the debt to aggregate capital ratio. Nevertheless, the widely preferred method of measuring capital structure as used by various researchers to compute capital structure in studies using capital

structure to predict different variables is the proportion of debt to equity (Abhor, 2005).

1.1.3 Corporate Taxes and Capital Structure

Modigliani and Miller (1958) and Miller (1977) state that within their perfect capital markets framework, such as the security exchange market, a permanently leveraged firm's value comes from adding the debt's corporate tax shield to the value of an identical but unleveraged firm. In an empirical manner, this proposition implies a corner solution because of the tax shield that adds up to the rate of corporate tax times the debt's market value. Nonetheless, Modigliani & Miller disregard the tax advantage as a reason for debt funding that is exhaustive due to different attributes that can't be considered within the static equilibrium models' framework for example agency conflicts between managers, creditors, and owners.

Corporate taxation and capital structure are inseparable concepts in the sense that firm profits' taxation apparently relies on the type of capital. This is to state that the difference in the taxation of equity funding relative to debt funding are expected to have an effect on the choices of capital structure. Regarding equity capital, the dividend taxation at the shareholder level and tax on corporate profit have to be taken into consideration. It is crucial to note that whereas corporate tax caused by the interest payment deductibility on debt exists; these interest payments are received in the form of income by investors. Interest that investors receive is taxed also on personal accounts that belong to them, and the income tax that is personal is negative. Tax, therefore, constitutes an important consideration when making capital structure financing decisions which may affect firm's value and share prices (Shay, Fleming & Peroni, 2002).

The decisions of capital structure might have an effect on the tax payments of companies, because the different finance sources are typically distinguished by corporate taxation. Payments of interest in general can be deducted from profits that are taxable whereas in the case of equity funding, such a deduction isn't available. Capital income taxation at the level of shareholder mostly also show the difference between the types of capital. Thus, the expectation could be that the relative tax benefits of finance sources, which are different, have an effect on decisions regarding financing. Theory gives the suggestion that income taxes on personal capital and tax on corporate profit should be put into consideration so as to reflect more accurately, on the tax consequences of the choices of capital structure (Peles & Sarnat, 1979).

1.1.4 Commercial and Services Firms Listed at the Nairobi Securities Exchange

The Nairobi Securities Exchange 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).

Commercial and service sector refers to a category of enterprises that provide services to commercial and retail customers. Some of the businesses listed under this category include expressly limited, Nation Media Group (NMG), Kenya Airways (KQ); Standard Group (SG), TPS Eastern Africa, Scan Group (SG), Uchumi Supermarket (US), Hutchings Biemer (HB), Longhorn Publishers (LP) and Atlas Development and Support services (ADSS) (NSE, 2018). Commercial and service industry is a major player in growth and development of the Kenyan economy through creation of employment opportunities, increasing the gross domestic product (GDP) and earnings from foreign exchange for the largest part of the post-independence period (UNCTAD, 2008). The contribution of these two sectors to the country's economy has been even larger, with a rise of 10 percent from 55 percent in 1980 to 65 per cent by 2006 in its share of total wage employment (CBK, 2014). The key contribution of the services segment to the Kenyan economy is very important to the trade balance. According to UNCTAD (2008), the annual export of services account for around 50% for period since 1980.

Due to the nature of their business, commercial and services firms listed at the NSE have a higher need for capital. A common method of raising finance in this sector is through debt or equity which is dominant in their capital structure. Although debt will give the commercial and service firms the tax shield benefit, there is also the risk of bankruptcy that is associated with high debt accumulation. Commercial and service firms should balance their need for tax shield benefit and the bankruptcy costs associated with too much debt.

1.2 Research Problem

Each and every company would want a capital structure which is best fitted to a situation which simultaneously brings about the minimization of capital cost and maximization of the value of the firm. An optimal capital structure selection is at all times a critical matter for every company. Although, in practice, it is almost impossible to establish a capital structure which is perfectly optimal since several variables which some are conflicting, affect capital structure. Literature gives the suggestion that a firm's debt requirements in one industry differs from a firm in another industry since different business environments are experienced in the various industries (Titman & Wessels, 1988).

The commercial and service firms in Kenya need a keen attention in order to make meaningful contribution to Kenya's economy. Capital structure is one of the factors expected to contribute to the performance of these firms and in essence their value. In the recent past, Kenya has experienced inability of some commercial and service firms to carry their activities properly and some of them ended up closing shop. Uchumi and Kenya Airways are two examples of firms in this sector that has been struggling and this study seeks to investigate whether corporate taxes has an impact on the capital structure of commercial as well as service firms in the Nairobi Securities Exchange listing. Although companies in different sectors are faced with differing factors, corporate taxes remain the same and therefore there is need to investigate whether capital structure of firms is influenced by corporate taxes.

Empirical evidence is largely inconsistent and quite varied on how capital structure is influenced by corporate taxes. Klapper and Tzioumis (2008) argue that though various impacts from corporate taxation in terms of financing choices, factor allocation and

investment patterns are predicted by economic models, little empirical evidence from the developing economies exists. This is reinforced by Panier, Pérez-González and Villanueva (2013) who clearly state that although there is near-universal agreement that taxation is relevant for corporate financing decisions, the empirical evidence linking corporate taxation and capital structure has been weak. Other studies however established a statistical connection that is more solid between capital structure choices and taxes. These studies include Graham (1999) and MacKie-Mason (1990).

Locally, the researcher came across three studies that relate corporate taxes with capital structure; Nyang'oro (2013) who uses a panel set of data for the periods 2003 to 2012, Kagoma (2015) who sampled 19 listed firms between 2005 and 2014 and Mutsotso (2007) who uses data for the periods 1990 – 2003. Most of the other studies on capital structure focus on the association between profitability and capital structure (Cheruiyot, Cheruiyot & Yegon, 2014; Gichangi, 2014; Kodongo, Mokoaleli-Mokoteli & Maina, 2014) and on the determinants of capital structure (Ayieye, 2004; Kosimbei, Muathe & Wamugo, 2014). Although all these studies provide useful insights on firms' capital structure, they leave a gap on the effect of corporate taxes on capital structure of commercial and service companies listed at the NSE. The current study intended to contribute to this area of research by answering the research question; what is the effect of corporate taxes on capital structure of commercial and service firms listed at the NSE?

1.3 Objectives of the Study

The objective of this study was to establish the effect of corporate taxes on capital structure of commercial and service firms listed at the NSE.

1.4 Value of the Study

The findings of this study will be used as a reference by scholars, students and researchers who might want to undertake studies in the same field. The study will also help both researchers and scholars in identifying research gap in this field which will prompt and guide them in executing further studies.

Value of this study is to the various managers who are tasked with the management of commercial and services companies listed at the NSE; this study provides useful information and recommendations to assist them in making more informed management decisions leading to shareholders' wealth maximization. The study increases the pool of knowledge available to assist both commercial and services firms and other firms seeking to improve their efficiency and ensure sustainability.

The outcome of this study will also aid the various regulatory agencies such as CMA and NSE. when developing legislation and regulatory framework around companies' capital structure decisions. The regulators will thus consider this study as they formulate policies that will create a favorable environment for investors.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter reviews theories that form the foundation of this study. In addition, previous empirical studies that have been carried before on this research topic and related areas are also discussed. The other sections of this chapter include determinants of capital structure, conceptual framework showing the relationship between study variables and a literature review summary.

2.2 Theoretical Framework

This section reviews the relevant theories that explain the associations between corporate taxes and capital structure. Theoretical reviews covered include; Modigliani and Miller model, trade-off theory, the pecking order theory, and the agency theory.

2.2.1 Modigliani and Miller Model

According to Modigliani and Miller (1958), a company's capital structure is immaterial to the company's worth, supposing faultless markets and zero business deal charges. Modigliani and Miller (1963) presented the influence of business

revenue levies on the company's capital structure of a company and established that companies will upsurge their use of debt to exploit the duty deductibility of interest. Though, greater debt funding upsurges the likelihood of insolvency. Market symmetry must be real in which the value of using debt- financing equals increased peril of insolvency owing to the great leverage of companies. This was supported by Staking and Babbel (1995) who argued that they concurred with the hypothesis made by Modigliani and Miller.

Modigliani and Miller (1963) revised their previous opinion through integrating duty welfares as causes of the capital structure of companies. Important feature of tax policy is that interest is a tax- deductible outlay. Company which remits duties obtains partly counterweighing interest duty- shield in the form of smaller levies remitted. Consequently, as Modigliani and Miller (1963) propose, companies ought to expenditure equally considerable debt capital as possible acceptable to exploit their worth. Alongside with company tax policy, scholars were also concerned in investigating the situation of individual duties levied on persons.

2.2.2 Pecking Order Theory

According to this theory, advanced by Majluf and Myers (1984), no predefined optimal capital structure exists but instead asserts that, firms displays different preference for utilizing internal funds or retained earnings over external capital. It is the one of the most significant theories of company leverage and goes against the firm's idea of having distinctive combination of equity and debt finance, which minimizes the corporation costs of funds. It suggests that the firm should follow a well-specified order of priority with regard to financing sources to minimize its information asymmetry costs, first choosing retained earnings, debt and finally raising

equity as a last option. It advocates for retained earnings to be used first in funding long-term projects and when they are exhausted or not available, then debt is issued; and when it is insufficient or not available, equity is issued (Myers, 1984).

The explanation of the pecking order stems from the existence of the information asymmetry where managers are presumed to understand more about their company risk, prospects and project value than external investors including capital markets. According to Myers and Majluf (1984), investors place low value on the company stock because of the inability of managers to convey information on the company prospects including the new investment opportunities identified. This in turn makes managers who are believed to be at the core of company information to finance their project using readily available retained earnings. If the retained earnings are insufficient, managers will choose debt capital in preference to issuing equity shares as they are undervalued in capital markets. The asymmetric information effect therefore favors the utilization of debt over equity and shows management confidence that the newly identified investment opportunity is profitable and the current share price is underpriced (Majluf & Myers, 1984).

2.2.3 Trade-Off Theory

This theory was proposed by Myers (1984). This theory holds that, every firm has its optimal capital structure, which can be determined drawing equilibrium between the costs and benefits of equity. As a result, a firm decides on how much debt capital and equity capital to include in their capital structure by comparing the costs and benefits derived from either source. Debt capital yields benefits such as tax shield though high debt levels in the capital structure can result to agency and bankruptcy expenses. Jensen and Meckling (1976) argue that agency expenses are brought about by

divergence of interest among the different firm stakeholders and because information asymmetry.

Thus, including cost of agency into the trade-off theory signifies that a corporation ascertains its optimal financial structure by balancing the benefit of debt (the debt tax advantage) against expenses of excessive debt (financial distress) and the resultant equity agency expenses against debt agency costs. The theory further asserts that, as a firm increases debt in their capital structure, the marginal cost associated with debt increases while the marginal benefits associated with debt decrease until an optimal point is reached. Beyond that point, the marginal costs of debt exceed the marginal benefits resulting in reduced firm value. In this regard, the firm should set an optimal financial structure in order to enhance its stock returns (Jensen & Meckling, 1976).

According to Myers (1984), firms with more tangible assets should exhibit higher debt ratios while firms possessing more intangible assets should depend more on equity capital because they are subject to loss of value in case of liquidation. Under this theory, firms should evaluate the various costs and benefits of each debt level and determine an optimal debt structure that balances the incremental costs and incremental benefits (debt tax shields against costs of bankruptcy). This further explains why firms are partly financed by equity and also partly financed by debt in their capital structure.

2.2.4 Agency Theory

The theory of agency exists when the principal is unable to do the business and thus delegates this responsibility to the agent (Jensen & Meckling, 1976). The issue of agency arises when there is a contradiction between the goals and desires of the principal and the agent. The principal incurs a lot of costs in the process of monitoring the

actions of the agent so as to ascertain whether the agents is working as per is interests and adequately serving is interests. The agency theory therefore offers a solution to the problems between the agent and the principle so as to offer lasting associations between them (Itiri, 2014). This concept is leans on the notion that the Executives interests and shareholders aren't perfectly affiliated in a manner that allows for easy attainment of the organizational goals. The theory is highly applicable in solving the issues between the managers and shareholders in making financial decisions (Aliu, 2010).

The Agency theory suggests that managers (agents) prefer to maintain huge cash flows despite lack of profitable investments so as to use the funds to serve their own interests (Calabrese, 2011). The agency theory explains that capital structure decisions must seek to reduce the agency costs by reducing capital structure equity. This is done be increasing the debt financing which increases the firm's market value as well as reducing the conflicts that may exist between managers of a firm and shareholders.

Agency theory suggests that debt is used as a tool to control the manager since with debt financing; managers will be forced to focus on using the free cash flows to service the debt other than trying to invest the funds in some unprofitable projects (Calabrese, 2011). The theory is founded on the notion that manager's behavior can be controlled by debt financing since the managers will adopt the free cash flow to interest payment of the debt obtain to finance the firm's investment projects. Thus, the theory of agency supports the use of debt to improve the firm's financial performance (Mwangi, Muturi & Ngumi, 2016).

2.3 Determinants of Capital Structure

Scholarly studies have demonstrated that the long term financial structures are distinct from industry to industry and even within organizations that make up an industry due to certain organization characteristics. The characteristics of organizations are crucial in influencing the capital mix choices of an organization. The study has included prevalent organization characteristics that are common from earlier research as follows: corporate taxes; profitability; organization's size and liquidity. In the following paragraphs, the researcher will discuss these organization characteristics in details.

2.3.1 Corporate Taxes

Corporate taxation and capital structure are inseparable concepts in the sense that a company profits' taxation apparently is dependent on the type of capital. This is to state that the difference in the taxation of equity funding relative to debt funding are expected to have an effect on the choices of capital structure. Regarding equity capital, the dividend taxation at the level of shareholder and tax on corporate profit have to be put into consideration. It is crucial noting that whereas corporate tax coming from the interest payment deductibility on debt exists; these interest payments are received as income by investors. Interest that the investors receive is taxable on personal accounts that belong to them, and the tax on personal income is negative. Tax, therefore, constitutes an important consideration when making capital structure financing decisions which may affect firm's value and share prices (Shay, Fleming & Peroni, 2002).

According to Overesch and Voeller (2008), the fact that dividends and interest payments are taxed in a different way at the company level, this could cause unequal

treatment of equity and debt that is effective. Nevertheless, the presence of market imperfections for example agency conflicts, transaction costs, asymmetric information and taxation, makes it worthwhile for organization's to invest resources and devote time to financing decisions. More so, on differential tax treatment of debt and equity as it makes the capital structure changes adopted by a firm relevant to stakeholders (Sivarama & Moyer, 1996).

2.3.2 Liquidity

Liquidity of an organization is another determinant of the capital mix decisions in an organization. This is basically the ease with which an organization services its short-term obligations. It also refers to how easily an organization can liquidate its assets into cash (Vries, 2012). As with the other determinants of capital structure, two opposing views exist in describing the correlation between liquidity and the organizations' capital combination. In the trade off theory, the debt level that an organization holds is positively correlated to how liquid the organization is. Organizations that are not liquid encounter a lot of restrictions in attracting financing in form of debt because their bankruptcy costs are high (Degyrse, 2010).

Conversely, other empirical studies have shown that highly liquid organizations tend to borrow less and therefore the association between the liquidity of an organization and level of debt is negative. This observation lends support to the pecking order theory which predicts that an organization would utilize its reserves that were generated internally first before borrowing debt and finally before issuing equity. Studies that have previously been conducted and reveal the negative relationship are by Aggrawal & Nagarajan (1990), Eriotis et al., (2007) and Rao et al., (2007).

2.3.3 Profitability

As suggested by Myers and Majluf (1984), pecking order theory is key in the determination of association between capital structure and profitability of the company. Pecking order theory suggests that firm systematical follows a hierarchy in financing. Due to information asymmetry in the market, floating security with which outsider investor is unaware is costly. This forces the firm to find internal financing being cheaper option. Due to the fact that holder of debt receive revenue that is constant and high from interest payment that causes them to have higher stake in firm asset than the owners this causes them to have less information asymmetry than owners. Therefore when making decision on source of funds to fund their investment project, firms prefer more of internal finances to debt and debt more as compared to equity.

The financing hierarchy of pecking order hypothesis states that that profitable company will decreases their debt to equity ratio as they will mainly meet their funding needs through internal funding's. Company with rich cash flows seems to suffer from the agency problem which was argued by Jensen (1986). Management sometimes gets their own benefits through creation of conflict of interest between the owners and the management. This results in disciplining the management by increasing debt to equity ratio, which seems to put a limit to usage or perquisites. This results to an inverse association between capital structure and financial performance. Titman and Wessels (1988) as well as Rajan and Zingales (1995) revealed an inverse association between capital structure and firms financial performance.

2.3.4 Firm Size

Empirical evidence supports the existence of negative association between cost of bankruptcy as part of value of the firm and value of the firm itself (Ang et al., 1982). They further argue that as the firm value reduce, the direct cost of bankruptcy takes a large portion of its value. Big firms are more diversified and they therefore experience a lower risk of the cost of bankruptcy (Titman & Wessels, 1988). Trade off theory argues that large firms that are more levered experience low financial distress cost. Rajan and Zingales (1995) established that capital structure is positively related to size of the company as seen by survey of all the G-7 nations, except Germany, which exhibited a negative association. Deloof and Verschueren (1998) from this study revealed that company size had a positive relationship with capital structure, However this association did not hold when short term debt only were considered.

However, some empirical studies have established that with increasing information asymmetries, small firm experience high cost of issuing share (Smith, 1977). Rajan and Zingales (1995) propose that asymmetry in information exist amongst management and external investor in capital markets is less in larger companies, which results in then cost of share being lower for large companies which make it make more used method of financing for large companies. When making choices on the source of external financing issuance cost is another key factor. Small companies are deterred by these costs in to taping the equity market (Schoubben & Hulle, 2004). Small companies results into issuing debt so as to reduce the cost of issuance. The tradeoff theory suggests a negative association between firm size and capital structure.

2.4 Empirical Review

Several empirical studies are available both locally and internationally on capital structure but most of these studies have either focused on its effect on financial performance or stock returns leaving a gap on the effect of corporate taxes on capital structure.

2.4.1 Global Studies

Booth et al., (2001) did an examination on data from ten developing nations to establish if the theories of capital structure are portable across nations with institutional structures that are different. This study undertook an investigation to determine if the stylized facts, that were observed from the developed countries' studies, could be applied only to these markets or if they have more general applicability. The findings are somewhat skeptical of this premise. Evidence that the companies' choices of capital structure in developing nations are impacted by similar variables as they are in developed nations came up. Also, differences of institutional structure which are persistence across nations showing that specific nation factors are at work exist. The study's findings give the suggestion that though some theory of modern finance insights are portable across nations, a lot still needs to be done for the understanding of the effect of different institutional choices.

Omet and Mashharawe (2002) did an examination on the nature and determinants of capital structure choice of non-financial companies quoted in Saudi, Kuwait, Jordan and Omani from the duration of 1996-2001. To test the study's panel regression model, random effects model, the fixed effects model as well as pooled ordinary least squares were employed. Their results show that Saudi Arabian, Kuwaiti, Jordanian and Omani firms have leverage ratios that are low. Also, the results indicate that

Jordanian firms hold the lowest mean value of long-term debt and is surprising since the tax rate they are subjected to is the highest.

Using Classical Linear Regression Model, Fama and French (2002) were able to show that leverage is an increasing function of the size of public companies. The study employed cross-section regressions testing what the tradeoff model, the pecking order model, and models which focus on market conditions predicted. Specifically, this study examines new outside funding split between debt and share issues, new debt funding split between long-term and short-term, and new equity funding split between retained earnings and share issues. This study's findings reveal that short-term debt targets seem to affect the mix of short term versus long term debt choices of smaller companies, although this targeting impact is weak to non-existent for large companies. Further, those dividends that are sticky plague the pecking order and market conditions models' predictions regarding the equity funding split between retained earnings and share issues.

Tesfaye (2012) developed a dynamic partial adjustment model which made the joint estimation of adjustment speed of basic capital structure and its determinants possible. The results from system-GMM dynamic panel data estimation procedure showed that firms in Africa not only adjust their basic capital structure to a target though they face degrees of adjustment costs and or benefits that vary when they undertake that. The study further reveals that the costs and or benefits extent that companies in Africa experience in adjusting their basic capital structure is established, inter alia, by factors that are firm-specific for example firm size, profitability, growth opportunities and the gap between target and observed capital structure.

In a study in the US, Longstaff and Strebulaev (2014) focus on the relation between leverage and corporate tax rates using an extensive data. Further the study evaluates the effects of a much broader set of policy change on the capital structure. Specifically, the data set was constructed from an Internal Revenue Service (IRS) database of all corporate income tax returns filed in the United States from 1926 to 2009. By using nearly a century of capital structure data, the study provides answers about the time series effects of tax rate changes on corporate leverage for firms of all sizes. The study results show the existence of a strong relationship between capital structure and taxes. The relationship is such that a change in tax rate is related in increase in corporate leverage. The study also finds that only large firms are responsive to a change in tax rates over a short duration while medium-sized companies exhibit higher leverage with a lag, and leverage ratios of small firms don't have a relation to the time series variation in tax rates.

2.4.2 Local Studies

Nyangoro (2003) studied the determinants of capital structure. He used conditional quartile regression in analyzing the debt ratios' distributional differences across companies in different quartiles. He concluded that some variables affect capital structure, for example, firm size increase causes the shift of firms from long-term to short-term debt, whereas firm size causes a firm to shift from short-term to long-term debt. Tax effect on capital structure shows significance only at lower quartiles and only for total debt ratios. Companies at higher debt quartiles employ tax shields that are non-debt instead of tax rate to establish their capital structure.

Mutsotso (2007) further conducted a study on the effect of the corporate tax rate on the capital structure of firms listed at the Nairobi Securities Exchange. The study puts

forward evidence of effect of tax that is substantial on the choice between equity and debt. The study had a conclusion that a change in the marginal tax rate for any company should impact the decisions of financing. Firms with higher tax shield are less likely to finance with debt because tax shields lower the effective marginal tax rate on interest deduction. The study further gives the confirmation that any tax advantage to debt might be small and therefore hold a weak association between firms' tax burden and debt usage.

Ngugi (2008) put the determinants of capital structure of companies listed in the NSE, and he focuses on if the companies target their capital structure or follow a hierarchical behavior, but with no specific focus on the effect of corporate tax on capital structure. This study's finding that companies observe a target debt ratio for minimization of the debt costs also has a possibility that these companies may also be exploiting the tax benefits in their financing decisions. This study didn't establish any significant impact of tax on capital structure on firms in Kenya.

Muema (2013) analysed the determinants of capital structure from one industry to another for listed companies at the NSE. Data required for the study was for five years between 2008 and 2012 was collected from NSE and CMA for the purpose of the study. Unlevered companies were excluded from this study. In addition, short term debt was excluded from the study. The factors which were tested included; profitability, growth of the organization, tangibility of the assets, liquidity, size & non-debt tax shields. Multiple regression analysis was conducted on the data. Capital structure determinants were found to be different for the various market segments. Therefore, the organizations' industry of operation was found to significantly affect the long term financial structure; hence capital combinations of similar organizations

in the industry should be considered because it might reflect the unique risks inherent in that industry.

Kagoma (2015) sought to establish the impacts of corporate tax on the capital structure of companies listed in Nairobi Stock Exchange (NSE). This study adopted an explanatory research design. This study's population consisted of all the 62 companies listed in the Nairobi Stock Exchange (NSE). The target population was composed of 19 non-financial firms listed in the NSE as at 31st December 2014. Data analysis was done by use of descriptive statistics, correlation analysis as well as regression analysis. This study found out that a significantly positive association existed between effective tax rate and capital structure of companies listed in the NSE. It also found that a unit increase in effective tax rate cause an increase in capital structure of firms listed in the NSE.

2.5 Conceptual Framework

Corporate taxation and capital structure are inseparable concepts in the sense that company profits' taxation apparently depends on the type of capital. This is to state that the difference in the taxation of equity funding relative to debt funding are expected to have an effect on the choices of capital structure. Regarding equity capital, the dividend taxation at the level of shareholder and tax on corporate profit have to be put into consideration. It is crucial noting that whereas corporate tax coming from the interest payment deductibility on debt exists; these interest payments are received as income by investors. Interest that the investors receive is taxable on personal accounts that belong to them, and the tax on personal income is negative. Tax, therefore, constitutes an important consideration when making capital structure

financing decisions which may affect firm's value and share prices (Shay, Fleming & Peroni, 2002).

The current study seeks to investigate whether this relationship holds. The independent variable for this study will be corporate taxes as measured by ratio of actual tax paid as reported in the cash flow statement and earnings of the company. The control variables will be profitability as measured by return on equity, firm size as measured by natural logarithm of total assets and liquidity of a firm as measured by the current ratio. Capital structure as measured by the debt ratio will be the dependent variable.

Independent variable

Dependent variable

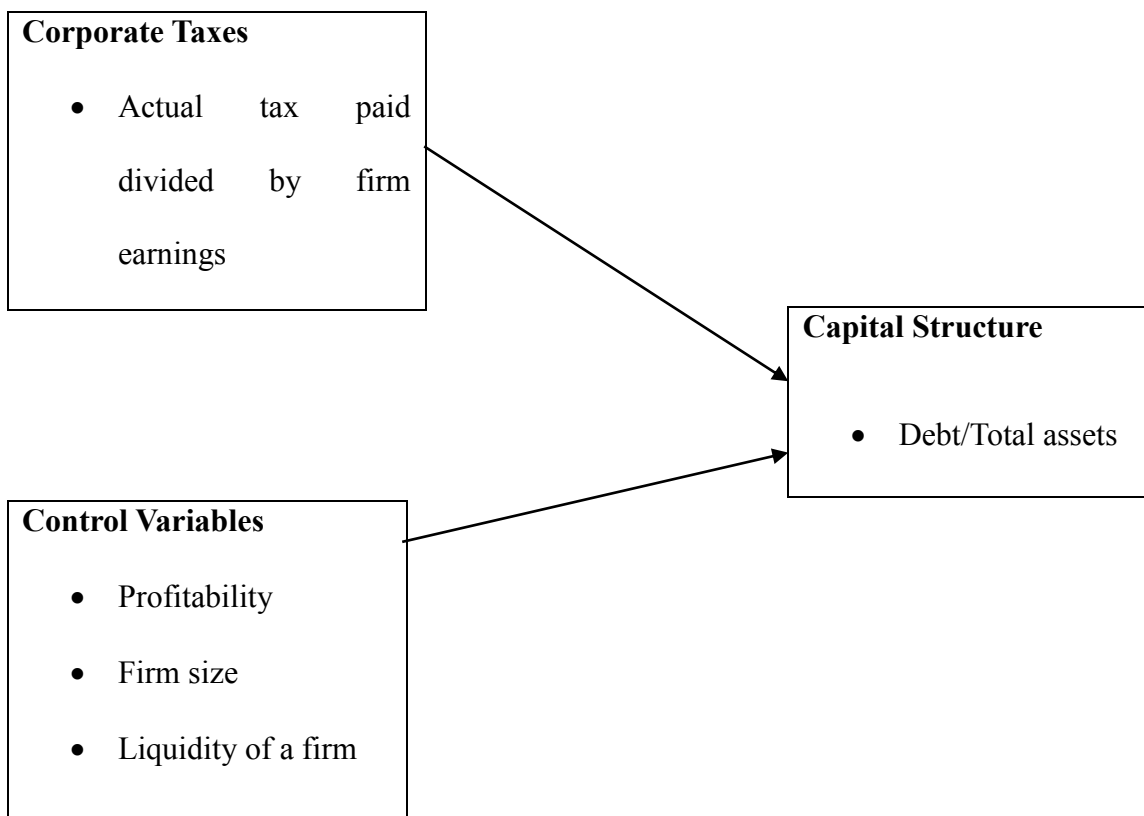


Figure 2.: The Conceptual Model

Source: Author (2018)

2.6 Summary of the Literature Review

Various theoretical frameworks have attempted to elaborate on the capital structure concept. A discussion of four theories has been undertaken in this theoretical review. These theories include: Pecking order theory, Modigliani and Miller model, the trade-off theory and the agency theory. Several empirical studies have been carried out both internationally as well as locally on the four objectives of this study. These studies' findings have also been discussed in this chapter.

However, the empirical evidence gives mixed reaction. Of importance to this study is that there is an extensive empirical literature on the effect of corporate capital structure but not on the effects of these determinants on the capital structure. Although many of the studies are in agreement that taxation plays a key role in the capital structure of corporate, very few studies which examine the impacts of corporate tax on the choice of capital structure in an explicit manner exist (a point which Stewart Myers noted during his presidential address to the American Finance Association (AMA) (Myers, 1984). At the same time, most of the studies that model the debt structure's cross-sectional behavior don't even include an explicit measure of the effect of tax. In addition, none of the local studies have tried to determine the effect of corporate taxes on capital structure of commercial and service firms listed at the NSE. The current study intended to fill this research gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

To determine the effect of corporate taxes on capital structure of listed commercial and service firms, a research methodology is necessary to outline how the research was carried out. This chapter has four sections namely; research design, data collection, diagnostic tests and data analysis.

3.2 Research Design

A descriptive cross-sectional research design was employed in this study to determine the relationship between corporate taxes and capital structure of commercial and services firms listed at the NSE. Descriptive design was utilized as the researcher was interested in finding out the state of affairs as they exist (Khan, 2008). This research design was appropriate for the study as the researcher is familiar with the phenomenon under investigation but want to know more in terms of the nature of associations between the study variables. In addition, a descriptive research aims at providing a valid and accurate representation of the study variables and this helps in responding to the research question (Cooper & Schindler, 2008).

3.3 Population

According to Burns and Burns (2008), population refers to the characters of interest upon which the study seeks to draw deductions. The population of the study comprised of all the 11 listed commercial and service firms as at 31st December 2017.

3.4 Data Collection

Data was exclusively collected from a secondary source. It is always a regulatory requirement for firms listed at the NSE to report their values annually to the Capital Markets Authority. The secondary data was obtained solely from the published annual financial reports of the listed commercial and service firms for the period contained from January 2013 to December 2017 on an annual basis and were captured in a data collection sheet. The end result will be information detailing corporate taxes and capital structure on an annual basis. The specific data that was collected was firms', net income; total taxes paid, total assets, revenue, current assets, current liabilities, total liabilities and equity.

3.5 Data Analysis

The data collected from the different sources was organized in a manner that can help address the research objective. Statistical Package for Social Sciences version 22 was used for data analysis purposes. Both descriptive and inferential statistics were carried out. In descriptive statistics, the minimum, maximum, mean, standard deviation, skewness and kurtosis were computed for each variable. In inferential statistics, both regression and correlation analysis were carried out. Correlation analysis involved determining the extent of relationship between the study variables while regression analysis involved establishing the cause and effect between the dependent variable (capital structure) and each of the independent variables: corporate taxes, profitability, firm size and liquidity.

3.5.1 Diagnostic Tests

Linearity uses the mathematical equation $Y=c+bX$ where c is a constant to show the association between variable X and Y . The linearity test was obtained through the

scatterplot testing or F-statistic in ANOVA. Stationarity test is a process where the statistical properties such as mean, autocorrelation and variance structure do not change with time. Stationarity was obtained from the run sequence plot. Normality is a test for the assumption that the residual of the response variable are normally distributed around the mean. This was determined by Shapiro-walk test or Kolmogorov-Smirnov test. Autocorrelation is the measurement of the similarity between a certain time series and a lagged value of the same time series over successive time intervals. It was tested using Durbin-Watson statistic (Khan, 2008).

Multicollinearity is said to occur when there is a nearly exact or exact linear correlation among two or more of the independent variables. This was tested by the determinant of the correlation matrices, which varies from zero to one. Orthogonal independent variable is an indication that the determinant is one while it is zero if there is absolute linear dependence between them and as it approaches to zero then the multicollinearity becomes more intense. Variance Inflation Factors (VIF) and tolerance levels were also carried out to show the degree of multicollinearity (Burns & Burns, 2008).

3.5.2 Analytical Model

Using the collected data, the researcher conducted a regression analysis to establish the extent of the relationship between corporate taxes and capital structure. The study applied the following regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon.$$

Where: Y = Capital structure as measured by debt to equity ratio on an annual basis

β_0 = y intercept of the regression equation.

$\beta_1, \beta_2, \beta_3$ and β_4 = are the slope of the regression

X_1 = Firm's effective tax rate measured as the ratio of actual tax paid as reported in the cash flow statement and earnings of the firm on an annual basis

X_2 = Profitability as measured by return on equity on an annual basis

X_3 = Firm size as measured by natural logarithm of total assets on an annual basis

X_4 = Liquidity of the firm as measured by the ratio of current assets to current liabilities on an annual basis

ε =error term

3.5.3 Tests of Significance

The researcher carried out parametric tests to establish the statistical significance of both the overall model and individual parameters. The F-test was employed to establish the significance of the overall model and it was obtained from Analysis of Variance (ANOVA) while a t-test was employed to establish statistical significance of individual variables.

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND INTERPRETATION

4.1 Introduction

This section represents study's findings established on the objectives of research. This chapter focused on collected data analysis from CMA to determine the impact of corporate taxes on capital structure of commercial and service firms quoted at the NSE. Using descriptive statistics, correlation analysis and regression analysis, the results of the study were presented in form of tables for easy interpretation.

4.2 Diagnostic Tests

The researcher carried out diagnostic tests on the collected data. A test of Multicollinearity was undertaken. Tolerance of the variable and the VIF value were used where values more than 0.2 for Tolerance and values less than 10 for VIF means that there is no Multicollinearity. For multiple regressions to be applicable there should not be strong relationship among variables. From the findings, the all the variables had a tolerance values >0.2 and VIF values <10 as shown in table 4.1 indicating that no Multicollinearity exists among the independent variables.

Table 4.: Multicollinearity Test for Tolerance and VIF

Variable	Collinearity Statistics	
	Tolerance	VIF
Corporate taxes	0.310	1.326
Profitability	0.380	1.367
Firm size	0.706	1.417
Liquidity	0.503	1.99

Source: Research Findings (2018)

Shapiro-walk test and Kolmogorov-Smirnov test was used in normality test. The null hypothesis for the test was that the secondary data was not normal. If the p-value recorded was more than 0.05, the researcher would reject it. The test findings are as illustrated in table 4.2.

Table 4.: Normality Test

Capital structure	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Corporate taxes	.149	55	.300	.857	55	.853
Profitability	.156	55	.300	.906	55	.822
Firm size	.172	55	.300	.869	55	.723
Liquidity	.165	55	.300	.880	55	.784
a. Lilliefors Significance Correction						

Source: Research Findings (2018)

Both Kolmogorov-Smirnova and Shapiro-Wilk tests recorded o-values greater than 0.05 implying that the data used in research was distributed normally and therefore the null hypothesis was rejected. This data was therefore appropriate for use to conduct parametric tests such as Pearson’s correlation, regression analysis and analysis of variance.

Autocorrelation tests were executed so as to check for correlation of error terms across time periods. Autocorrelation was tested using the Durbin Watson test. A

durbin-watson statistic of 1.778 indicated that the variable residuals were not serially correlated since the value was within the acceptable range of between 1.5 and 2.5.

Table 4.: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.686 ^a	.471	.429	.202602	1.778

a. Predictors: (Constant), Liquidity, Firm size, Corporate Taxes,

Profitability

b. Dependent Variable: Capital structure

Source: Research Findings (2018)

4.3 Descriptive Analysis

Descriptive statistics gives a presentation of the mean, maximum and minimum values of variables applied together with their standard deviations in this study. Table 4.4 below shows the descriptive statistics for the variables applied for the research. An analysis of all the variables was obtained using SPSS software for the period of five years (2013 to 2017) on an annual basis. Capital structure had 0.4464 as mean with a 0.2681 standard deviation. Corporate taxes had a 0.2004 mean and 0.1632 standard deviation. Profitability resulted to 0.0482 mean with a 0.1522 standard deviation. Firm size had a mean of 14.9361 and a standard deviation of 3.0711 while liquidity recorded a 1.9051 mean with a 1.8762 standard deviation.

Table 4.: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Capital structure	55	.000	1.020	.44636	.268089
Corporate Taxes	55	.000	.549	.20040	.163190
Profitability	55	-.280	.390	.04818	.152224
Firm size	55	8.574	18.020	14.93605	3.071149
Liquidity	55	.110	10.090	1.90509	1.876194
Valid N (listwise)	55				

Source: Research Findings (2018)

4.4 Correlation Analysis

Correlation analysis are used to test whether a relationship exists between two variables and often range between (-) strong negative correlation and (+) perfect positive correlation. The study employed the Pearson correlation to analyze the level of correlation between the capital structure of service and commercial firms quoted at the NSE and the independent variables for this study (corporate taxes, profitability, firm size and liquidity).

The study found out that there was a negative and statistically insignificant correlation ($r = -.145$, $p = .290$) between corporate taxes and capital structure. The study further established that a negative and significant correlation exists between liquidity and capital structure of quoted commercial and service firms as evidenced by ($r = -.599$, $p = .000$). Firm size was found to have a weak positive and significant association with

capital structure as evidenced by ($r = .373, p = .005$). Profitability was found to have an insignificant correlation with capital structure as evidenced by ($r = -.124, p = .367$).

Table 4.: Correlation Analysis

		Capital structure	Corporate Taxes	Profitability	Firm size	Liquidity
Capital structure	Pearson Correlation	1	-.145	-.124	.373**	-.599**
	Sig. (2-tailed)		.290	.367	.005	.000
	N	55	55	55	55	55
Corporate Taxes	Pearson Correlation	-.145	1	.081	-.221	.174
	Sig. (2-tailed)	.290		.558	.105	.205
	N	55	55	55	55	55
Profitability	Pearson Correlation	-.124	.081	1	.382**	.365**
	Sig. (2-tailed)	.367	.558		.004	.006
	N	55	55	55	55	55
Firm size	Pearson Correlation	.373**	-.221	.382**	1	-.074
	Sig. (2-tailed)	.005	.105	.004		.590
	N	55	55	55	55	55
Liquidity	Pearson Correlation	-.599**	.174	.365**	-.074	1
	Sig. (2-tailed)	.000	.205	.006	.590	
	N	55	55	55	55	55

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

Source: Research Findings (2018)

4.6 Regression Analysis

Capital structure of commercial and service companies listed at the NSE was regressed against four predictor variables; corporate taxes, profitability, firm size and liquidity. The regression analysis was executed at 5% significance level. The study obtained the model summary statistics as illustrated in table 4.6 below.

Table 4.: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.686 ^a	.471	.429	.202602	1.778

a. Predictors: (Constant), Liquidity, Firm size, Corporate Taxes, Profitability

b. Dependent Variable: Capital structure

Source: Research Findings (2018)

R squared is the coefficient of determination and depicts the variations in the response variable that is brought about by the changes in the predictor variables. From the outcome in table 4.6 above, the value of R square was 0.471, a discovery that 47.1 percent of the deviations in capital structure of commercial and service firms quoted at the NSE are caused by changes in corporate taxes, liquidity, firm size and profitability of the firms. Other variables not included in the model justify for 52.9 percent of the variations in capital structure of service and commercial firms quoted at the NSE. Also, the results revealed that there exists a strong relationship among the selected independent variables and the capital structure of commercial and service companies listed at the NSE as shown by the correlation coefficient (R) equal to 0.686.

Table 4.: Analysis of Variance

Model	Sum of Squares	Df	Mean Square	F	Sig.
1 Regression	1.829	4	.457	11.138	.000 ^b
Residual	2.052	50	.041		
Total	3.881	54			

a. Dependent Variable: Capital structure

b. Predictors: (Constant), Liquidity, Firm size, Corporate Taxes, Profitability

Source: Research findings (2018)

The significance value is 0.000 which is less than $p=0.05$. This implies that the model was statistically significant in predicting how corporate taxes, liquidity, firm size and profitability affects capital structure of commercial and service companies listed at the NSE.

The researcher used t-test to determine the significance of each individual variable used in this study as a predictor of capital structure of commercial and service firms listed at the NSE. The p-value under sig. column was used as an indicator of the significance of the association between the dependent and the independent variables. At 95% level of confidence, a p-value of less than 0.05 was interpreted as a statistical significance measure. As such, a p-value above 0.05 shows a statistically insignificant association between the dependent and the independent variables. The findings are as indicated in table 4.8.

Table 4.: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.117	.172		.678	.501
Corporate Taxes	.060	.177	.037	.340	.735
Profitability	-.111	.219	-.063	-.508	.614
Firm size	.032	.010	.364	3.069	.003
Liquidity	-.079	.016	-.556	-4.851	.000

a. Dependent Variable: Capital structure

Source: Research Findings (2018)

From the above results, it is evident that liquidity produced negative and statistically significant values for this study (high t-value (-4.851), $p < 0.05$) while firm size produced positive and statistically significant values for this study as shown by a p value less than 0.05. Corporate taxes produced positive but statistically insignificant values for this study as shown by a p value that was more than 5% while profitability produced negative but insignificant values for this study as shown by a high p value.

The following regression equation was estimated:

$$Y = 0.117 + 0.032X_1 - 0.079X_2$$

Where,

Y = Capital structure

X_1 = Firm size

X_2 = Firm liquidity

On the estimated regression model above, the constant = 0.117 shows that if selected dependent variables (corporate taxes, profitability, firm size and liquidity) were rated zero, commercial and service firms' capital structure quoted at the NSE would be 0.117. A unit increase in firm size would result to an increase in capital structure of commercial and service companies listed at the NSE by 0.032. A unit increase in liquidity would result to a decrease in capital structure of commercial and service firms quoted at the NSE by 0.079 while a unit increase in profitability and corporate taxes would not have a significant effect on capital structure of commercial and service companies listed at the NSE.

4.7 Discussion of Research Findings

The research purposed to explore the effect of corporate taxes on capital structure of commercial and service firms quoted at the NSE. Corporate taxes as measured by ratio of tax paid to corporate earnings, profitability as measured by return on equity, liquidity as measured by current ratio and firm size as measured by the natural logarithm of total assets were the independent variables while capital structure of commercial and service companies listed at the NSE as measured by debt ratio on an annual basis was the dependent variable. The effect of each of the independent variable on the dependent variable was analyzed in terms of strength and direction.

The Pearson correlation coefficients between the variables revealed that a strong negative correlation exists between liquidity and capital structure of service and commercial firms quoted at the NSE. The association between firm size and capital structure of commercial and service firms quoted at the NSE was found to be weak

and negative. The study also showed that there exist a weak negative association between corporate taxes and capital structure of commercial and service firms quoted at the NSE while profitability was found to have a weak and insignificant negative relationship with capital structure of service and commercial companies listed at the NSE.

The model summary revealed that the independent variables: corporate taxes, firm size, liquidity and profitability explains 47.1% of variation in the dependent variable as depicted by an R^2 value implying that other factors were not included in the model that account for 52.9% of changes capital structure of service and commercial companies listed at the NSE. The model is fit at 95% confidence level as the F-value was 11.138. Therefore, the overall multiple regression model is statistically significant and suitable in predicting how the independent variables selected affects capital structure of commercial and service firms quoted at the NSE.

The findings of this study are in line with Tesfaye (2012) who developed a dynamic partial adjustment model which made the joint estimation of adjustment speed of basic capital structure and its determinants possible. The results from system-GMM dynamic panel data estimation procedure showed that firms in Africa not only adjust their basic capital structure to a target though they face degrees of adjustment costs and or benefits that vary when they undertake that. The study further reveals that the costs and or benefits extent that companies in Africa experience in adjusting their basic capital structure is established, inter alia, by factors that are firm-specific for example firm size, profitability, growth opportunities and the gap between target and observed capital structure.

This study is in agreement with Ngugi (2008) who put the determinants of capital

structure of companies listed in the NSE, and he focuses on if the companies target their capital structure or follow a hierarchical behavior, but with no specific focus on the effect of corporate tax on capital structure. This study's finding that companies observe a target debt ratio for minimization of the debt costs also has a possibility that these companies may also be exploiting the tax benefits in their financing decisions. This study didn't establish any significant impact of tax on capital structure on firms in Kenya.

This study differs with Kagoma (2015) who sought to establish the impacts of corporate tax on the capital structure of companies listed in Nairobi Stock Exchange (NSE). This study adopted an explanatory research design. This study's population consisted of all the 62 companies listed in the Nairobi Stock Exchange (NSE). The target population was composed of 19 non-financial firms listed in the NSE as at 31st December 2014. Data analysis was done by use of descriptive statistics, correlation analysis as well as regression analysis. This study found out that a significantly positive association existed between effective tax rate and capital structure of companies listed in the NSE. It also found that a unit increase in effective tax rate cause an increase in capital structure of firms listed in the NSE.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This section summarizes the previous chapter's findings, conclusion and study limitations. The section also elucidates the policy recommendations that policy makers can implement to achieve the expected capital structure of commercial and service companies listed at the NSE. Lastly the chapter presents suggestions for further research which can be useful by future researchers.

5.2 Summary of Findings

The study sought to investigate the effect of corporate taxes on capital structure of commercial and service companies listed at the NSE. The independent variables for the study were corporate taxes, profitability, firm size and liquidity. The study adopted a descriptive cross-sectional research design. CMA reports were used to retrieve secondary data which were analyzed using SPSS software version 22. The study used annual data for the 11 commercial and service firms listed at the NSE covering a five year time frame as from January 2013 to December 2017.

From the results of correlation analysis, a strong negative correlation exists between liquidity and capital structure of service and commercial firms quoted at the NSE. The association between corporate taxes and capital structure of commercial and service firms quoted at the NSE was found to be weak, negative and insignificant. The study also showed that there exist a weak positive and significant association between firm size and capital structure of commercial and service firms listed at the NSE while

profitability was found to have a weak and insignificant negative relationship with capital structure of commercial and service companies listed at the NSE.

The co-efficient of determination R-square value was 0.471 implying that the predictor variables selected for this study explains 47.1% of changes in the dependent variable. This means that there are other factors not included in this model that account for 52.9% of changes in capital structure of commercial and commercial companies quoted at the NSE. The model is fit at 95% confidence level and F-value of 11.138. Therefore, the overall multiple regression model was statistically significant and thus suitable in explaining how the capital structure of the commercial and service companies quoted at the NSE is affected by the selected independent variables.

The regression results show that when all the independent variables selected for the study have zero value, capital structure of commercial and service companies listed at the NSE would be 0.117. A unit increase in firm size would result to an increase in capital structure of commercial and service companies listed at the NSE by 0.032. A unit increase in liquidity would result to a decrease in capital structure of commercial and service firms quoted at the NSE by 0.079 while a unit increase in profitability and corporate taxes would not have a significant effect on capital structure of commercial and service companies listed at the NSE.

5.3 Conclusion

From the findings of the study, it can be concluded from the study that capital structure of commercial and service companies listed at the NSE is significantly affected by corporate taxes, profitability, firm size and liquidity of the companies. Corporate taxes was noted to have a negative but statistically insignificant association

with capital structure of commercial and service companies listed at the NSE and this means an increase in corporate taxes does not have a significant effect on capital structure of commercial and service firms quoted at the NSE. The study found that profitability had a negative but insignificant impact on commercial and service firms' capital structure quoted at the NSE. The study therefore concludes that profitability leads to a decrease in capital structure of service and commercial companies listed at the NSE but not to a significant extent.

The study established that liquidity had a negative and significant impact on capital structure of commercial and service companies quoted at the NSE and therefore it is concluded that higher levels of liquidity leads to a decrease in capital structure. Firm size was found to be a statistically significant determinant of capital structure of commercial and service companies quoted at the NSE in a positive direction and therefore this study concludes that an increase in firm size leads to a significant increase on capital structure of commercial and service companies quoted at the NSE.

This study concludes that independent variables chosen for this study corporate taxes, profitability, firm size and liquidity affect to a large extent capital structure of service and commercial firms quoted at the NSE. It could be therefore concluded that these variables significantly affect capital structure as depicted by the p value of ANOVA summary. Since the four independent variables explain 47.1% of changes in capital structure of commercial and service companies listed at the NSE imply that the variables not included in the model explain 52.9% of changes in capital structure.

This finding concurs with Ngugi (2008) who put the determinants of capital structure of companies listed in the NSE, and he focuses on if the companies target their capital structure or follow a hierarchical behavior, but with no specific focus on the effect of

corporate tax on capital structure. This study's finding that companies observe a target debt ratio for minimization of the debt costs also has a possibility that these companies may also be exploiting the tax benefits in their financing decisions. This study didn't establish any significant impact of tax on capital structure on firms in Kenya.

5.4 Recommendations

The study found out that a relationship that is positive exists between capital structure of listed companies and firm size. This study recommends that listed non-financial firms' management and directors should aim at increasing their asset base by coming up with measures and policies aimed at enlarging the firms' assets as this will eventually have an impact that is direct on capital structure of listed companies. From findings of this study, big firms in terms of asset base are expected to perform better than small firms and therefore firms should strive to grow their asset base.

The study found out that a negative relationship exists between capital structure and liquidity position. This study recommends that a comprehensive assessment of listed commercial and service firm's immediate liquidity position should be undertaken to ensure the company is operating at sufficient levels of liquidity that will lead to improved capital structure of firms. This is because a firm's liquidity position is of high importance since it influences the firm's current operations.

The study established that there was a negative and insignificant influence of corporate taxes on capital structure of firms listed at the NSE. The study recommends that when firms are setting their capital structure they should strike a balance between the tax savings benefit of debt and bankruptcy costs associated with borrowing.

Corporate taxes should not be a significant consideration as evidenced in this study but other factors ought to be considered.

Profitability of commercial and service firms was found to have an insignificant negative effect on capital structure and this implies that the more profitable a firm is the less debt in its capital structure. The study recommends that commercial and service firms listed at the NSE should work towards improving their profitability and by doing so be able to reduce their debt levels. This will be crucial in avoiding the bankruptcy costs associated with debt.

5.5 Limitations of the Study

The scope of this study was for five years 2013-2017. It has not been determined if the results would hold for a longer study period. Furthermore it is uncertain whether similar findings would result beyond 2017. A longer study period is more reliable as it will take into account major happenings not accounted for in this study.

One of the study's limitations was the quality of the data. It is difficult to derive conclusions from the study since the legitimacy of the situation cannot be ascertained. The data that has been used is only assumed to be accurate. The measures used may keep on deviating from one year to another subject to prevailing condition. Secondary data that had already been retrieved was utilized for the study, unlike the primary data which is first-hand information. The study also considered selected determinants and not all the factors affecting capital structure of service and commercial companies quoted at the NSE mainly due to limitation of data availability.

For data analysis purposes, the researcher applied a multiple linear regression model. Due to the shortcomings involved when using regression models such as erroneous and misleading results when the variable values change, the researcher cannot be able

to generalize the findings with certainty. If more and more data is added to the functional regression model, the hypothesized relationship between two or more variables may not hold.

5.6 Suggestions for Further Research

This study focused on corporate taxes and capital structure of service and commercial firms quoted at the NSE and relied on secondary data. A research study where data collection relies on primary data i.e. in depth questionnaires and interviews covering all the 11 commercial and service firms listed at the NSE is recommended so as to compliment this research.

The study was not exhaustive of the independent variables affecting capital structure of commercial and service firms quoted at the NSE and this study recommends that further studies be conducted to incorporate other variables like management efficiency, growth opportunities, industry practices, age of the firm, political stability and other macro-economic variables. Establishing the impact of each variable on capital structure of service and commercial companies quoted at the NSE will enable policy makers know what tool to use when maximizing shareholder's wealth.

The study concentrated on the last five years since it was the most recent data available. Future studies may use a range of many years e.g. from 2000 to date and this can be helpful to confirm or disapprove the findings of this study. The study limited itself by focusing on listed commercial and service firms at the NSE. The recommendations of this study are that further studies be conducted on other non-listed commercial and service firms operating in Kenya. Finally, due to the shortcomings of regression models, other models such as the Vector Error Correction Model (VECM) can be used to explain the various relationships between the

variables.

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APPENDICES

Appendix 1: Listed Commercial and Service firms at NSE

1. Atlas Development and Support Services
2. Express Ltd
3. Hutchings Biemer Ltd
4. Kenya Airways Ltd
5. Longhorn Kenya Ltd
6. Nation Media Group
7. Scangroup Ltd
8. Standard Group Ltd
9. TPS Eastern, Africa (Serena) Ltd
10. Uchumi Supermarket Ltd
11. Deacons (East Africa)