

**CAPITAL STRUCTURE AND FIRMS PERFORMANCE: EVIDENCE FROM
LISTED NON-FINANCIAL COMPANIES IN DAR ES SALAAM STOCK
EXCHANGE**

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CERTIFICATION

The undersigned certifies that has read and hereby recommends for acceptance by the Open University of Tanzania a Dissertation entitled: “*The relationship between capital structure and firm’s performance: Evidence from listed non-financial companies in Dar es Salaam Stock Exchange*” in partial fulfilment of the requirements for the degree of Masters of Business Administration (MBA) of The Open University of Tanzania.

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I, **Victor Akalikawe Matondane**, declare that the work presented in this dissertation is original. It has never been presented to any other University or Institution. References have been supplied where other people's work has been used. In this regard, I declare that this is my unique work. It is hereby in partial fulfilment of the requirements for the degree of Master of Business Administration (MBA) of the Open University of Tanzania.

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DEDICATION

This research work is dedicated to God and his wonderful son Jesus Christ, the strength of my life, my Alpha and Omega and my inspiration, who has been seeing me through the rigours of the academic world and to my beautiful, loving and wonderful wife and my sons and daughter.

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ABSTRACT

The aim of this study was to determine the relationship between capital structure and firm performance of listed non-financial corporations in Tanzania. The study used panel data for the period of five years from eight non-financial firms listed on the Dar es salaam Stock Exchange. Study use mixed model repeated measure to estimate the relationship between capital structure and firm performance where, capital structure was proxies by debt ratio and debt-to equity ratio while performance was proxied by return on assets and return on equity. The study reveals Tanzania listed non-financial firms are financed more by equity capital than debt financing. Results also show that listed non-financial firms perform below average. The study results indicate significant negative relationship between return on assets and debt to equity ratio, return on assets and debt ratio, and return on equity and debt ratio. However, the relationship between return on equity and debt to equity ratio was positive but insignificant.

Keywords: *Capital structure, Firm performance, Tanzania.*

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LIST OF ABBREVIATIONS

CSE	Colombo Stock Exchange
CSI	Consumer Service Index
DER	Dept to Equity Ratio
DR	Dept Ratio
DSE	Dar es Salaam Stock Exchange
EPS	Earnings Per Share
GMM	Generalize method of moment
IA	Industrial and allied index
NSE	Nigeria Stock Exchange
OLS	Ordinary Least Squares
ROA	Return on Asset
ROE	Return on Equity
SSA	Sub Saharan Africa

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Firm performance has brought challenges to financial managers and shareholders in the process of maximizing owner's wealth and investment return. Shareholders wealth maximization is manifested in the high price of firm's outstanding ordinary shares. One way of ensuring firm performance is the ability of financial managers to choose optimal capital structure (Watson & Head, 2017). Capital structure is financing mix which includes the mixing of debt and equity in a way that not only maximizes shareholder wealth but also that of the other stakeholders of the firm and enable the firm to operate in a competitive environment (Chinaemerem and Anthony, 2012).

In the past and contemporary world, financial managers are confronted with the problem of choosing a mix of equity and debt to achieve optimal capital structure that would minimize firm cost of capital and in turn improve return to owners of the business. Managers have a duty to choose sources of finance that should be used in the firm since a wrong mix of financing may affect the firm and its survival in the market. Up to date, financial managers do not have a well-defined formula for taking decisions on optimal capital structure making the studies of capital structure to be continuous.

The idea of modern theory of capital structure is traced to the seminal contribution of Modigliani and Miller (1958) when they develop capital structure irrelevance

theorem under the assumption of perfect capital markets. The theory concluded that the way a firm finances its assets has no impact on its value but the firm value is derived from productivity and quantity of asset in which the firm has invested. Since introduction of capital structure irrelevance theorem, the existence and determination of capital structure have been controversial issues in finance (Ryne *et al*, 1997).

Empirical studies also lack consensus. While other report negative relationship between capital structure and firm performance (Kipesha & Moshi, 2014; Pastory *et al*, 2018) others report a positive relationship (Ross, 1977; Salehi & Bigler, 2009). Despite the fact that there has been substantial research about how firm improves performance by using optimal capital structure still academician and researchers have failed to give practitioners a clear guidance with regard to optimal mix of equity and debt in their firm's financing mix.

Capital markets in developing countries are performing differently, South Africa market is developed while Nigeria, Egypt and Kenya are frontier capital markets but rest Sub Saharan Africa (SSA) capital markets including DSE are developing. Most markets are illiquid and offer vanilla products (Yousuf, 2009). Studies from capital markets in Africa on relationship between capital structure and firm's performance shows inconsistent results. This is a signal that the way firms finance their investment may increase or decrease shareholders wealth (Pastory *et al*, 2013; Anarfo, 2015; Adesina, *et al*, 2015). This study investigates the relationship between capital structure and firm performance of listed non-financial firms in Tanzania. Most studies on capital structure and firm performance in Africa and Tanzania in

particular have been focused on banking sector. This study seeks to determine relationship between capital structure and firm performance of listed non-financial firms in Tanzania.

1.2 Statement of the Research Problem

Capital structure and its relationship with firm performance has been an issue of great concern in corporate finance and accounting literature since the foundational work of Modigliani and Miller (Modigliani & Miller, 1958). While size of the literature examining the performance implications of capital structure choices is higher in developed and emerging economies (Tianyu, 2013; Margaritis & Psillaki, 2010; Salehi & Biglar, 2008; Hassan, *et al.* 2014; Pouraghajan *et al.*, 2012; Ebadi *et al.*, 2011) little is empirically known about such implications in African capitalmarkets (Fosu, 2013; Adesina *et al.*, 2015; Abor, 2005) and Tanzania in particular. There are few published studies which have been conducted in Tanzania which relate capital structure and firm performance. Most of the few have focused on the banking sector (Kipesha & Moshi; 2014, Pastory *et al.*, 2013). Other research pertaining to capital structure in Tanzania has been done by Kumalija (2011) when examining capital structure decisions on listed companies, Bundala (2012) focus on practice of capital structure theories in Tanzania; Bundala & Machagu (2012), research on determinants of capital structure on listed firms. Capital structure studies conducted in Africa mostly focus on determinants of capital structure (Akitonya, 2007; Kumah, 2015), effects of capital structure on firm performance (Ebaid, 2009; Fosu, 2013), Relationship between capital structure and bank performance (Adesina, *et al.*, 2015; Victor & Badu, 2012).

Studies in banking sector cannot portray real picture on other non-banking firms because banks are highly regulated and their capital structure can't be entirely altered by the financial manager. This research therefore investigates the relationship between capital structure and corporate performance of listed non-financial firms in Tanzania using panel data approach as the way of mitigating for the small data.

1.3 Research Objectives

The objectives for this study are sub-divided into two, general objective and the specific objectives.

1.3.1 General Objective

The general objective for this study is to determine the relationship between capital structure and the corporate performance.

1.3.2 Specific Objectives

From the general objective, the following specific objectives were pursued

- i) To measure the corporate performance of listed companies
- ii) To analyze the effect of debt on firm performance of listed companies in Tanzania
- iii) To examine the effects of equity on the firm performance of listed companies in Tanzania.

1.4 Research Questions

The study aimed to answer the following key questions.

- i) How is the corporate performance of listed companies for listed companies in Tanzania
- ii) What are the effects of debt on firm performance of listed companies in Tanzania
- iii) What are the effects of equity on the firm performance of listed companies in Tanzania.

1.5 Significance of the Study

The findings of study have benefit to the investors, directors, managers, academicians, stakeholders and other company decision makers on financing behavior of the listed companies in Tanzania. This study provides the financial information to corporate managers and its stakeholders to make relevant and timely decisions to affect the growth of their firm. Adequate and appropriate financing and investment decisions will increase corporate value and thus increase shareholders wealth. Since the company cost of capital is seen as a function of its capital structure, choice of optimal capital structure reduces company's cost of capital and increase its profitability and market value thus increase shareholders wealth. Firm performance influence investing and financing decision of shareholders and debt holders, Debt holders evaluate performance to decide about the interest rates. Shareholders on the other hand evaluate performance to know how managers are serious in implementing their interests. Therefore, this study provides additional empirical evidence on the relationship between capital structure and firm performance from developing capital markets in Africa- Dar es salaam Stock Exchange.

1.6 Scope of the Study

The scope of the study was based on listed non-financial companies at Dar es Salaam Stock Exchange at Dar es Salaam in Tanzania. Dar es Salaam had been chosen due to its being the main city, the centre of the national economy and as well the headquarters of all listed companies. Furthermore, the selection is based on the researcher's easy accessibility to the data required, limited time required to complete the research study.

1.7 Organization of the Study

Rest of the dissertation is organized as follow; chapter two provides literature review and development of conceptual framework and research model. Chapter three describes methodology including research paradigm, strategies, sampling design, study area, population, method of data collection and analysis and expected results. Chapter four provides findings and discussion and chapter five provide summary, conclusion and recommendations.

CHAPTER TWO

LITERATUREREVIEW

2.1 Overview

This chapter presents the theoretical and empirical literature review. Under the theoretical literature review, capital structure theories are reviewed and the hypothesized link between capital structure choice and firm performance is established. The empirical literature review analyzes different studies about relationship between capital structure and firm performance in different countries including Tanzania. The aim here was to establish what is known so far in terms of relationship between capital structure and firm performance. Conceptual framework shows interconnection between independent variable and dependent variable, how capital structure and corporate performance relate.

2.2 Conceptual Definitions

2.2.1 Capital Structure

Capital structure is the way the corporation finances their assets through some combination of equity, debt, or hybrid securities. Pandey (2010) defined capital structure as the various means of financing a firm, that is, the proportionate relationship between debt and equity. Debt and equity are the two major classes of claims where debt holders and equity holders representing the two types of investors in the firm. Each of these is associated with different levels of risk, benefits, and control. Debt represents money that the company borrowed from financial institution or from the public through the issuance of debenture through stock exchange under

agreed period in which there is repayment of principal and interest. Equity is share of the company which shows the ownership in the company, so when investors purchase shares they provide capital to the company and become owners. Therefore, capital structure refers to the mix of these claims in the firm's financing arrangements.

2.2.2 Firm Performance

A firm's financial performance, in the view of the shareholder and this study refers to how better the shareholder is at the end of a period, then he was at the beginning and this can be determined using various ratios derived from financial statements, mainly the statement of financial position and income statement, or using data on stock market prices (Berger & Patti, 2002). These ratios give an indication of whether the firm is achieving the owners' objectives of making them wealthier and can be used to compare with other firms or to find trends of performance over time (Severin, 2002).

2.3 Theoretical Literature Review

Choice of sources of finance in a firm is most critical issue especial to financial managers (Bundala, 2012). Financing decision is one the role of financial managers. This decision depends on the target at which firm want to reach or stage of the business. At the beginning a business may start with owners' equity but as it grows it may need more capital than what it can internally generate or founders can provide. The options here are therefore to raise capital externally by issuing shares or debentures. Capital structure is the art of mixing equity and debt finance to obtain appropriate financing structure which could minimize cost of capital and in turn

maximize the value of the firm. The concept of relationship between capital structure and firm performance has been studied by different researchers. There are views that strongly support or oppose relationship between capital structure and value of the firm. Those supports the theory believes that financing mix affect the performance of the firm through the earnings available to stockholders (Durand, 1952). Those which opposed believe capital structure is irrelevant, and it has no impact on shareholders wealth in other words there is nothing such as optimal capital structure (Modigliani & Miller, 1958).

Modigliani & Miller's (1958) Irrelevancy theorem is attained under perfect capital market condition assumptions. The theory assumed that capital markets work under conditions where there is no bankruptcy cost, frictionless capital markets and without taxes. However, on their revised theory incorporated tax benefits and argued that under market imperfection where interest payments are tax deductible firm value will increase with level of the leverage (Modigliani & Miller, 1963). The two scholars acknowledged that capital structure is optimal at 100% debt financing as it minimises the weighted average cost of capital and maximises firm performance and value but challenges remain on increasing debt in the capital structure may raise the potential bankruptcy costs.

Static tradeoff theory (Jensen & Meckling, 1976) theory express that a firm can attain its optimal capital structure whenever there was balance between tax benefits of debt and the costs of debt like bankruptcy cost and financial distress provided that decision on further investment and asset of the firm are kept constant. The theory

also states that if a firm issues equity, it means that the firm was parting with optimal capital structure and that was bad news for the company. According to the theory, there is a positive relationship between the firm's leverage and performance.

In the mid-1970s, research turned to agency costs, focusing on two categories of conflicts of interest between managers and shareholders, on the one hand, and between creditors and shareholders. The research is hinged on the assumption that optimal capital structure represents a compromise between the effects of interest tax shield, financial distress costs and agency costs. "Agency cost theory" posits that leverage disciplines managers, as the debt level may be used to monitor managers. Thus, it is to be expected that increased leverage in the context of low agency costs may raise the level of efficiency and thereby contribute to upgrading firm performance.

Ross (1977) posits that managers are knowledgeable about the distribution of firm returns, but investors don't have this knowledge. If managers decide to increase debt in the capital structure, investors may interpret this as a signal of increased future cash flows and the firm's commitment towards its contractual obligations. So, this will show a higher level of confidence that the management has towards the firm's prospect in the near future. However, if managers decide to raise capital by issuing new equity, this is a sign that management has no confidence towards future prospects of the firm. Therefore, it concludes that investors take higher amounts of debt as a sign of higher quality and that profitability and leverage are thus positively correlated.

In the first half of the 1980s, the emphasis was mainly placed on information asymmetries among investors and firms, which defined the pecking order theory. The theory argues that there is a hierarchy in the firm's preference for financing its investments, and that compliance with the hierarchy represents the optimal financing strategy. Since issuing new shares would be damaging to current shareholders, managers prefer to finance investments from internal sources i.e. retained earnings, if this source proves insufficient, managers will then orient to external sources, first to debt financing and lastly to the issuance of new shares as last resort. Thus, according to pecking order theory, more profitable firms generate higher earnings that can serve for self-financing, enabling them to opt less for debt financing; conversely, less profitable firms do not enjoy the same opportunity and therefore compelled to take on debt in order to finance their ongoing activity. Consequently, the theory asserts a negative correlation between the debt level and firm performance.

Studies carried out during the 1990s were marked by the focus on the disjunctive-hypothetical reasoning, researchers seeking to provide arguments in favour of or against the two theories proposed, i.e. trade-off theory and pecking order theory.

2.4 Empirical Literature Review

Empirically, the relationship between capital structure and firm performance has been subjected to many studies since seminal work of Jensen and meckling (1976) and reported mixed findings. Some authors got positive relationship; some got negative relationship while others got mixed or no relationship between capital

structure and firm's performance. Some of the major contributions in the literature on this topic are discussed below.

Kipesha & Moshi (2014) tested for impact of capital structure on banking performance using a panel data of 38 banks in Tanzania over five years period. The study hypothesis was capital structure has positive impact on firm performance. The study used two variables, capital structure as independent variable and firm performance as dependent variable. Capital structure was measured by using debt to equity ratio, short term debt to equity, total debt to total asset and short debt to asset and short debt to asset ratio, short debt to asset ratio. Firm performance was measured by Efficiency, ROE and ROA. Study reveal that on average returns on equity was 16.03% while the average return on asset was found to be 1.19% this indicate that banks don't utilize well their asset to generate profit to shareholders.

The study results indicated presence of negative trade-off between the use of debts and firm performance when capital structure was measured using the ratio of debts to equity and performance was measured by cost efficiency and return on equity on capital structure. On average the banks in Tanzania were founds using more debt than equity financing. The study concludes that, banks in Tanzania prefer to use more short term debts in form of deposits other than commercial debts hence they still have a chance to excel as the debts to asset ratio was found to have significant positive impact on return on equity. The study concluded that there was negative relationship between the capital structure and performance of the banks

Pastory *et al.* (2011) study the relationship between Capital Structure and Commercial Bank Performance using panel data analysis. The study aimed at

identifying the relationship between capital structure and bank performance by employing data from bank scope and covered 20 banks in Tanzania. Casual research design was used because the study sought to identify the relationships between the dependent and the independent variables. The dependent variable is ROE (return on equity). The independent variables are equity to loans, equity to total asset, liabilities to equity and equity to customer funding. The study concluded that there was negative relationship between the capital structure and performance of the banks.

Adesina *et al.* (2015) study on capital structure and firm performance in Nigeria, study used profit before tax as dependent variable and two capital structure variables (Equity and Debt) as independent variable. The sample of the study consist ten Nigerian banks quoted on NSE for period of eight years from 2005 to 2012. Ordinary least square regression analysis of secondary data shows that capital structure has positive relationship with financial performance. This suggests that the management of quoted banks in Nigeria consistency use debt and equity capital in financing to improve earnings.

Abor (2005) also investigated the link between capital structure and profitability of firms listed in Ghana Stock Exchange for the period 1998–2002. Using regression analysis, he reported a significantly positive relationship among ROE and the short-term debt and total debt ratio, while, a negative relation with long-term debt.

Conversely, using panel data consisting of 257 South African firms over the period 1998 to 2009, Fosu, (2013) investigated the association between capital structure and

firm performance. To test the relationship, he used Generalized Moment Methods (GMM) regression approach and found a positive and significant relation between financial leverage and firm's performance.

Tianyu (2013) examined the influence of capital structure on firm's performance in both developed and developing markets. A sample of 1200 listed firms in Germany and Sweden and 1000 listed firms in China for the period 2003-2012 were used in his study. Applying Ordinary Least Squares (OLS) regression method, he documented that capital structure has a significant negative effect on firm's performance in China, but, significant positive effect in two European countries, i.e., Germany and Sweden, before financial crisis in 2008.

Margaritis & Psillaki (2010) observed a significant positive relation between leverage and firm's performance. They used a sample of both low and high growth French firms for the period 2003-2005 and found that leverage have positive effect on firms' efficiency over the entire sample.

Salehi & Biglar (2008) studied on the relationship between capital structure measures and performance evidence from Iran. They tested the hypotheses, that there is meaningful link between capital structure and return on equity; there is meaningful link between capital structure and return on equity, there is meaningful link between capital structure there is meaningful link between capital structure and return on stock; and that there is meaningful link between capital structure and earnings before tax to sale ratio. The study applied the data of 117 corporations in Tehran Stock Exchange in a five-year time horizon between 2002 and 2007. Variables were capital

structure (independent) measured by debt ratio and Firm performance (dependent) measured by ROE, ROA, earning before tax and return on stock. They argued that, capital structure influences financial performance and thus, the significance of the influence is belonged to measures of adjusted value, market value and book value, and hence proposed that market value should be taken more into consideration in evaluating capital structure.

Kajanathan & Nimalthasan (2013) also examined capital structure and its impact on financial performance on listed manufacturing companies in Sri Lanka, for the period 2005 to 2009. The study objectives were to identify the relationship between capital structure and firm performance, to find out the impact of capital structure on firm performance and suggest the organization to adopt capital structure towards the performance. The Colombo Stock Exchange (CSE) has 287 companies representing 20 business sectors as at 31st January 2013. Out of 37 Manufacturing companies 25 companies were selected for the study. The regression were models utilized to test the relationship between the determines capital structure such as debt equity ratio and debt asset ratio and firm performance such as gross profit ratio, net profit ratio, return on equity (ROE), and return on assets (ROA). Descriptive statistic, correlation analysis and regression analysis were used to estimate the result. The results show that gross profit, net profit, return on equity, return on assets, are not significantly correlated with debt equity ratio and that gross profit margin and Return on equity are significantly correlated with debt assets ratio as the measures of capital structure and capital structure has significant impact on gross profit and return on equity. The result proves that with the increase in leverage negatively affects the ROE. The

results recommend that managers shall not use excessive amount of leverage in their capital structure, they must try to finance their projects with retained earnings and use leverage as a last option. Managers must work to achieve the optimal capital structure level to maximize the firms' performance and try to maintain it as much as possible. The following were suggested to increase the profitability, an appropriate mix of capital structure should be adopted in order to increase the profitability. Top management of every firm should make prudent financing decision in order to remain profitable and more competitive inducing the investors to help to achieve the high level of firm financial performance.

Pouraghajan *et al.* (2012) studied on the impact of capital structure on financial performance of firms listed at Tehran Stock Exchange. The main objective of the study was to investigate the impact of capital structure on financial performance.

Researchers used sample size of 400 firms from 12 industry group for the time horizon in between 2006 and 2012 which have following features, Companies must be listed before the research period, they should be non-financial companies, The end of financial period of companies lead up to December 31 of each year, Financial period have not changed in the course of study. Thus, by considering the above constraints, the investigated sample size was about 80 companies. Results indicate that there is a strong negative and significant relationship between debt ratios and performance measures of Iranian firms (ROA and ROE).

Hassan *et al.* (2014) research on influence of capital structure on firm performance, evidence from Bangladesh study used a selected sample size of 36 firms from the

capital market for the period during 2007 -2012. The authors used four performance measures, Earnings Per Share (EPS), Return on Equity (ROE), Return on Asset (ROA) and Tobin's Q as dependent variables and the three capital structure ratios short term debt, long term debt and total debt ratio as independent variables. Using panel data regression methods, they report significant negative relationship between ROA and ROE and capital structure and there is no statistical relationship between capital structure and firm performance as measured by ROE. The negative relationship explained by high cost of using debt and strong covenants attached underdeveloped equity and debt market in Bangladesh. The authors at last concluded that, capital structure has negative impact on firm's performance which is consistent with the proposition of pecking order theorem.

From the above empirical studies, researchers agree that an association between capital structure and firm performance exist. While some studies have concluded that the relationship between capital structure and firm performance is positive (Salehi & Biglar, 2009; Abor 2005; Adesina *et al.*, 2015; Margaris & Psillaki,2010), some other studies have concluded that the relationship between capital structure and firm performance is negative (Tinyu, 2013; Kipesha & Moshi, 2104; Pastory *et al*, 2011; Hassan *et al.* 2014), while some have concluded that the relationship is both positive and negative (Pouraghajan *et al.*, 2012) With these mixed and conflicting results, the question for examining the relationship between capital structure and firm performance has remained a puzzle and empirical study continues.

2.5 Research Gap

Capital structure theory has been study of interest of many financial economist, extensive researches have been performed to investigate the relationship between capital structure and firm's performance in different countries while Tanzania has very little contribution in literature (Kipesha & Moshi; 2014, Pastory *et al.*, 2013). This research adds more empirical study on capital structure and firm's performance in Tanzania by investigating the listed non-financial firms under time frame from 2009-2013 by relate capital structure proxies, debt to Equity ratio and Debt ratio with firm performance accounting proxies ROE and ROA.

2.6 Conceptual Framework

Based on the research questions, the conceptual framework model has been adopted and modified from Pratheepkanth (2011). The model below contains two variables; independent variable which is debt to equity ratio and debt ratio and the dependent variables which are ROE and ROA. This study uses ROE and ROA as measure firm performance and Debt to Equity ratio and Debt ratio as measurements of capital structure. Conceptualization model predict there is relationship between capital structure and performance of listed firms in Tanzania. The relationship can be positive or negative.



Figure 2.1: Conceptual framework

Source: Researcher (2022).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Overview

The chapter presents research methodology which was adopted in the study. Chapter consist research paradigm, strategies, population, sample design, variable measurement procedures, method of data collections, data processing and analysis.

3.2 Research Philosophy

Research philosophy refers to beliefs and assumptions on how the data of a particular phenomenon can be collected, analyzed and applied (Saunders *et al.*,2019). Generally, research philosophy has many branches depending on various disciplines (Aarkeret *al.*, 2010). The business and management field have five main components of research philosophy. These are pragmatism, positivism, post-positivism, realism and interpretivism, which are described by philosophical assumptions that are epistemology (adequate knowledge), ontology (nature of reality) and axiology (role of values and ethics). This study used positivist philosophy. Positivists' philosophy highlights that scientific inquiry should rely on observable and measurable facts rather than subjective experiences (Guba, 1990).

3.3 Research Design

The study used descriptive-quantitative design. The study was designed to use statistical analysis to reach its conclusion. The study was conducted in Tanzania to investigate eight non-financial companies listed on Dar es Salaam stock Exchange. The main reason to select Tanzania there are few studies relate capital structure and

firm's performance compare with other African countries like Kenya, Nigeria and South Africa. So far available studies in Tanzania conducted on banking sector (Kipasha & Moshi, 2014; Pastory *et al*, 2011), and those were conducted by Bundala & Machagu (2012) were based on non-panel data suffer from fewer observations.

3.4 Research Strategies

The study used deductive strategy employing survey at which independent variable capital structure proxies and dependent variable firm performance measures were analyzed. Data were collected from company financial statements and prospectus obtained from DSE and companies' websites. Regression analysis conducted through mixed model repeated measure techniques.

3.5 Area of the Study

The area of the study was Dar es Salaam Stock Exchange. Dar es Salaam Stock Exchange (DSE) was selected because it accommodates all websites for all listed companies in Tanzania, where the researcher obtained annual reports for all listed companies.

3.6 Target Population

Sekaran (2003) described a population in research as an entire group of people; event or objects/things of interest that the researcher wished to investigate. The population of the study was 21 listed companies at Dar Es Salaam Stock Exchange in Tanzania.

3.7 Sampling Design and Sample Size

The study sample included all companies listed in DSE during 5 years periods from

2014 to 2018. The following features used to select sample size. The company should be a listed company, managed to issue financial statements as required by regulations under period of study, they should be non-financial companies and not cross listed. Thus, by considering above features eight companies met the criteria to be included in the sample size. The sample size covers the following companies, Tanga Cement Company Limited (SIMBA), Swiss port Tanzania Limited (SWISSPORT), Tanzania Portland Cement Company Limited (TWIGA), Tanzania Cigarette Company Ltd (TCC), Precision air (PAL), Tanzania Tea Packers Ltd (TATEPA), Tanzania Oxygen Limited (TOL), and Tanzania Breweries Limited (TBL).

3.8 Variable and Measurement Procedures.

This study uses secondary data obtained from companies' prospectus and financial statements of listed companies found in DSE data base accessed through its website www.dse.co.tz. The variables were capital structure (Independent variables) and financial performance (dependent Variable). Capital structure was measured by following proxies, debt to equity ratio (DE) and Debt Ratio (DR) while financial performance was measured by return on equity (ROE) and Return on Asset (ROA). Data to measure all these proxies extracted from company's financial statements.

3.8.1 Independent Variable

The study used two variables measurements of which are detailed in the following sections.

3.8.1.1 Debt to Equity Ratio (DER)

This is a measure of a company's financial leverage calculated by dividing its total liabilities by stockholders' equity. It indicates what proportion of equity and debt the company use to finance its assets. A high debt/equity ratio generally means that a company has been aggressive in financing its growth with debt. This can result in volatile earnings as a result of the additional interest expense. If a lot of debt is used to finance increased operations (high debt to equity), the company could potentially generate more earnings than it would have without this outside financing. If this were to increase earnings by a greater amount than the debt cost (interest), then the shareholders benefit as more earnings are being spread among the same number of shareholders. However, the cost of this debt financing may outweigh the return that the company generates on the debt through investment and business activities and become too much for the company to handle. This can lead to bankruptcy, which would leave shareholders with nothing. The debt/equity ratio depends on the industry in which the company operates. For example, capital-intensive industries such as auto manufacturing tend to have a debt/equity ratio above 2, while personal computer companies have a debt/equity of under 0.5. There have been various others that have studies used debt to equity capital structure ratio when related to firm performance (Pratheepkanth, 2011; Hassan *et al.*, 2014; Pouraghajan *et al.*, 2012; Houang & Song, 2006).

3.8.2 Debt Ratio (DR)

The debt ratio compares a company's total debt to its total assets, which is used to gain a general idea as to the amount of leverage being used by a company. A low

percentage means that the company is less dependent on leverage, i.e., money borrowed from and/or owed to others. The lower the percentage, the less leverage a company used and the stronger its equity position. In general, the higher the ratio, the more risk that company was considered to have taken on.

3.8.2.1 Dependent Variables

Dependent variable that may change in response to change in other variables observed outcome or results from manipulation of another variable (Sounders, 2012). Changes in the independent variable determine the changes in the dependent variables. From the study, the researcher will use dependent variables which are firm performance measures that are ROE and ROA.

3.8.2.2 Return on Equity (ROE)

The amount of net income returned as a percentage of shareholders equity. Return on equity measures a corporation's profitability by revealing how much profit a company generates with the money shareholders have invested. Return on equity can be calculated by dividing net income by average shareholders' equity. Average shareholders' equity calculated by adding the shareholders' equity at the beginning of a period to the shareholders' equity at period's end and dividing the result by two.

Various studies which have used ROE as a firm performance measurement include Hassan et al. (2014) and Pouraghajani et al (2012) although these studies differ in sample size and variables. Hassan, *et al.* (2014) found negative relationship between capital structure and firm performance one measure was ROE. Salehi and Biglar (2008) found positive relationship between capital structure and performance when

was studying manufacturing listed companies in the same country. Thus why this study propose to study relationship between capital structure and listed non-financial firm performance in Tanzania and to see if results differ with previous studies conducted by Pastory *et al.* (2011); Kipesha and Moshi (2014) when we're investigating relationship between Capital structure and firm performance on banking sector in Tanzania.

3.8.2.3 Return on Assets (ROA)

An indicator of how profitable a company is relative to its total assets. ROA gives an idea as to how efficient management in using company assets to generate earnings. ROA calculated by dividing a company's annual earnings by its total assets. There are various studies which has used ROA as a performance measurement in different economic regions. Some of these studies are; Hassan, *et al.* (2014) Pouraghajan *et al.* (2012) Salehi & Biglar (2009) use ROA in their study and found ROA was negatively related to capital structure.

3.9 Method of Data Collection

Secondary data collected from issued financial statements and prospectus which are found in companies and DSE websites. From such document's total asset, equity, debt, sales, extracted and analyzed by using excel software to obtain DR, DER, ROA, ROE, TURN and SIZE for whole sample and for all years under considerations where data was not available for five years for example precision air, preceding year's figures its issue prospectus were used to attain a balanced panel data.

3.10 Data Processing and Analysis

After data collection and computation of key variables descriptive and regression analysis were conducted in SPSS mixed model with repeated measure techniques. Descriptive analysis used to measure firm performance and analyze capital structure. Regression analysis was used to determine relationship between capital structure variables and firm performance variables. The relationship was estimated by using following regression model equation:

$$Y_{it} = \alpha + X_{it}\beta + \varepsilon_{it}. \text{ Here, } i = 1, 2, \dots, N; t = 1, 2, \dots, T$$

Where; Y_{it} is the dependent variable (firm's performance) of firm i in period t . X_{it} is the independent variable (capital structure) of firm i in period t . β is the regression coefficient and ε_{it} is the error term.

Using the following regression models the study examine the influence of capital structure on firm performance

$$ROA = \alpha + (D/E)_{it}\beta_0 + \varepsilon_{it} \quad (1)$$

$$ROE = \alpha + (D/E)_{it}\beta_0 + \varepsilon_{it} \quad (2)$$

$$ROA = \alpha + (DR)_{it}\beta_0 + \varepsilon_{it} \quad (3)$$

$$ROE = \alpha + (DR)_{it}\beta_0 + \varepsilon_{it} \quad (4)$$

Where, ROA = Return on Assets, ROE = Return on Equity, D/E = Debt to Equity,

DR = Debt ratio.

The results were judged for statistical base on statistical significance or insignificant based on $P < 0.05$. (Pallant, 2005).

3.11 Ethical Issues

Research ethics provides guideline for the responsible conduct of research. In addition, it educates and monitors scientists conducting research to ensure a high ethical standard (Jenn, 2006). In this study the research information was gathered and handled confidentially and the participants were informed about the study purpose individually and confidentially. The participants were also informed of their rights to access the results from this study. In the situation where the case of questions that requires mentioning names, letters and numbers were used instead. The study did not intend to cause any harm to the participants in terms of psychological, social, economic and physical aspects.

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

4.1 Overview

This chapter presents and discusses the findings. It's organised as follow: Section 4.2 presents a description of the sample, Section 4.3 presents descriptive statistics of variable of interest, Section 4.3.1 presents results per objectives, and 4.4 discusses the findings.

4.2 Descriptive Statistics

Sample size of the study described by Firm size and turnover ratio, sample is made up by consumer services index (CSI) and industrial and allied index (IAI) of DSE. The results are shown in table 4.1.

Table 4.1: Descriptive statistics of sample

VARIABLE	N	Range	Minimum	Maximum	Mean	Std. Dev
TURN	40	1.78	0.00	1.78	.853	0.50
TURN -IA	30	1.74	0.04	1.78	0.97	0.40
TURN CS	10	1.65	0.00	1.65	0.49	0.62
FIRM SIZE	40	4.94	15.97	20.77	18.17	1.45
FIRM SIZE - IA	30	4.94	15.77	20.71	18.30	1.50
FIRM SIZE - CS	10	3.07	16.22	19.79	17.64	1.19

TURN= Sale/Total assets, TURN - IA = Turnover ratio of industrial and allied index, TURN-CS= Turnover ratio of Commercial Services index. SIZE - Firm size= Natural logarithm of assets, FIRM SIZE IA = Firm size of Industries and allied Index, FIRM SIZE -CS = Firm size of commercial services index.

Number of observations for IAI were 30 out of 40 of total expected sample observations, results shows IA mean value for TURN and SIZE are 0.97 and 18.14 respectively while mean value of CS TURN was 0.49 and SIZE was 17.64 Results shows IA index is made up by large companies than CS index because of large asset base and more diversified compare to CS evidenced by high TURN 0.97 and SIZE 18.14.

Table 4.2: Descriptive statistics

VARIABLE	N	Range	Minimum	Maximum	Mean	Std. Dev
DR	40	0.6415	0.1889	0.8304	0.3843	0.1815
DER	40	16.97	-1.9591	15.02	0.2023	3.36
ROE	40	2.17	-0.5150	1.65	0.3368	0.411
ROA	40	0.55	-0.1127	0.4378	0.1646	0.1477
DR – CS	10	0.2056	0.1889	0.3945	0.2940	0.0757
DR – IA	30	0.6415	0.1889	0.8304	0.4144	0.1970
DE – CS	10	16.97	-1.95	15.02	0.49	6.54
DE – IA	30	4.66	0.2329	4.8977	0.1050	1.1397
ROA - CS	10	0.4352	0.0026	0.4378	0.1863	0.1724
ROA – IA	30	0.5146	-0.1127	0.419	0.1573	0.1411
ROE – CS	10	1.6986	-0.1588	1.5398	0.4549	0.4864
ROE – IA	30	2.1726	-0.5150	1.6576	0.2974	0.3843

The table shows the descriptive statistics for variables used in the study. The variables are defined thus: DR=Debt ratio (total liability/total assets), DER =Total Liability/Total Equity, ROA = Return on asset, ROE = Return Equity. DR-CS =Debt ratio commercial services index, DR-IA =Debt ratio industries and allied index, DE-CS =Debt equity ratio commercial services index, ROA-IA =Return on asset ratio industries and allied index, ROA-CS =Return on asset ratio commercial services index. ROE-IA =Return on equity ratio industries and allied index. ROE-IA =Return on equity ratio industries and allied index, ROE-CS =Return on equity ratio

commercial services index, ROE-IA =Return on equity ratio industries and allied index.

4.3 Findings

4.3.1 Objective One: To measure the Corporate Performance of Listed Companies

Table 4.2 shows descriptive statistics on variable used to determine the corporate performance. It's clear from the table that ROA mean of the sample is 0.164, on average listed firm earn profit of 16.4% from its asset. ROE represents the firm power to obtain profit from its assets. Results shows on average firms appear to have a mean 0.3368 return on equity. This tells that listed non-financial firms generate Tshs33.68 profit from every 100 shillings invested by shareholders. This is signing that management of listed non-financial companies are working on interests of shareholder which is to maximize shareholder wealth items of increase price of share and dividend payments.

4.3.2 Objective Two: To Analyze Capital Structure of Listed Companies

Capital structure has been measured by debt ratio and debt to equity ratio. Descriptive statistics results show that debt equity ratio of sample range is 16.97, minimum -1.9591, maximum 15.02 and mean 0.202, DR mean is 0.384. On average indicates capital structure of listed non-financial firms in Tanzania is made by more equity than debt. More equity than debt because of privatization policy, reduced cost of rising capital, and poverty reduction initiative which encourage Tanzania to buy shares to enable them to have sustainable income.

On other side DR –IA index mean is 0.41, DR –CS index mean is 0.294. This indicate two indices differ because IA index made up by large size firms compare CS index as shown in Table 4.2, DR for IA is higher compare to DR – CS because large sized firms are more diversified and less financial distress as opposed to smaller firms, larger firms may have a low level of bankruptcy cost compare to smaller one so they apply debt as advantage thus they have high ROA and ROE. This may suggest that IA index firms perform better than CS index.

4.3.3 Objective Three: To determine the Relationship between Capital Structure and Firm Performance

On determining the relationship between capital structure and firm performance four models were used which relate independent variable and dependent proxies. Fixed effect technique was used to related ROA and DE on the first model, second model relate ROA and DR, third model relate ROE and DE and last model relate ROE and DR. The relationship estimated by using following regression model equation

$$Y_{it} = \alpha + X_{it}\beta + \epsilon_{it}. \text{ Here, } i = 1, 2, \dots, N; t = 1, 2, \dots, T$$

Where; Y_{it} is the dependent variable (firm's performance) of firm i in period t . X_{it} is the independent variable (capital structure) of firm i in period t . β is the regression coefficient and ϵ_{it} is the error term.

To examine relationship between capital structure and firm performance four distinct regression models have been developed as shown in Table 4.3. Using mixed model repeated measure regression analysis was carried out by each model and all regression models were conducted based on fixed effect models.

Model 1 examined the relationship between ROA and DE. The results show the return on asset have negative relationship to debt to equity ratio (DE)(-0.0168) at significant level of 0.005 and t value -2.939.

Model 2 examine the relationship between ROA and DR. The results show the return to asset has significant negative relation with debt ratio (-0.4456) at significant level 0.000.

Model 3 examine relationship between ROE and DE. The results show the ROE has positive relationship with debt to equity ratio (0.0067) with statistically insignificant value is 0.701.

Table 4.3: Relationship between capital structure and firm performance

Models	Estimates of Fixed effects				
Model 1 ROA	Parameter	Estimate	Standard Error	t	Sig
	Intercept	0.1984	0.0238	8.309	0.000
	DE	-0.0168	0.0057	-2.939	0.005
Model 2 ROA	intercept	0.3356	0.0456	7.346	0.000
	DR	-0.4456	0.1077	-4.130	0.000
Model 3 ROE	Intercept	0.3231	0.7318	4.41	0.000
	DE	0.0067	0.0175	0.38	0.701
Model 4 ROE	Intercept	0.664	0.1407	4.719	0.000
	DR	-0.8518	0.3319	-2.567	0.014

Model 4 examine relationship between ROE and DR. The results show the return on equity has significant negative relationship with debt ratio (-0.8518) at significant level 0.014.

Results indicates increase in leverage level of a company decrease return on assets, the more the debt incorporate in the capital structure, decrease firm's performance.

Results are consistent with empirical studies conducted by Kipesha & Moshi (2014); Pastory *et al.* (2011); Anarfo (2015); Hassan *et al.* (2012); Kajanathan *et al.* (2013).

ROE has positive relationship with DE and model was statistically insignificant but positive sign indicate equity financing increase return to assets and but decrease return to shareholders. Results are consistency with empirical studies conducted by Adesina *et al.* (2015) and Abor (2005).

4.4 Discussion of Findings

Descriptive statistics indicates ROA mean of sample is 0.164 and ROE mean is 0.3368 this indicate Listed non-financial firms perform well compare to financial firms in Tanzania. Research conducted on banking sector shows ROE mean was 0.1603 Pastory *et al.* (2011) and ROA mean was 0.0119 Kipesha & Moshi (2014). Results also show that IA performs better than CS. AI index ROE mean is 1.6576, ROE – CS 1.5539 while CS index ROA mean is 0.4378 and ROA is 0.4122. Also, Table 4.2 show that listed non-financial corporate in Tanzania DR mean is 0.3881, DE mean 0.2013 while in financial firms DR mean was 7.926 Kipesha & Moshi (2014) and DE mean was 14.49. Results show listed non-financial firms use more equity than debt on financing its investment opportunities compare to financial firms which are high geared, also its an indicator that listed firm in Tanzania do not use much long-term debt in their respective capital structure. This may be due to general poor participation of both public and private sectors in the bonds markets.

The study reveals that their significant negative relation between capital structure and firm performance when ROA was regressed against DR and DE and when ROE was

regressed against DR. ROE is positively related with DE but is statistically insignificant. These results are consistent with previous research conducted in Tanzania on banking sector by Pastory *et al*, 2011; and other studies such as Anarfo (2015); Hassan *et al*. (2014); Kajanathan *et al*. (2013).

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Overview

The main purpose of the study was to determine the relationship between capital structure and firm performance in context of listed non-financial in Tanzania for the period of 2009-2013. Capital structure was independent variable which was expected to influence dependent variable firm performance. DR and DE were proxies which used to determine the level of leverage while ROE and ROA measure firm performance. Data were collected from company's prospectus and financial statements found in companies and DSE websites. Analysis was conducted through descriptive and regression analysis. Regression analysis was performed through mixed model techniques.

5.2 Summary of Main Findings

Findings show that listed non-financial firms perform below average ROE was 0.3368 and ROA was 0.1646. Also, statistics shows that listed non-financial firms in DSE were more financed by equity in their capital structure, DR found to be 0.3843 and DE 0.2013. There is significant negative relationship between ROE and DR and insignificant positive relationship with DE. ROA shows significant negative relationship with DR and DE.

5.3 Conclusions

The study concludes that listed firms are performing below average and more financed by equity. There is significant negative relationship between capital

structure and firm performance. Results are consistent with static trade off theory (Meyer, 1984) pecking order theory and empirical studies conducted by Kipesha and Moshi (2014); Pastory *et al.* (2011); Anarfo (2015); Hassan *et al.*, (2012); Kajanathan *et al.* (2013).

5.4 Contribution to the Knowledge

This study has contributed to the literature by examining the relationship between capital structure choices and firm performance. The results of the study will help managers of listed non-financial firms in Tanzania to increase the percentage of debt in an optimal way in their capital structure, hence enjoy tax advantages and avoid share dilutions.

5.5 Areas for Further Studies

It is suggested that further research on the relationship between capital structure and firm performance be conducted across East African capital markets to see if the results of individual markets can be different if the study is based on the region as a whole. Also, there is an opportunity to conduct a comparative study to check the relationship between capital structure and firm performance of foreign and domestic corporations in DSE. Also, studies can be conducted to determine rigid policies which hinder the effective participation of companies, especially on bond markets.

This study will help DSE to come up with policies that could help further development of the capital market in such a way that it can absorb an increase in demand for funds.

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APPENDECIES

Appendix: I. Variable computations

TIME	FIRM	TA	DR	DE	ROE	ROA	TURN	SIZE
1	1	3.48E+08	0.5194	1.0808	1.0484	0.2319	1.783	17.68
2	1	4.54E+08	0.4063	0.6844	0.5203	0.2038	1.5149	20.08
3	1	5.25E+08	0.3952	0.6535	0.4149	0.232	1.4016	20.27
4	1	6.89E+08	0.2781	0.3851	0.4086	0.2416	1.5267	20.5
5	1	7.38E+08	0.3396	0.5142	0.4086	0.2399	1.3427	20.71
1	2	1.08E+07	0.4864	0.9469	-0.1143	-0.0541	0.9381	16.31
2	2	1.30E+07	0.5785	1.3725	0.0027	0.0011	0.8374	16.46
3	2	1.69E+07	0.6552	1.9005	-0.1429	-0.0477	0.9682	16.55
4	2	1.60E+07	0.7019	2.3548	0.1605	0.0316	0.0434	16.73
5	2	1.78E+07	0.8304	4.8977	-0.515	-0.1127	1.7707	16.69
1	3	1.08E+07	0.2645	0.3595	0.6691	0.3755	0.00169	16.22
2	3	1.33E+07	0.387	0.6313	0.5434	0.3283	0.0015	16.40
3	3	1.62E+07	0.3386	0.512	0.7513	0.4378	0.00178	16.59
4	3	1.85E+07	0.376	0.6025	0.6044	0.3636	0.00164	16.73
5	3	2.19E+07	0.3945	0.6516	0.2842	0.1609	0.00161	16.92
1	4	1.50E+08	0.4089	0.6919	1.6576	0.4019	0.6023	18.82
2	4	1.77E+08	0.2714	0.3724	0.4236	0.2604	0.8246	18.99
3	4	2.05E+08	0.2746	0.3785	0.5118	0.3467	0.8582	19.13
4	4	2.23E+08	0.2245	0.2895	0.5349	0.3854	0.6714	19.22
5	4	2.49E+08	0.2733	0.3761	0.4414	0.3138	0.5927	19.33
1	5	9617544	0.5737	1.346	-0.2025	-0.0926	0.5927	16.07
2	5	7089874	0.7753	3.4508	-0.0655	-0.0263	0.9306	15.77
3	5	8776545	0.696	2.2891	0.0563	0.0137	0.919	15.98
4	5	1.42E+07	0.4964	0.9857	0.2801	0.0968	0.8559	16.47
5	5	1.83E+07	0.7626	3.2123	0.1644	0.0517	0.8998	16.71
1	6	1.92E+08	0.2642	0.3591	0.3876	0.2495	0.9306	18.94
2	6	2.17E+08	0.3002	0.429	0.3421	0.2312	0.919	19.07
3	6	2.53E+08	0.2604	0.3521	0.3001	0.2012	0.8559	19.19
4	6	2.78E+08	0.2416	0.3186	0.3098	0.2216	0.8998	19.34
5	6	2.95E+08	0.2405	0.3167	0.1669	0.123	0.7254	19.44
1	7	4.53E+07	0.2089	-1.9591	-0.1588	0.0634	1.032	19
2	7	1.68E+08	0.2934	7.1414	0.2093	0.0166	1.2977	17.89
3	7	2.40E+08	0.246	14.5231	0.071	0.0054	1.6524	18.48
4	7	2.41E+08	0.2422	11.5231	0.0357	0.0026	0.4352	18.93
5	7	2.76E+08	0.1889	15.0207	1.5398	0.1094	0.5392	19.29
1	8	1.16E+08	0.2089	0.2641	0.3969	0.2619	1.032	19.3
2	8	1.54E+08	0.2934	0.4153	0.325	0.212	1.2977	18.57
3	8	1.43E+08	0.246	0.3263	0.2062	0.1562	1.6524	18.85
4	8	1.94E+08	0.2422	0.3196	0.2916	0.1914	0.4352	18.86
5	8	2.09E+08	0.1889	0.2329	0.2032	0.1537	0.5392	19.08

Appendix: II. Research Clearance Letter

THE OPEN UNIVERSITY OF TANZANIA
DIRECTORATE OF POSTGRADUATE STUDIES

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Our Ref: HD/B/141/T.10
Regional Administrative Secretary,
Dar es Salaam Region
P.O.Box 11564
Dar es Salaam

Date: May 3rd, 2022

RE: RESEARCH CLEARANCE

The Open University of Tanzania was established by an Act of Parliament No. 17 of 1992, which became operational on the 1st March 1993 by public notice No.55 in the official Gazette. The Act was however replaced by the Open University of Tanzania Charter of 2005, which became operational on 1st January 2007. In line with the Charter, the Open University of Tanzania's mission is to generate and apply knowledge through research.

To facilitate and simplify the research process therefore, the act empowers the Vice Chancellor of the Open University of Tanzania to issue research clearance, on behalf of the Government of Tanzania and Tanzania Commission for Science and Technology, to its staff and students who are researching in Tanzania. With this brief background, the purpose of this letter is to introduce to you **Mr Victor Akalikawe Matondane, Reg.No: HD/B/141/T.10** pursuing a **Master of Business Administration (MBA)**. We hereby grant this clearance to conduct research titled "*Capital Structure and Firms Performance: Evidence from Listed Non-Financial Companies in Dar Es Salaam Stock Exchange*". He will collect his data in your area from 5th, May 2022 to 4th, July 2022.

If you need further information, kindly do not hesitate to contact the Deputy Vice-Chancellor (Academic) of the Open University of Tanzania, P.O. Box 23409, Dar es Salaam. Tel: 022-2-2668820. Lastly, thank you in advance for your assumed cooperation and facilitation of this research academic activity.

With kind regards,

Prof. Magreth Bushesha

DIRECTOR OF POSTGRADUATE STUDIES