RELATIONSHIP BETWEEN FIRM GEARING AND FINANCIAL PERFORMANCE OF SUGAR PROCESSING COMPANIES IN WESTERN KENYA REGION

BY

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ABSTRACT

Gearing is the use of the debt capital to finance activities of the firm. The capital structure of the firm consists of debt and equity. Studies have been done based on capital structure theories on which this research has been anchored on, such as static trade off theory, pecking order theory and agency theory which analyzed the extent, proportion of finance and costs related with the use of gearing respectively. All this theories gave a conflicting results as to whether the relationship between Gearing and Financial Performance was either positively or negatively related or their was no relationship. The purpose of this study was to examine this conflict by investigating the relationship between Firm Gearing and Financial Performance of sugar processing companies in western Kenya region. The specific objective was to; establish determinant, extent of Gearing and the relationship between Gearing and Financial Performance in the capital structure of Sugar processing companies in western Kenya region based on their financial statements from 2009 to 2013 and factors affecting the capital structure decisions The study was guided by the conceptual framework which showed equity and debt as independent variable quantified by the gearing ratios measuring extent of gearing and dependent variables measuring financial performance in the form of ratios to bring out the relationship while the intervening variables measured the determinant of gearing. The population comprised of 364 employees in the finance department of the nine manufacturing companies where random sampling was used to select 187 employees. The research was conducted using descriptive survey research and data panel regression analysis. Primary data was collected using structured questionnaires while secondary data was collected from financial statements and were analyzed using factor analysis and data panel regression analysis respectively. The study found out that; objective one, as more gearing was used past optimum level it become expensive concurring with trade off and pecking order theories of positive relationship between gearing and financial performance with a correlation of +0.473, objective two found a correlation of +0.551 which concurred with the Modigliani and miller (1968) and trade off theory on the usage of debt which had a positive relationship with financial performance due to interest tax shield making debt a cheaper source of finance. The third objective found out that their was a strong positive relationship between financial gearing and financial performance at a confidence level of 99%,99% and95% ,R-Squire of 0.9811%,0.9156% and 0.9346% for return on asset, operating profit margin and net profit margin respectively. The study concluded that indeed their was a strong positive relationship between financial gearing and financial performance concurring with Modigliani and miller (1968) and trade off theories of capital structure. The study is significant as it will help investors to gauge how effective to use debt to finance firm's activities in sugar manufacturing companies and contribute to the literature on relationship between financial gearing and financial performance in public and private sector.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Capital structure refers to the firm's financial framework which primarily consists of the debt and equity used to finance the firm. From the initial work of Modigliani and Miller (1958) on capital structure, it is believed that capital structure has both advantages and disadvantages on the growth of companies and its strategic investments. However according to Myers (2001) there is no universally accepted theory that explains the determinants of debt-equity choice and how it relates to financial performance of companies. Never the less they are accepted corporate financial management theories on

Capital structure such as: static trade-off, pecking order, and agency cost theories which attempts to identify the perceived determinants of gearing and how gearing relates with financial performance of the company.

The static trade-off theory of capital structure (also referred to as the tax based theory) states that optimal capital structure is determined by balancing the net tax advantage of debt financing with the gearing related costs such as financial distress and bankruptcy, holding firm's assets and investment decisions constant (Baxter, 1967); (Altman, 1984). According to Myers (1984), firms adopting this theory could be regarded as setting a target gearing ratio with a gradual attempt to achieve it. On the other hand, pecking order theory (also referred to as the information asymmetry theory) proposed by Myers (1984) states that firms prefer to finance new investment, first internally with retained earnings, then with debt, and finally with an issue of new equity. Myers (1984) argues that an optimal capital structure is difficult to define as equity appears at the top and the bottom of the 'pecking order'. The agency cost theory of capital structure states that an optimal capital structure will be determined by minimizing the costs arising from conflicts between the parties involved. Jensen and Meckling (1976) argue that agency costs play an important role in financing decisions due to the conflict that may exist between

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shareholders and debt holders. Consequently, the capital structure theories give conflicting thoughts on the major determinants of gearing in the capital structure and how gearing relates with financial performance of companies. However studies such as Jõeveer (2013); De Jong, Kabir, and Nguyen (2008); Kayo and Kimura (2011) and Frank and Goyal (2009), have identified the determinants of gearing in capital structure of companies to include profitability, tangibility, growth, tax, and company's risk. In line with these findings, this study attempted to establish the major determinants of gearing in the capital structure of sugar processing companies in Kenya.

Researchers continue to analyze capital structure and try to determine whether optimal capital structures exist. An optimal capital structure is usually defined as one that will minimize a company's cost of capital while maximizing firm value i.e. financial performance. Therefore capital structure decision has a great effect on the financial success of the company. Precisely how companies decide the extent of gearing in their capital structures remains a problem (Rao, Al-Yahyaee and Syed, 2007). Do traditional capital structures of an industry influence the companies' managers' decisions or are there other reasons behind their actions in capital structure? The answers to these questions are important, because the actions managers take will have an impact on the financial performance of the firm, the extent of gearing within the capital structure, as well as influence how the investors will perceive the company. For that reason, in addition to establishing the determinants of gearing in the capital structure, this study also endeavored to determine the extent of gearing in capital structure of sugar companies in western Kenya region, and analyze the relationship between gearing and financial performance of these companies for the period 2009 to 2013.

In developing countries, company financing decisions involve a wide range of policy issues. At the macro level, they have implications for capital market development, interest rate and security price determinations, and regulation. At the micro level, such decisions affect capital structure, corporate governance and company development (Green, Murinde and Suppakitjarak 2002). Knowledge about capital structures has mostly

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been derived from data from developed economies that have many institutional similarities (Booth, L., Aivazian, V., Demirguc-Kunt, A.and Maksimovic, V. 2001) .

Many studies on corporate financing policy and impact of debt on performance focus on firms from developed countries where there are corporate and personal taxes and developed financial markets (e.g.Barton and Gordon, (1988), Bettis, (1983), Bradley, Jarrell, and Kim, (1984), Capon, Farley, and Hoening (1990), and Titman and Wessels (1988)). It was important to note that different countries have different institutional arrangements, mainly with respect to their tax and bankruptcy codes, the existing markets for corporate control, and the roles banks and securities markets play. There are also differences in social and cultural issues and even the levels of economic development. These differences actually warrant taking a thorough look at the issue from the perspective of developing economies, especially within the context of East Africa.

The few studies on developing countries have not even agreed on the basic facts. Singh and Hamid (1992) and Singh (1995) used data on the largest companies in selected developing countries. They found that firms in developing countries made significantly more use of external finance to finance their growth than was typically the case in the industrialized countries. They also found that firms in developing countries rely more on equity finance than debt finance. These findings seem surprising given that stock markets in developing countries are invariably less well developed than those in the industrial countries, especially for equities. However, in an Indian study, Cobham and Subramaniam (1998) used a sample of larger firms and found that Indian firms use substantially lower external and equity financing. In a study of large companies in ten developing countries, Booth (2001) also found that gearing ratios varied substantially across developing countries, but overall were not out of line with comparable data for industrial countries.

Further, in the last decade, most countries have shifted their development strategies

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towards a greater reliance on private companies and on the use of organized capital markets to finance these companies. This underlines the importance of research on the functioning and financing of private companies in a wide range of institutional environments, particularly in developing countries such as Kenya and within the sugar industry (Green, Murinde and Suppakitjarak, 2002). However, according to Kenya Sugar Board report (2013), the Kenyan sugar sector is in crisis since most of the sugar manufacturing firms are challenged with a heavy debt burden and continuous poor financial performance. This predicament led to the closure of Ramisi sugar factory in 1988, while Muhoroni, Miwani and Busia sugar companies have been placed under receivership in March 2001, April2001 and August 2006 respectively. Therefore, this study attempted to answer the question on how debt levels impact on the financial performance of sugar processing companies from Western Kenya Region.

1.2   Statement of the problem

Government reports have shown that debt levels within most of the companies in the sugar industry have been increasing while their financial performance has taken a downward trend in the last decade. This has been evident by several companies such as Muhoroni, Miwani and Busia sugar companies have been placed under receivership in March 2001, April2001 and August 2006 respectively and the closure of Ramisi sugar factory in 1988 because of debt and financial performance difficulties. This Study attempted to investigate the relationship between firm gearing and financial performance of sugar processing companies in western Kenya region.Further studies on the relationship between gearing ratios and financial performance have generated mixed results ranging from those supporting a positive relationship hypothesis, negative relationship and those opposing any relationship. Most of these studies have data from developed economies with less data from agricultural corporations such as sugar companies. In addition studies on capital structure in Kenya have focused on the impact of gearing on financial performance of companies listed on the Nairobi Securities Exchange, which excludes most of the sugar companies from Western Region. Hence, this study attempted to learn existing debt problems within the sugar industry and fill the

existing literature gap by investigating the relationship between firm gearing and financial performance of sugar processing companies in Western Kenya Region.

1.3 Objectives of the study

The main objective of the study was to investigate Relationship between Firm Gearing and Financial Performance of Sugar Processing Companies in Western Kenya Region. The study was guided by the following specific objectives;

i. To identify the determinants of gearing in the capital structure of sugar manufacturing companies in Western Kenya Region.

ii. To determine the extent of gearing ratio in sugar processing companies in Western Kenya Region.

iii. To analyze the relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013.

1.4 Research questions

The study answered the following research questions

i. What are the determinants of gearing in the capital structure of sugar manufacturing companies in Western Kenya Region?

ii. What is the extent of gearing ratio in sugar manufacturing companies in Western Kenya Region?

iii. How does gearing ratio of sugar manufacturing companies in Western Kenya Region relate with their financial performance for the five year period from 2009 to 2013?

1.5 Scope of the study

This study examined the effect of gearing on the financial performance of sugar manufacturing firms in Kenya and it covered a period of five years from 2009-2013. This period was characterized by an increase in debt level and declining financial performance in the sugar manufacturing companies as mumias sugar company made a loss of one billion six hundred and seventy million in 2013 and was in the process of

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restructuring its five billion loss with financial institutions while Nzoia sugar company was advanced by the government 800 million and it posted a loss of 667 million (Wafula, 2014).

1.6 Justification of the study

The study was intended to be beneficial to the Kenya government as it shed light on the importance of financing decisions on financial performance since most of the nation's parastatals are in financial crisis due to over reliance on debt. The study would be beneficial to the new industries such as Kwale International Sugar Company, Sony Sugar Company, Kibos Sugar, Butali Sugar Company, Sukari and Transmara among others on the desired capital structure mix that enhances financial performance. The study was to contribute significantly to the body of knowledge on capital structure and financial performance. The findings were to be used as a source of reference for other researchers. In addition, academic researchers needed the study findings to stimulate further research in this area and as such form a basis of good background for further researches.
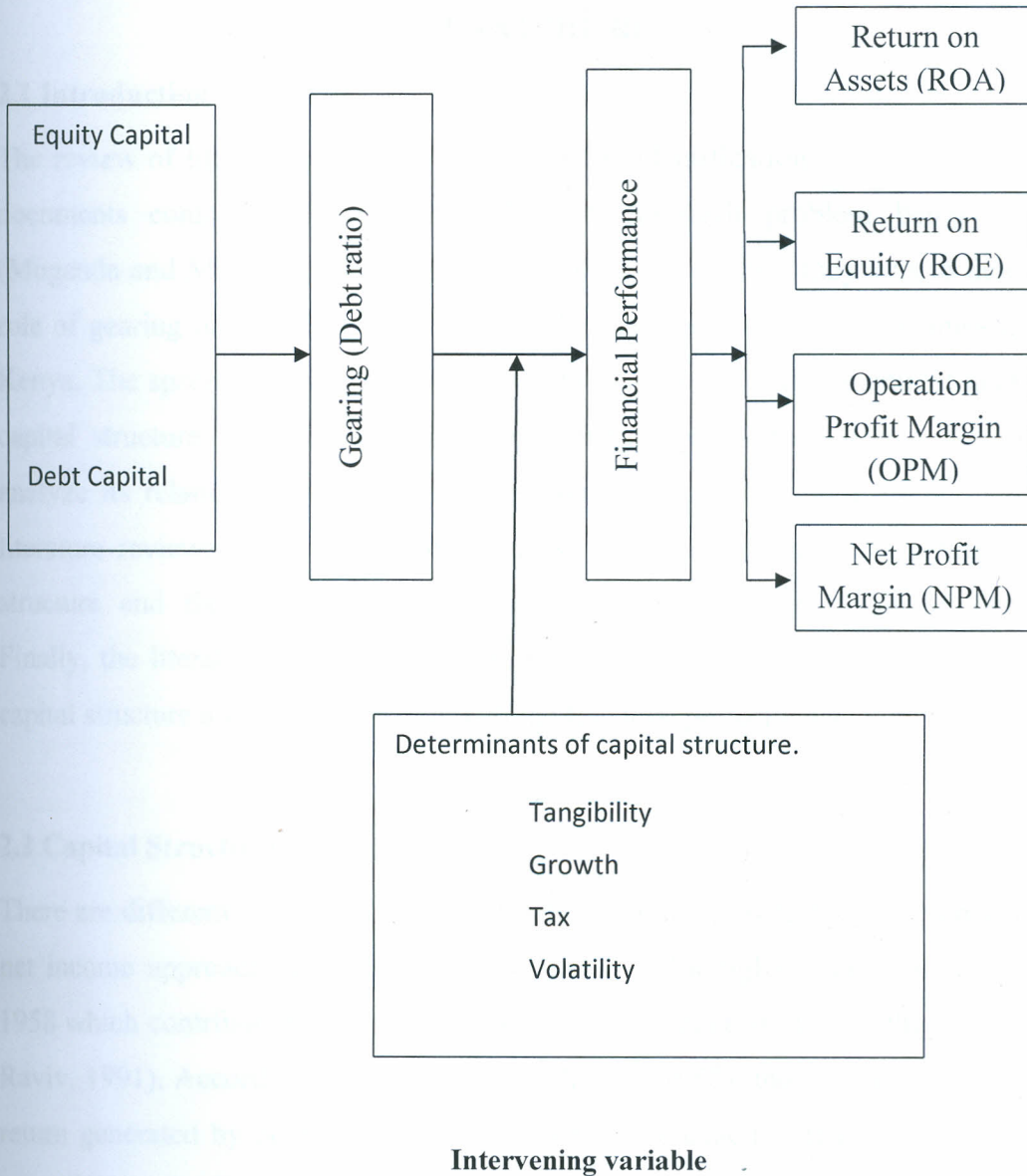
1.7 Conceptual Framework

This study was guided by the following conceptual framework. Figure 1 illustrates Conceptual Framework for relating gearing to financial performance of sugar companies in Western Kenya.

The equity capital and debt capital were the independent variable and they measured the extent of gearing in sugar manufacturing companies depending on their amounts. While the financial performance which depends on the gearing level, was measured by the dependent variables in the form of ratios of the sugar manufacturing companies which calculated the financial performance. Return on Assets (ROA) measured the efficiency of the firm, Operation Profit Margin (OPM) and Net Profit Margin (NPM) measured the profitability of the firm, Return on Equity (ROE) and while the determinant in the capital structure was measured by the intervening variables.

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Figure 1: Conceptual Framework for relating gearing to financial performance of sugar companies in Western Kenya.

Self Conceptualization June 2014

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The review of literature involved the systematic identification, location and analysis of documents containing information related to research problem being investigated (Mugenda and Mugenda, 2003). The broad objective of this study was to determine the role of gearing on financial performance of sugar manufacturing companies in Western Kenya. The specific focus of the study was to identify the determinants of gearing in the capital structure of sugar manufacturing company in western Kenya Region, and to analyze its relationship with financial performance of these companies. Therefore the literature reviewed the theories of capital structure, determinants of gearing in capital structure and the relationship between capital structure and financial performance. Finally, the literature reviewed the empirical studies on determinants of gearing in the capital structure and its relationship with the financial performance of companies.

2.2 Capital Structure Theories

There are different theories of capital structure beginning with the traditional theories of net income approach, and the celebrated paper of Modigliani and Miller published in 1958 which contributed majorly towards the development of modern theories (Harris and Raviv, 1991). According to Modigliani and Miller (1958), the increased expected rate of return generated by debt financing is believed to be exactly offset by the risk incurred, regardless of the financing mix chosen (Rao et al, 2007). This theory was later known as the "theory of irrelevance". It was theoretically very sound but was based on the assumptions of perfect capital market and no tax world, which were not valid in reality. In correction they incorporated the effect of tax on value and cost of the capital of the firm (Modigliani and Miller, 1963). Therefore, they argued that, in the presence of corporate tax, the value of the firm varied with the variation of the use of debt due to the

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tax benefit on interest bill, which makes the gearing level within the capital structure relevant in financial management decisions (Baral, 1996).

However according to Myers (2001) there is no universally accepted theory that explains the determinants of gearing level in the capital structure and how it relates to the value of companies. Never the less, there are modern accepted corporate financial management theories on Capital structure such as: static trade-off, pecking order, and agency cost which were also developed from the late 1970s. Each theory has tried to explain the extent of gearing in the capital structure, its determinants and its relationship with financial performance of companies.

2.2.1 Trade-Off Theory

Trade-off theory claims that a firm's optimal debt ratio is determined by a trade-off between the bankruptcy cost and tax advantage of borrowing, holding the firm's assets and investment plans constant. The goal of the firm is to maximize the firm's value or its financial performance and for that reason debt and equity are used as substitutes. According to this theory, higher financial performance decreases the expected costs of distress and causes firms to increase their tax benefits by raising gearing; therefore, firms would prefer debt financing because of the tax benefit. However, the increase in gearing also increases the risk of bankruptcy and financial distress (Scott, 1977). Therefore, based on this theory, firms would prefer debt over equity until the point where the profitability of the firm cannot offset their financial distress costs.

This theory would be applicable for large firms which are more likely to generate high profits. Since small firms are less likely to have high profits, they would not have an option to choose debt financing for the tax shields advantage (Petit and Singer, 1985). The theory therefore suggested that firms with substantial amount of intangible assets would rely on equity financing, whereas those firms which have tangible assets would rely heavily on debt financing (Harris And Raviv, 1990). Hence, Tudose (2012) argued that static trade-off theory, whose fundamental claim is that companies set a target debt

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financing level which they attempt to reach, predicts a positive relationship between the debt financing level of a corporation and its financial performance.

According to Myers (1984), trade-off theory is easily accepted because it explained why firms do not use excessive debt. On the other hand, Hackbarth, Hennesy and Leland (2007) argued that trade-off theory analyze the optimal amount of debt, but do not provide guidance on debt structure or mix. However, after reviewing all the constraints of the trade-off models, Frank and Goyal (2005) analyzed the models into static and dynamic trade-off theories, and concluded that the trade-off class of models now appears to be much more promising than it did even just a few years ago. Therefore, the study attempted to find out whether trade-off theory offers a better explanation of determinants of gearing and how gearing relates with financial performance of sugar processing companies in Western Kenya Region.

2.2.2 Pecking Order Theory

Pecking Order Theory was developed by Myers and Majluf, (1984) which stated that capital structure was driven by firm's desire to finance new investments, first internally, then with low risk debt, and finally if all fails, with equity. Therefore, the firms preferred internal finance to external finance. It basically stated that firms considered all methods of financing available and use the least expensive source first (Myers, 1984); (Brealey and Myers, 2000). Pecking order theory suggests that firms issuing debt send a positive signal about their future prospects. This also shows that the company has more investment opportunities and growth prospects than it could handle with internally generated funds. The reason behind this is that managers who are unsure of future profitability will not subject the firm to bankruptcy risks. Therefore, only those firms that are confident of their ability to repay obligations will issue debt.

In summary, according to pecking order theory, equity is issued to spread risk amongst equity holders, while debt is issued to a void sharing wealth (Roa 2007). That means, pecking order theory is consistent with shareholder wealth maximization and therefore

has wide support. Unlike the trade-off theory, the pecking order theory does not have a well defined optimal level of debt financing, because there are two kinds of equity, internal (retained earnings) and external, one at the top of the pecking order and one at the bottom (Myers 1984). Myers, in this study, argued that the debt financing level of a corporation reflects its cumulative requirements for external finance.

It is also not clear whether the firm will use all the available internal sources of finance first and at what point external equity is introduced. This is commonly referred to as information asymmetry problem. Further, according to the pecking order theory, more profitable corporations generate higher earnings that can be used for self-financing, enabling them to opt for less gearing in capital structure of the firm (Lemmon & Zender, 2010). While, less profitable corporations may not enjoy the same opportunity and might be compelled to take on more debt financing in order to finance their ongoing activity. Therefore, in contrast to trade-off theory, the pecking order theory asserts a negative relationship between the gearing level and the financial performance of the corporation (Tudose, 2012).

However, Shyam-Sunder and Myers (1999), in their study testing static trade-off against pecking order theory, concluded that the pecking order theory is an outstanding first-order descriptor of corporate gearing level mostly for established corporations. Therefore, it was the interest of the study to find out if pecking order theory is the best first- order descriptor of the extent of gearing within the capital structure of sugar companies in Western Kenya Region and its relationship with their financial performance.

2.2.3 Agency Theory

Agency theory focused on the costs which are created due to conflicts of interest between shareholders, managers and debt holders. According to Jensen and Meckling (1976), the extent of gearing in capital structure is determined by agency costs. They discuss that optimal gearing level in the capital structure is the result of trade-off between the benefit (discipline of management) and cost (excess risk-taking by shareholders) of debt financing. Following Jensen and Meckling model, other models, such as Harris and Raviv (1990) and Stulz, (1990) emerge based on agency costs. In their models, the

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conflicts between managers and shareholders occur due to disagreements over an operating decision. Harris and Raviv (1990) adopt that even if shareholders or debt holders prefer liquidation of the firm, managers always choose to continue the firm's business.

The agency theory is an important model, yet controversial (Eisenhardt 1989). Its proponents argued that it is a revolution and puts in place a foundation for a powerful theory of organizations. Its detractors called it trivial, dehumanizing and dangerous. However, Eisenhardt (1989) noted that the agency theory is applicable in various situations, ranging from macro-level concerns, such as regulatory policy, to micro-level experiences such as blame, impression management and other expression of self-interest. However, in most cases, agency theory has been applied to organizational matters such as acquisition and diversification strategies, board relationships, ownership and financing (Eisenhardt 1989). In financing decisions, the agency theory controversies arise on the empirical tests' evidence in the capital structure literature, which gives mixed results (Berger and Bonaccorsi di Patti 2006). It was therefore necessary to find out whether the extent of gearing in the capital structure, its determinants and how it relates with financial performance of sugar companies in Western Kenya Region are best explained by agency theory.

2.3 Determinants of gearing in the capital structure of a firm

The determinants of gearing in the capital structure remain indefinite despite much theoretical literature and decades of empirical tests exists (Frank and Goyal, 2009). A number of studies, like Jõeveer (2013); De Jong et al. (2008); Kayo and Kimura (2011) and Frank and Goyal (2009), categorizes the major determinants of gearing in the capital structure of a firm into profitability, tangibility, growth, tax, volatility and industry norm of the firm.. These determinants empirically influence gearing level decisions of firms, either positively or negatively.

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2.3.1 Tangibility

It is believed that corporations operating with more tangible assets have a higher debt capacity (Byoun, 2008). Kayo and Kimura (2011) suggested that asset tangibility plays an important role on debt financing decisions since the security capability of tangible assets in place tend to increase debt financing levels. In addition, agency theory proposes that corporations with high debt financing levels tend to under invest, or invest below their optimal investment levels, and thus transfer wealth away from debt holders to equity holders (Deesomsak 2004). They argue that these predictable behaviors of under investment cause debt holders to require security because the use of secured debts can help ease this problem.

They also argue that the bankruptcy value of the firm increases with the tangibility of assets and decreases the probability of mispricing in the result of bankruptcy. Therefore, the existence of tangible assets within the assets of a corporation serves two critical purposes: it enables the corporation to guarantee the assets as security, thereby reducing the agency costs of debt, like risk shifting; and, at the same time, protects the debt holder in the event of liquidation (Rajan and Zingales, 1995). It means that corporations with difficulties in providing collaterals are prone to pay higher interest, or may be forced to issue equity instead of debt finance, which implies a positive relationship between tangibility of assets and debt financing.

Asset tangibility can also discourage debt financing since a larger proportion of tangible assets in the asset portfolio of a corporation is expected to reduce supply side constraints (Majumdar 2012). According to Frank and Goyal (2009), the pecking order theory makes opposite predictions since low information asymmetry associated with tangible assets makes equity issuances less costly. Thus, debt financing levels should be lower for firms with higher tangibility.

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2.3.2   Growth

Generally, theoretical studies suggest that company growth opportunities are negatively related with debt financing levels (Huang and Song, 2006). Growth increases costs of financial distress, reduces free cash flow problems, which the managers of companies tend to protect, hence making bad debt financing related agency problems (Frank and Goyal, 2009). According to these authors, growing companies place a lot of emphasis on investments that benefit the shareholders; hence, the trade-off theory predicts that expansion reduces debt financing levels. Titman and Wessels (2012) agreed with this argument and suggest that the cost related with the agency relationship is likely to be higher for companies in growing industries, which have more flexibility in their choice of future investments. They, therefore, propose that projected future growth should be negatively linked to debt financing levels. Deesomsak et al. (2004) indicated that higher growth opportunities provide more benefits to invest sub-optimally, or to recognize risky projects that take wealth from debt holders. These opportunities raise the cost of borrowing. Consequently, growing companies tend to use internal resources or equity capital rather than debt. In addition, they stated that companies with high growth and whose value comes from intangible growth opportunities may not want to obligate themselves to debt servicing as their revenue may not be available when needed.

Nevertheless, growth opportunities can also compare positively with leverage, in line with the pecking order presumption (Kayo and Kimura, 2011). According to Frank and Goyal (2009), the pecking order theory implies that corporations with more investments, holding profitability constant, should amass more debt over time. Thus, growth opportunities and debt financing are positively related under the pecking order theory. In addition, the pecking order of debt financing decisions derives from the asymmetric information between managers and investors (Kayo and Kimura, 2011). Asymmetric information propositions fronted by Myers and Majluf (1984) argued that managers tend to issue new shares when prices are overestimated, thus benefiting old shareholders. This scenario may cause new shareholders to demand a discount on the new prices of shares. Consequently, managers avoid issuing new shares, even though this decision may result

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in firms ignoring profitable investments. This behavior, therefore, may increase the issue of debt instead of equity, thus rising debt financing levels.

2.3.3 Volatility

Corporation risk or volatility is a measure for the probability of financial distress and it is generally expected to be inversely related with debt financing level (Huang and Song, 2006). According to Frank and Goyal (2009), corporations with more volatile cash flows face higher predictable costs of financial distress and should use less debt. They argued that more volatile cash flows are capable of reducing the probability of tax benefits being used. Therefore, higher risk may result in less debt financing under the trade-off theory. Deesomsak et al. (2004), looking at corporation risk from the point of earning of companies, argued that higher volatility of earnings increases the likelihood of financial distress, since corporations may not be able to fulfill their debt servicing contacts. This implies that the debt financing level of companies decreases with increase in earnings volatility, leading to an expected inverse relationship.

In their further analysis of corporation's risk, Frank and Goyal (2009) suggested that it should be expected that companies with risky equity shares are those which are very volatile and such companies may suffer more from adverse selection in the stock markets. Therefore, according to the pecking order theory, these corporations, being riskier because of their volatile stocks, would forecast a higher debt financing level. In addition, Frank and Goyal (2009) argued that even companies with risky cash flows might need to periodically access the external capital markets, thereby increasing debt financing levels.

2.3.4 Tax

Corporation tax rates should influence debt financing since debt interest expenses are typically tax deductible, whereas dividend payments are not (Antonczyk and Salzmann, 2014). It is, therefore, logical that higher tax rates will involve greater interest tax shield benefits, and consequently, induce more debt financing rather than equity financing (Jõeveer, 2013). This reasoning is the main theme of the pioneering study by Modigliani and Miller (1963) and almost all researchers now believe that company taxes should be significant to debt financing decisions of companies. (Huang and Song, 2006).

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Therefore the objective of this was to identify the determinants of gearing in the capital structure of sugar manufacturing companies in Western Kenya Region for five year period, from 2009 to 2013

2.4 Firm Gearing and Financial Performance of a Firm

2.4.1 Firm gearing

Gearing refers to debt securities the firm issues in order to raise the needed capital (Rao, Al-Yahyaee, and Syed, 2007). Modigliani and Miller theory of 1963 assumes that a firm's value is maximized when it employs more of debt in its capital structure than equity. When debt is used in the capital structure, the average cost of capital is reduced and profitability enhanced (Modigliani and Miller, 1963). Gearing is a financing strategy designed to increase the rate of return on owner's investment by generating a greater return on borrowed funds than the cost of using the funds. Gearing would be positive if return on assets (ROA) is greater than the before-tax interest rate paid on debt. Negative gearing occurs when a firm generates a return on assets (ROA) that is less than the before-tax interest on debt (Damodaran, 1999).

The major advantage of using debt is its low cost compared to the cost of equity. The actual cost of debt to the firm is the after-tax cost of debt, which is the market interest rate less the marginal tax rate proportion. The actual cost of debt would therefore be:

$$\mathbf{K_d = I\,(1\text{-}t)} \dotfill (1)$$

Where $\mathbf{K_d}$ = Cost of debt

   $\mathbf{I}$ = Interest rate payable (Market interest rate)

   $\mathbf{t}$ = The marginal tax rate

(Correia 2005).

The use of debt therefore reduces the amount of tax to be paid by the firm and increases the return to shareholders whilst the use of equity does not enjoy such a benefit. In addition to the tax advantage, the cost of debt is generally low as compared to equity due to the lower risk associated with debt as debt holders has the first claim in the case of insolvency (Damodaran, 1999). Debt also makes planning easy because interest cost on debt is usually fixed which allows efficient planning as the cost will be known (Obert and

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Olawale, 2010). As long as the interest on debt is lower than the return that can be earned on the funds supplied by creditors, this excess return accrues to the owners of the firm as their benefit of using debt (Bernstein, 1993). Though debt has its fair portion of benefits, it does not come without costs. The major costs associated with debt include bankruptcy, agency costs and loss of flexibility (Damodaran, 1999).

2.4.2 Financial Performance of a Firm

According to San and Heng (2011), companies performance can be measured by variables which involve productivity, profitability, growth or, even, customer's satisfaction. These measures are related among each other. Financial measurement is one of the tools which indicate the financial strengths, weaknesses, opportunities and threats. Those measures are return on investment (ROI), residual income (RI), earning per shares (EPS), dividend yield, price earnings ratio, growth in sales, market capitalization and others (Barbosa and Louri, 2005). One of the most fundamental facts about businesses is that the operating performance of the firm shapes its financial structure. It is also true that the financial situation of the firm can also determine its operating performance.

The financial statements are therefore important diagnostic tools for the informed manager. Management researchers prefer accounting measures of performance, such as return on equity (ROE), return on investment (ROI), and return on assets (ROA), along with the variability in these returns measures. Researchers from finance and economics seem to prefer market returns or cash flow measures along with their variability as performance measures. Some performance measures in previous studies typically measure accounting rate of return (Rao et al., 2007). According to there study, the idea behind this measure is perhaps to evaluate performance from a management standpoint. They argue that return on investment (ROI), return on capital (ROC), return on assets (ROA) and return on sales (ROS) are essentially efficient measures. That is, how well management is using the assets as measured in currency terms to generate accounting returns per currency of investment, assets or sales. Return on assets (ROA) and return on equity (ROE) are the most frequently used performance measures in prior studies for

example(Carter, 1977), (Rao et al., 2007) and (Obert and Olawale, 2010).It was the objective of this study to find out if there is relationship between gearing and financial performance of sugar manufacturing companies in Western Kenya Region.

2.5 Empirical findings on determinants of gearing in capital structure of a firm

There is no consensus regarding the empirical findings on determinants of gearing on capital structure within corporations. Different studies have given different results depending on the types of companies, nature of the industry and the economic environment of the country (Mokhova and Zinecker 2014).

2.5.1 Tangibility

The pecking order theory recognizes a negative relationship between the asset tangibility and debt financing level, whereas the trade-off theory supports a positive one Baltacı and Ayaydın (2014) argued that, from a trade-off opinion, one expects that companies with a higher ratio of tangible assets-to-total assets are subject to lower costs of financial distress, as tangible assets suffer from a lesser loss of value in case of bankruptcy. Also, tangible assets are easier to price for outsiders, resulting in lower information asymmetry, a smaller amount of pronounced agency costs of debt, and a higher debt capacity.

On the other hand, the pecking order theory predicts that firms with less collateral face higher information costs and, therefore, favours debt financing to equity financing. Some studies like Deesomsak, Paudyal and Pescetto (2004); Gaud *et al.* (2005); reported a negative relationship, especially when more than one measure is used for debt financing levels.

2.5.2 Growth

The expected theoretical relationship between corporation growth opportunities and debt is negative in line with trade-off and agency theories since a corporation's growth increases financial distress and agency cost of debt (Deesomsak, Paudyal and Pescetto 2004) They also argued that, to a small extent, a positive relationship is also expected in

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line with the pecking order and signaling theories. Most observations have supported the negative relationship between a corporation's growth opportunities and its debt financing level (Bauer 2004) Huang and Song (2006) On the other hand, some observations, like Daskalakis and Psillaki (2008), have shown a positive relationship.

2.5.3 Volatility

The debt financing of corporations is expected to decrease with increase in earnings' volatility, which is used as a measure of risk, since higher volatility of earnings increases the probability of financial distress as corporations may not be able to fulfill their debt-servicing contracts Deesomsak, Paudyal and Pescetto (2004). This implies that a corporation's debt-financing level decreases with increase in the corporation's risk, leading to an expected inverse relationship. Bauer (2004) also accepted the fact that the relationship can be positive, especially when the variance of the corporation's assets increases and, in turn, reduces the systematic risk of the equity.

2.5.4 Tax

Most studies fail to find plausible or significant tax effects on debt-financing behaviour since debt-financing measures of debt/equity ratios are the cumulative result of years of separate decisions and tax shields have a negligible effect on the marginal tax rate for most corporations De Jong, Kabir and Nguyen (2008) have established a negative relationship. Conversely,(2004) studying corporations across different countries, identified a positive relationship and Lemma and Negash (2013) observed both positive relationship, for some countries in Africa, and a negative relationship for others within the continent. It was therefore the objective of this study to identify the determinants of gearing in the capital structure of sugar manufacturing companies in Western Kenya Region for five year period, from 2009 to 2013

2.6 Empirical findings on firm's gearing and financial performance

Under the agency costs' hypothesis, a high debt-financing level reduces the agency costs of outside equity and increases a companies value by constraining or encouraging managers to act more in the interests of the existing shareholders, thereby increasing a

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companies financial performanceBerger and Bonaccorsi di Patti (2006) . Agency costs can also exist from conflicts between debt and equity holders when there is a risk of default. This risk of default may create underinvestment which, in effect, tends to reduce the value of the companies.

Additionally, the pecking order theory argues that more profitable companies generate higher earnings that can be used for self-financing, enabling them to go for less debt financing, implying that good financial performance is equated to low debt financing levels Lemmon and Zender (2010). Debt financing is, therefore, theoretically expected to be either positively or negatively related with a corporation's financial performance.

The analysis of the results of empirical research indicates that the observations are contradictory, as they convey evidence both in favour of the positive relationship and in favour of the negative relationship between debt financing decisions and corporation performance Tudose (2012). Therefore, empirical evidence has supported both propositions, especially when deferent measures of financial performance are applied. For example, Welch (2004), using share price as the gauge of companies performance, found a positive relationship. Berger and Bonaccorsi di Patti (2006) also using profit efficiency as a corporation performance measure, found a positive relationship. Margaritis and Psillaki (2010), using companies efficiency as performance measure, equally found a statistically significant positive relationship. San and Heng (2011), studying large construction companies, found a positive relationship when they used return on capital (ROC) and earnings per share (EPS) as measures of corporations' financial performance. Fosu (2013) using return on assets (ROA), return on equity (ROE) and Tobin's q as a corporation's performance measure also found a positive relationship between the debt-financing level and a companies performance. Park and Jang (2013) also found a positive relationship while observing the interrelationships between free cash flow, diversification, debt financing and financial performance of corporations.

On the other hand, studies like Majumdar and Chhibber (1999); Zeitun and Tian (2007) found a negative relationship between debt financing and a corporation's financial performance. Most of the studies used financial accounting measures of financial

performance such as return on assets (ROA), return on equity (ROE), earnings per share (EPS) and operating profits. Thomas (2013) used the graphical means to observe the relationship and found a behaviour that confirms the agency theory proposal. Thomas observed that debt increased with the increase of companies performance, measured by earnings per share (EPS), up to some level (target debt), then declined as performance continued increasing steadily. This study used the common financial performance measures, such as return on asset (ROA), return on equity (ROE), and return on investment (ROI). It was the objective of this study to find out if there is relationship between gearing and financial performance of sugar manufacturing companies in Western Kenya Region.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 The Research Design

The study applied descriptive survey research design. This design helped in description of the data and whether the data analysis showed statistical relationships or was merely descriptive, in this case the financial performance of sugar processing companies in Western Kenya Region in relation to their capital structures.

3.2 Study area

The study area comprised of registered sugar manufacturing companies in Western Kenya Region as on June 30, 2011. According to data from Kenya Sugar Board directory, there were nine registered sugar companies in Western Kenya. The target population for this study comprised of 9 companies from Western region which formed the study area.

3.3 Population

For the purpose of this study, population has been defined in terms of the number of registered sugar manufacturing companies in Western Kenya Region as on June 30, 2011. According to data from Kenya Sugar Board directory, there are nine registered sugar companies in Western Kenya. The study targeted all the employees in finance department in the sugar manufacturing companies. According to the human resource department in the nine sugar manufacturing department there were a total of 364 employees in the finance department of sugar companies as illustrated in the table 1 below.

Table 1: Population and Sample for the Study

Company Name	Population	Sample Size
Butali Company	14	7
Chemelil Sugar Company	32	16
Kibos & Allied Sugar Company	20	10
Muhoroni Sugar Company	15	8
Mumias Sugar Company	100	51
Nzoia Sugar Company	56	29
Soin Sugar Company	15	8
Sony Sugar Company	85	44
West Kenya Sugar Company	27	14
Total	**364**	**187**

3.4 Sample size

A number of authors including Cochran (1963) and Fisher et al (1993) have suggested the formulae below to calculate sample size at 95% confidence level for target population greater than 10,000.

$$n = \frac{Z^2 pq}{d^2} \text{ --- (i)}$$

Where:

n is the desired sample size if the target population is greater than 10,000.

Z is the standard normal deviate at 95% confidence level.

P is the proportion in the target population estimate to have characteristics being measured.

q is the proportion in the target population estimate to lack characteristics being measured. It is calculated using the following formula (1-p).

d is level of statistical significance set.

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$$n = \frac{(1.96)^2 (0.5) (0.5)}{(0.05)^2} = 384 \text{---------------------(ii)}$$

Since there were 364 respondents the researcher modified the formula to facilitate sampling for a smaller population according to Cochran (1963) and Fisher et al (1993).

$$n_s = \frac{n}{1+\underline{n}}$$

$$N \text{--(iii)}$$

Where:

n_s is the number of employees in the finance department to be sampled.

n is the desired sample when target population is less than 10,000

N is the target population for the study was 364 respondents.

The study used stratified random sampling to select 187 employees in the finance department in the sugar manufacturing companies in Western Kenya Region as computed below.

$$n_s = \frac{384}{1+ \dfrac{384}{364}} = 187 \quad \text{employees.......(iv)}$$

$$2.05495$$

Sample size for Butali company was $n_s = \dfrac{14}{2.05495} = 6.8128$ approximately 7 respondent.

Sample size for other sugar companies were computed using the above formula.

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3.5 Data Collection Methods and Analysis

3.5.1 Primary data

The study adopted survey technique to collect primary data, using self administered structured questionnaire for the sampled financial managers and clerical finance officer of sugar manufacturing companies in western Kenya and was analyzed using factor method in the SPPS.

3.5.2 Secondary data

Secondary data was collected through review of company documents such as financial statements and literature review and analyzed using factor analysis and panel regression analysis. This kind of data is best analysed using the panel data regression model since the model incorporates both longitudinal and cross-sectional measures Daskalakis and Psillaki (2008). According to them, the panel data regression model reduces co-linearity among the explanatory variables, thus improving the efficiency of econometric estimates.

The panel regression model is further believed to give a small standard error of estimate compared to the ordinary least squares method Petersen (2009). The general form of the model can be specified as:

$$Y_{it} = \alpha + \beta X_{it} + \varepsilon_{it} \quad\quad\quad\quad\quad (V)$$

where the subscript i denotes the cross-sectional dimension and t represents the time-series dimension . The left-hand variable, Y, represents the dependent variable in the model. This variable represents the corporation's capital structure measures (financial gearing) and X contains the independent (explanatory) variable which represents the firm's financial performance measures i.e. ROA, ROE, OPM, and NPM , α is the constant and β represents the coefficient which measures the association between debt financing factors and debt (financial leverage) ratios. Finally, ε is the error disturbance term.

However, a number of studies, like Zeitun and Tian (2007) argued that a number of other factors, apart from financial gearing, can have an impact on a corporation's financial performance. These may be firm-specific related aspects, such as tangibility, growth, tax, and volatility, and have to be controlled (intervening variables). The objective is to

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control for other intrinsic and extrinsic factors which also impact on financial performance. In introducing the control variables in the model, the panel regression model IV below becomes more appropriate because it can incorporate the controlled variable as follows:

$$Y_{it} = a_0 + \beta X_{it} + \sum_{k=1}^{N} \gamma_k Z_{kit} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\text{(vi)}$$

In this model, Y_{it} is now a measure of financial performance of corporation i in year t and X represents the measure of the explanatory variable; capital structure (financial gearing). Variable Z represents controlled factors from $k = 1\ to\ N$ with their coefficients γ to be estimated. α_0 is the constant and β is coefficient of the measure of explanatory variable X which indicates the relationship between debt financing and financial performance of the corporations. The regression model can, therefore, be put simply as:

$$financial\ performance = \int(financial\ gearing + Tangibility + Tax +$$
$$Volatility + GrowtH)\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\text{(vii)}$$

In estimating the parameters of the regression models of financial performance and debt financing, Obert and Olawale (2010) have applied the ordinary least squares (OLS). Salehi and Biglar (2009) also used the OLS model and used the Statistical Package for Social Sciences (SPSS) in calculating the Pearson's correlations and the analysis of variance (ANOVA) tests. However, this study applied the regression model VI and analyzed it using the fixed effects (FE) and random effects (RE) regression models according to Forte, Barros and Nakamura (2013), using variable proxies shown in table 2 below.

3.5.3 Instrument for data collection tools

The study also used self administer structured questionnaires for the employees in the finance department of the sugar manufacturing companies. Selection of tools was guided by the nature of data collected, the time available as well as the objectives of the study. Self administered structured questionnaire was prepared, pre-tested and delivered to the finance department employees by the researcher. Questionnaire comprised of closed ended questions. The questionnaire comprised Section in line with objectives of the study. Appendix III shows the questionnaire.

3.5.4 Validity and Reliability of Research instruments

A data collection instrument was pre-tested to determine validity and reliability. Validity was necessary as it helped to determine the degree to which the results obtained from the analysis actually represented the variables under study. Content validity approach was used for the study. In content validity data instrument was tested to establish if it contained all possible items that was used in measuring the concepts (Mugenda and Mugenda 2008; Sekaran, 2006).

Reliability measured the degree to which a research instrument yielded consistent results after repeated trials. Reliability indicated the stability and consistency with which data collection instrument measured the concept under study and helped to assess the goodness of the measure. Test-retest reliability was used in the study (Kerlinger, 1983).

A data collection instrument was administered to a set of sugar manufacturing company's finance department employees to 27 managers of the sugar manufacturing companies to test the reliability of the items. The instrument was collected and after one week the tools were administered to the same managers by the researcher. The two set of the completed data collection instruments was computed by the researcher and analyzed using correlation. The correlation coefficient was (+0.8341), this implied that the tools yielded consistent result after the two trials and therefore it was reliable. The correlation coefficient tests, Pearson product moment correlation coefficient (r) and coefficient of determination (R-sq), and t-tests, at 90%, 95% and 99% levels of confidence, were applied to determine internal and external validity. Further, the robustness and Arellano-

Bond tests were applied to test the validity and reliability of the study regression models and variables.

3.6 Data Analysis: Interpretation and presentation

Data was analyzed using SPSS and the method adopted was factor analysis approach, according to the nature of responses gathered from the questionnaires. Quantitative data was analyzed through descriptive statistics such as cross tabulation, means, frequencies and percentages. Completed questionnaire was coded for identification purpose and to distinguish between responses. Closed ended questions was coded such that a question requiring a response "YES" was coded as 1 and a response requiring a response "NO" was coded as 0. After coding the responses were transferred into a summary sheet for tabulation, this was tallied to establish cross tabulation, means, and percentages. Results were presented using graphs and tables. The number of respondent received from the administered questionnaire was 187 while the financial statements gathered were from parastatals in the sugar manufacturing companies. Correlation among the factors in the factor analysis indicated the relationships on the factors while panel data regression model was used in the secondary data showed the relationships on gearing and financial performance on the variables. To establish the significance of individual variables in each of the regression models, the t-test was applied at 90%, 95% and 99% levels of confidence. The data analysis was done using both the Statistical Package for the Social Sciences (SPSS) and Data Analysis and Statistical Software (STATA) and the presentations and discussions of the results shown in chapter four. The results obtained were presented using tables, then analyzed according to the research objectives, followed by conclusions and recommendations arising from the outcomes.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter presents the results of the study followed by the discussion of findings in light of the research objectives. The first objective of the study was to establish determinants of gearing in the capital structure of sugar manufacturing companies in Western Kenya. This objective was analyzed by means of descriptive statistics and factor analysis. The second objective of the study sought to determine the level of gearing in sugar manufacturing companies in Western Kenya Region. The last objective was to analyze the relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013 from their financial statement using panel data regression model.

4.2 Determinants of Gearing on the Capital Structure of Sugar Manufacturing Companies.

The researcher presented its findings on descriptive statistics and then looked further on correlation matrix and rotated matrix.

4.2.1 Descriptive Statistics

The section presented findings on descriptive statistic on determinants of gearing on the capital structure of sugar manufacturing companies. The researcher was concerned with establishing determinants of gearing by asking the respondents the contribution of 17 factors on the capital structure of sugar manufacturing companies based on a scale of 5 where 1 was equally to strongly disagree; 2 was equally to disagree; 3 was equally to neutral; 4 was equally to agree; 5 was equally to strongly agree.

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Table 3 : Descriptive Statistics of determinants of Gearing on the Capital Structure of Sugar Manufacturing Companies in western Kenya region.

	Mean	Std. Deviation	Analysis N
In making debt and equity decisions, a company considers the market response to new issues.(B1)	3.54	1.123	187
Use of debt would decrease relative to equity if debt interest were no longer tax deductible. (B2)	3.48	1.133	187
A company would issue debt when equity is undervalued by the market (B3)	3.40	.936	187
If a company could issue unsecured long term debt at the same after-issue, after-tax cost of secured debt, it would increase its use of debt financing.(B4)	3.30	1.030	187
If a company were more dependent on R&D for its success, its debt to equity ratio would be lower(B5)	3.53	1.074	187
Private placements offer a satisfactory exchange of information between a company and investors without publicizing proprietary information in full.(B6)	3.41	1.085	187
A decision to issue long term debt sends a favorable signal to the market about future long term prospects(B7)	3.61	1.113	187
Restrictive covenants might be suggested in the hopes of convincing a doubtful lender to grant a loan (B8)	3.62	.989	187
A company issues shares when prices are high, even though present needs are not great, in order to build up a long term fund cushion.(B9)	3.33	1.041	187
Issuing debt is delayed because of transaction costs and fees, and retiring debt is delayed because of recapitalization costs and fees.(B10)	3.33	1.171	187
The decision to issue debt or equity is affected by the existence of tax loss carry forwards.(B11)	3.46	1.123	187
If bankruptcy occurred, finance directors would, in general, find comparable positions elsewhere (. B12)	3.52	1.309	187
A company issues debt when recent profits are not sufficient to fund activities.(B13)	3.76	1.336	187
Share price usually declines when debt is issued.(B14)	3.61	1.103	187
The present value of interest tax shields is balanced with the present value of possible bankruptcy costs.(B15)	3.58	1.153	187
A company would issue shares to dilute the holdings of certain shareholders.(B16)	3.39	1.329	187
A decision to issue shares sends an unfavorable signal to the market about future long-term prospects.(B17)	2.90	1.174	187

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the mean is a measure of central tendency from the above table many respondents agreed that a company issues debt when recent profits are not sufficient to fund activities is the most important variable that influence determinants of gearing in the capital structure of sugar manufacturing companies in Western Kenya which had the highest mean of 3.76 and standard deviation of 1.336 which measures level of dispersion from the mean of 3 where most respondents were neutral, the standard deviation measures how far that factor is away from the mean . The least important variable that influences the gearing in the capital structure was the decision to issue shares sends an unfavorable signal to the market about future long-term prospects which had a mean of 2.90 which was near to neutral against the mean of 3 and standard deviation of 1.174 away from the mean. This had no bearing to gearing since the ordinary shares do not affect the level of gearing in the company. A company would issue debt when equity is undervalued by the market has the least standard deviation of 0.936 and a mean of 3.40 in the analysis this means that it is the least risky variable on all the other variables in the analysis and therefore it makes.

4.2.2 Correlation Matrix

This section presents findings on Correlation on determinants of gearing on the capital structure of sugar manufacturing companies. The correlation matrix shows the degree of relationship between the factor variables affecting determinants of gearing in the capital structure. A correlation shows association or relationships among factor variables where a correlation of positive one stands for direct relationship, as one factor increases the other factor also increases while a negative one correlation shows that as one factor increases the other factor decreases that is inverse relationship while a zero correlation means that there is no linear associations among the factor variables.

Table 4: Correlation Matrix Between firm gearing and Determinants of Gearing on the Capital Structure of Sugar Manufacturing Companies.

	B1	B2	B3	B4	B5	B6	B7	B8	B9	B10	B11	B12	B13	B14	B15	B16	B17
B1	1.000	.473	.084	.120	-.321	-.199	-.198	.031	.113	.139	.292	.181	.259	.191	.075	-.034	.036
B2	.473	1.000	.402	.315	-.087	-.044	-.152	-.035	.112	.158	.237	.159	.023	.139	.153	.304	.289
B3	.084	.402	1.000	.165	.074	-.029	-.011	-.055	.244	.125	-.023	.079	.017	.025	.201	.301	.109
B4	.120	.315	.165	1.000	.287	.160	-.101	-.020	.032	.128	.155	.056	-.041	.069	-.207	.213	.300
B5	-.321	-.087	.074	.287	1.000	.325	.227	-.015	-.111	.006	-.062	-.034	-.097	-.002	-.201	.135	-.100
B6	-.199	-.044	-.029	.160	.325	1.000	.277	.064	-.020	-.283	-.035	.029	-.207	-.183	-.177	.195	-.184
B7	-.198	-.152	-.011	-.101	.227	.277	1.000	.169	-.335	-.312	-.189	.005	-.041	-.064	-.113	.124	-.160
B8	.031	-.035	-.055	-.020	-.015	.064	.169	1.000	.045	-.078	.105	-.059	.105	-.120	.021	.023	.084
B9	.113	.112	.244	.032	-.111	-.020	-.335	.045	1.000	.365	-.085	.165	.147	-.118	.089	-.028	.061
B10	.139	.158	.125	.128	.006	-.283	-.312	-.078	.365	1.000	.249	.113	.050	.210	-.197	-.055	.125
B11	.292	.237	-.023	.155	-.062	-.035	-.189	.105	-.085	.249	1.000	.243	-.019	-.004	-.113	-.146	.115
B12	.181	.159	.079	.056	-.034	.029	.005	-.059	.165	.113	.243	1.000	-.214	.109	.005	-.092	.026
B13	.259	.023	.017	-.041	-.097	-.207	-.041	.105	.147	.050	-.019	-.214	1.000	.050	.029	-.183	.067
B14	.191	.139	.025	.069	-.002	-.183	-.064	-.120	-.118	.210	-.004	.109	.050	1.000	.401	.334	.291
B15	.075	.153	.201	-.207	-.201	-.177	-.113	.021	.089	-.197	-.113	.005	.029	.401	1.000	.296	.359
B16	-.034	.304	.301	.213	.135	.195	.124	.023	-.028	-.055	-.146	-.092	-.183	.334	.296	1.000	.279
B17	.036	.289	.109	.300	-.100	-.184	-.160	.084	.061	.125	.115	.026	.067	.291	.359	.279	1.000

From the above table. The variable with the largest correlation is the decision of making debt and equity towards market response to new issues(B1) and use of debt would decrease relative to equity if debt interest were no longer tax deductible(B2) with a factor of +0.473which concurs with pecking order theory and trade-off theory meaning that there was a direct relationship which was not strong, this is discussed as follows the issue of equity will affect the response on the market especially the ordinary shareholders who will increase there shares in the company this is so because the debt holders will not issue new debt as it will be more expensive as result of the foregone interest tax shield which make the debt capital a cheaper source of finance for the organization this is what explains the reason of the correlation in the table.

A decision to issue long term debt sends a favorable signal to the market about future long term prospects(B7) and A company issues shares when prices are high, even though present needs are not great, in order to build up a long term fund cushion(B9) -0.335 this two variables indicate that there is a negative correlation meaning that as one variable increases the other one decreases this is discussed as follows the interest tax shield increases making debt a cheaper source of finance therefore increasing gearing up to optimum level according to trade off theory, this means that the issue of ordinary shares will decrease as their prices are increasing and the usage of equity finance will decrease.

4.2.3 Rotated Component Matrix

The idea of rotation is to reduce the number factors on which the variables under investigation have high loadings. Rotation does not actually change anything but makes the interpretation of the analysis easy.

Table 5: Rotated Component Matrix Between firm gearing and Determinants of Gearing on the Capital Structure of Sugar Manufacturing Companies

	Component						
	1	2	3	4	5	6	7
B1		.691					
B2		.712			.607		
B3					.620		
B4				.557			
B5				.851			
B6							
B7			-.726				
B8							
B9					.678		
B10			.948				
B11		.844					
B12							1.196
B13						1.270	
B14	.906						
B15	.721			-.586			
B16	.765				.650		
B17	.737						

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

looking at the table above, we can see that Share price usually declines when debt is issued(B14), the present value of interest tax shields is balanced with the present value of possible bankruptcy costs(B15), a company would issue shares to dilute the holdings of certain shareholders(B16), a decision to issue shares sends an unfavorable signal to the market about future long-term prospects(B17) are substantially loaded on Factor Component 1 this is discussed as follows as the company increase debt financing and gearing level there is advantage of the interest tax shied to the company and therefore gearing is related to financial performance of the company positively this concurs with the trade- off theory.

4.3 Determine the extent of gearing in sugar manufacturing companies in Western Kenya Region.

4.3.1 Descriptive Statistic

This section presented findings on descriptive statistic on determining the level of gearing in sugar manufacturing companies. The researcher was concerned with establishing contribution of 20 factors on determining the extent of gearing on sugar manufacturing companies.

Table6 Descriptive Statistics of determine the extent of gearing in sugar manufacturing companies in Western Kenya Region.

	Mean	Std. Deviation	Analysis N
Ensuring the long term survivability of the company.(C1)	3.35	1.325	187
Projected cash flow or earnings from assets financed.(C2)	3.43	1.14	187
Volatility of the company's earnings and cash flows. .(C3)	3.28	1.273	187
Ensuring customers /suppliers are not worried about the company's survival.(C4)	3.56	1.145	187
Restrictive covenants imposed by debt providers.(C5)	3.38	1.15	187
Level of interest rates. .(C6)	3.28	1.076	187
Tax advantage of interest deductions to the company. .(C7)	3.61	1.023	187
Avoiding the need to issue equity.(C8)	3.51	1.048	185
Potential costs of bankruptcy, near-bankruptcy or financial distress.(C9).	3.66	2.061	187
Level of other non-taxable deductions (e.g. capital allowances) available to the company.(C10)	3.69	1.257	187
Preventing the company from becoming a take-over target. .(C11)	3.54	1.059	187
Ensuring that a large proportion of cash flow is committed to interest payments to provide a disciplinary control on management. .(C12)	3.44	0.973	187
Personal tax cost your investors face value when they receive interest income. .(C13)	3.45	1.137	187
Does the size of your company determine the amount of debt to be borrowed. .(C14)	3.47	1.142	187
Does profitability of your company determine the amount of debt to be borrowed. .(C15)	3.59	1.05	187
Do collateral required when applying for the debt capital. .(C16)	3.48	0.935	187
When their is opportunity for growth in terms of market share do you borrow debt capital. .(C17)	3.52	1.054	187
Is the amount of borrowed debt determined by industrial norms. .(C18)	3.64	1.075	187
Does the management influence the amount of borrowing in the business. .(C19)	4.01	3.228	187
Is their room for the rescheduling of debt if losses are realized. .(C20)	3.8	1.135	187

Typically, the mean, standard deviation and number of respondents (N) who participated in the survey are given. Looking at the mean, one can conclude that the management influence the amount of borrowing in the business is the most important variable that influences level of gearing in sugar manufacturing companies in Western Kenya Region. It has the highest mean of 4.01 and standard deviation of 3.228 this is true because the management are the once controlling the activities of the company and they determine the debt to be borrowed on behalf of the company and the risk level that the company is exposed therefore the larger the amount borrowed the higher the financial risk the company is exposed to. The least important variable that influences level of gearing in sugar manufacturing companies in Western Kenya Region is Volatility of the company's earnings and cash flows. and Level of interest rates which has a mean of 3.28 though from the study this the outcome in real sense this factors are very important in determining the level of gearing since the financial institutions can not advance easily money to institutions whose earnings are volatile and have cash flow problems the interest rate also determine the pricing of the loan which is also an important factor. Ensuring that a large proportion of cash flow is committed to interest payments to provide a disciplinary control on management has the least standard deviation of 0.973 in the analysis this means that it is the least risky variable on all the other variables in the analysis and therefore it makes our decision to be less risky as it ensures that there is enough money to pay our debt when they fall due to avoid financial risk and eventual liquidation of our company.

4.3.2 Correlation Matrix

This section presents findings on Correlation on determinants of gearing on the capital structure of sugar manufacturing companies. The correlation matrix shows the degree of relationship between the factor variables affecting determinants of gearing in the capital structure. A correlation shows association or relationships among factor variables where a correlation of positive one stands for direct relationship, as one factor increases the other factor also increases while a negative one correlation shows that as one factor increases the other factor decreases that is inverse relationship while a zero correlation means that there is no linear associations among the factor variables.

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From this table above we conclude the following deduction concerning the correlation matrix table. The variable with the largest correlation is Projected cash flow or earnings from assets financed (C2) and Volatility of the company's earnings and cash flows (C1) which is +0.551 this is discussed as follows the volatility of the earnings in the firm depends entirely on the quality of the investment undertaken in the asset and from the earnings generated from asset financed and therefore the more the usage of debt finance the more the interest tax shield consequently cash flow will increase and its profits. This concurs with the trade off theory thus there is a positive relationship between financial performance and extent of gearing.

4.3.3 Rotated Component Matrix

The idea of rotation is to reduce the number factors on which the variables under investigation have high loadings. Rotation does not actually change anything but makes the interpretation of the analysis easier.

Table8: Rotated Component Matrix

	Component						
	1	2	3	4	5	6	7
CI			.735				
C2			.765				
C3			.673				
C4		.532					
C5							
C6				.737			
C7				.718			
C8	-.559			.566			
C9					.654		
C10					.764		
C11					.728		
C12							
C13	.756						
C14	.799						
C15	.551					.500	
C16						.734	
C17		.806					
C18		.798					
C19						-.512	
C20							-.835

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 8 iterations.

Looking at the table above, we can see that avoiding the need to issue equity which would dilute existing shareholders' claims/voting proportions(C8), Personal tax cost your investors face value when they receive interest income(C13), Does the size of your company determine the amount of debt to be borrowed(C14), does profitability of your company determine the amount of debt to be borrowed(C15) are substantially loaded on Factor Component 1 this factors are discussed as follows the extent,leval or amount of debt finance used in the firm depends on the size and profitability of the firm the larger they are the more the gearing and the interest tax shield this concurs with the trade off theory of capital structure.

4.4 To analyze the relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013.This objective answered the question of the study

4.4.1 Summary statistics of regression results

Table 9 presents the mean, standard deviation, minimum, and maximum values for the dependent and explanatory variables applied in the panel data regression analysis of study models. Table 4.4.1 demonstrates the summary statistics for the regression analysis used for determining the relationship between gearing and financial performance.

Table 9: Summary statistics of the relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013.

Variable	Mean	Std. Dev.	Min	Max
GEARING	0.3949	0.3604	0.0743	1.2328
TANG	0.6428	0.0865	0.4973	0.7825
GROW	7.5192	13.0119	-12.9032	45.0000
RISK	0.0649	0.0339	0.0169	0.1440
TAX	0.1013	0.1492	0.0000	0.4545
ROA	0.0693	0.0607	-0.0704	0.2105
OPM	0.1013	0.0890	-0.1583	0.3313
ROE	0.2149	0.5843	-0.1308	3.4118
NPM	0.1055	0.1554	-0.1417	0.8182

The mean for the gearing was 0.3949 and standard deviation of 0.3604.On the determinant of gearing their was a decline in growth of -12.9032 which was attributed to financial losses as indicated by negative financial performance indicators and their was an improvement in growth of 45.0000 which was attributed to financial profits as shown by increase in the positive financial performance indicators. During the period of study of 2009 to 2013 the minimum financial performance indicator of ROA, OPM, ROE and NPM showed a negative values of -0.0704,-0.1583,-0.1308 and -0.1417 which was period characterized by losses made by the sugar manufacturing companies while the max values of 0.2105, 0.3313, 3.4118 and 0.8182 characterized periods when profits were made by the sugar manufacturing companies.

4.4.2 Correlation analysis

Table 10 presents the Pearson correlation coefficients (r) for the panel data regression analysis variables used in the study. The table presents all the variables used in the

determination of the relationship between financial gearing and financial performance in Sugar manufacturing companies in Western Kenya Region.

Table 10: Correlation analysis of relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013.

	GEARING	TANG	GROW	RISK	TAX	ROA	OPM	ROE	NPM
GEARING	1								
TANG	-0.5337	1							
GROW	-0.1873	-0.1317	1						
RISK	-0.6651	0.2713	-0.073	1					
TAX	-0.272	-0.3048	0.3448	0.3201	1				
ROA	-0.1969	0.0961	0.2561	0.3954	0.5171	1			
OPM	0.1671	0.0431	0.1446	0.0251	0.2824	0.8547	1		
ROE	0.0309	0.3225	-0.1692	-0.0334	-0.1095	0.3665	0.5605	1	
NPM	0.2706	0.0017	0.1953	-0.1979	-0.1135	0.3187	0.4667	0.422	1

The financial performance indicators of operating profit margin(OPM),return on equity(ROE) and net profit margin (NPM) showed a weak correlation with gearing level of the sugar manufacturing companies in Kenya of 0.1671,0.0309 and 0.2706 respectively The weak correlation between financial leverage and financial performance is an indication of the trade-off theory Baltacı and Ayaydın (2014) .Their was weak negative relationship between gearing and return on asset(ROA) of -0.1969 which is an indication of pecking order theory Baltacı and Ayaydın (2014)

Their was average or satisfactory negative correlation between gearing and determinants of capital structure in relation to tangibility(TANG),-0.5337,and risk(RISK)-O.6651 which conforms with the pecking order theory recognizes a negative relationship between the asset tangibility and debt financing level Jõeveer (2013) and Baltacı and Ayaydın (2014).

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4.4.3 Regression analysis results

4.4.3.1 Fixed effects regression results

Table 11 represents the fixed effects panel data regression analysis results of the regression model VI, which was applied to determining the relationship between financial gearing and financial performance of sugar manufacturing companies in Western Kenya region. The table shows the results for the regression analysis of the relationship between financial performance variables, such as return on asset (ROA), return on investment (ROI) and return on equity (ROE), and the financial gearing (GEARING) using fixed effects panel data regression method.

Table 11 Fixed effects regression results of relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013.

	ROA	ROE	OPM	NPM
GEARING	0.1838*	3.5342**	0.3555*	-0.0229
TANG	0.3737	4.0966	0.7651	1.7736*
TAX	0.1951**	0.8180	0.2874	0.1525
RISK	1.7791***	3.6827	2.0134*	3.1216
GROW	0.002**	-0.0003	0.0026*	0.0060**
_cons	-0.3896*	-4.1232*	-0.7104*	-1.2864*
R-sq:	0.8006	0.2844	0.7687	0.4700

The symbols ***, **, and * indicate significance at the 99%, 95% and 90% confidence levels, respectively.

The above table indicated there was a positive relationship between gearing and financial performance at different level of significance as indicated by the stars. It is only net profit margin which is negatively related to financial performance. The determinant of capital is also positively related to financial performance and gearing. This conforms to other studies conducted by. Berger and Bonaccorsi di Patti (2006), also using profit efficiency as a corporation performance measure, found a positive relationship. San and Heng

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(2011), studying large construction companies, found a positive relationship when they used return on capital (ROC) and earnings per share (EPS) as measures of corporations' financial performance. Fosu (2013), using return on assets (ROA), return on equity (ROE) and Tobin's q as a corporation's performance measure also found a positive relationship between the debt-financing level and a companies performance. Park and Jang (2013) also found a positive relationship while observing the interrelationships between free cash flow, diversification, and debt financing and financial performance of corporations.

4.4.3.2 Random effects regression results

Table 12 represents the random effects panel data regression analysis results of the regression model VI, which was also applied to determining the relationship between financial gearing and financial performance of sugar manufacturing companies in Western Kenya region. The table shows the results for the regression analysis of the relationship between financial performance variables, such as return on asset (ROA), return on investment (ROI) and return on equity (ROE), and the financial gearing (GEARING) using random effects panel data regression method.

Table 12: Random effects regression results of relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013.

	ROA	ROE	OPM	NPM
GEARING	0.1407***	0.8480	0.2520***	0.3550**
TANG	0.3438***	4.5426**	0.6781***	0.6600
TAX	0.1955**	1.2966	0.2853**	0.0526
RISK	1.5516***	-0.3735	1.3999**	1.2927
GROW	0.0017**	-0.0050	0.0020	0.0049*
_cons	-0.3370***	-3.1159*	-0.5691***	-0.5771*
R-sq:	0.9811	0.6682	0.9156	0.9346

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The symbols ***, **, and * indicate significance at the 99%, 95% and 90% confidence levels, respectively.

The random effects indicated a more positive relationship between firms gearing and financial performance at 99% significance level as indicated by the stars in the table above there was also a strong positive relationship between operating profit margin and gearing at 99% significance level while that of net profit margin their the relationship was at 95% significance with gearing thus the random effect regression results using panel data regression analysis showed a very strong relationship between financial gearing and financial performance of sugar manufacturing companies than fixed effect regression analysis results. The R-squire explained the factors the caused this strong positive relationship which were as follows 0.9811%,0.6682%,0.9156% and 0.9346% for return on asset, return on equity, operating profit margin and net profit margin respectively. This can be discussed as follows during this period most of this sugar manufacturing companies made profits from their financial statements and that is why there is a strong positive relationship between financial gearing and financial performance of this sugar manufacturing companies. This conforms to other studies conducted by. Berger and Bonaccorsi di Patti (2006), also using profit efficiency as a corporation performance measure, found a positive relationship. San and Heng (2011), studying large construction companies, found a positive relationship when they used return on capital (ROC) and earnings per share (EPS) as measures of corporations' financial performance. Fosu (2013: 146), using return on assets (ROA), return on equity (ROE) and Tobin's q as a corporation's performance measure also found a positive relationship between the debt-financing level and a companies performance. Park and Jang (2013) also found a positive relationship while observing the interrelationships between free cash flow, diversification, and debt financing and financial performance of corporations.

CHAPTER FIVE

SUMMARY CONCLUSIONS AND RECOMMENATIONS

5.1 Introduction

This chapter presents summary, conclusions and recommendations of the study. The problem of this study emanated from the challenges the companies has been facing in executing its mandate on the usage of debt capital. The purpose of this study was to establish the association between firm gearing and financial performance. The specific objectives of the study were to; establish determinants of gearing in the capital structure of sugar manufacturing companies determine the extent of gearing in sugar manufacturing companies, to analyze the relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013.

The study sampled 187 employees of sugar companies in western Kenya region. A structured questionnaire was used to collect data. The comprehensive analysis undertaken during this study resulted in various findings: some arise from the literature surveyed, some emerge from the study methodologies adopted whereas the bulk of results emanate from data analysis. The purpose of this chapter is to elucidate the summary, conclusions and recommendations of this study, as well as implications for theory, policy and practice. A discussion on the limitations of the study and suggestions for future research concludes the chapter.

5.2 Summary of Findings

As regards the extent to which sought to establish determinants of gearing in the capital structure of sugar manufacturing companies the study found out from the correlation table the factor of +0.473 which concurs with pecking order theory and trade-off theory meaning that there was a direct relationship between gearing and financial performance From the rotated component matrix, increase in debt financing and gearing level gave the

advantage of the interest tax shied to the company and therefore gearing related to financial performance of the company positively this concurs with the trade- off theory .

The second objective of the study sought to determine the extent of gearing in sugar manufacturing companies. From the correlation table the factor of +0.552 concurred with the trade off theory thus there was a positive relationship between financial performance and extent of gearing. From the rotated component matrix the extent, level or amount of debt finance used in the firm depends on the size and profitability of the firm the larger the firm the more the gearing and the interest tax shield which showed a positive relationship with financial performance this concurs with the trade off theory of capital structure. .

The third objective of the study was to analyze the relationship between financial performance of sugar manufacturing companies in Western Kenya Region and their gearing ratios for the five year period from 2009 to 2013. Random effects regression results indicated a strong positive relationship between firms gearing level and financial performance based on their financial gearing ratios.

5.3 Conclusions

Following the findings of this study, the following conclusions were made. The study concluded that increases in financial gearing had a positive effect on financial performance as measured by return on asset, net profit margin, operating profit. The study therefore concluded that the agency theory which postulates that financial leverage mitigates against the agency problem is not applicable among the sugar manufacturing firms. The study established that as a company increases their financial gearing, financial performance was measured by return on asset, net profit margin, operating profit contrary to expectations based on agency theory The study found out that sugar manufacturing firms used both debt and equity in their capital structure although debt was predominant. This was largely due to the fact that sugar manufacturing firms perceived debt as a cheaper source of financing that lowered their weighted average cost of capital and the taxes paid. The study therefore concluded that the assumptions of the Moldgani and Miller (1968) where they argue that increased in debt

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resulted in improved financial performance due the tax shielding effect of debt holds true since increases in debt had a positive impact on the financial performance this also concurs with the trade off theory.

5.4 Recommendations

Stemming from the study findings, the following recommendations were made in regard to the sugar manufacturing sector in Kenya:

Heavily geared sugar manufacturing firms should use debt finance to improve on their financial performance as there is a positive relationship as this debt is subjected to interest tax shield.. The firm must select source of funding carefully to avoid falling into the leverage risk trap. Sugar manufacturing firms should rely on debt as a source of finance since debt is subjected to interest tax shield which subsequently improve their profitability to be which can be used to diversification of their operations into production of ethanol, electricity and cardboard.

5.5 Contributions of the study

The findings of this study brings out several important contributions to the finace practice. First and foremost, the study exposes the level of gearing in sugar sector in westen kenya. Little knowlege exists in literature as to the leval of gearing in the sugar manufacturing industry,. therefore this study provides a much needed feedback to fill this gap. This study will be of significant use in assisting the current and potential investors to get an understanding of the viability of the sugar industry. It will provide information on whether gearing can be used in effectively in the private sugar companies can and the state-owned. Moreover, this study will be helpful to the government and the public in judging the performance of the state-owned companies and deciding on whether they are fulfilling their responsibility to the country. It will also help the management of institutions within the sugar industry in identifying and addressing any significant performances differences that may exist. Finally, it will also serve as a future reference for researchers on the subject of capital structure and financial gearing.

5.6 Limitations of the Study

This study is not without limitations and those limitations should be taken into account when interpreting the results.

The study covered only 6 out the 9 sugar companies that operated during the selected study period. The 2 companies (Soin and Kibos) left out lacked sufficient data. Miwani Sugar Company was put under receivership in 2001 and the only activities since then is sugar cane farming on the nucleus estate, and data could not be obtained. This additional data could have contributed to the study.

Most of the data was obtained from financial statements prepared under different accounting policies and procedures. For example, the study noted that there was no uniformity of treatment of items in the financial statements especially biological assets and classification of loans as to whether long-term or short-term. Thus the study was constrained by limitations arising from such financial statements preparation.

The study relied on only figures from financial statements without consideration of any events that could have also contributed to the performance of the companies. May be when taken together the interpretations and conclusions could have been different.

. Other internal and external factors not included as variables in this study could also influence the financial performance.

The study used panel data regression analysis and factor analysis to analyze the data. One needs to be conversant with the technical statistical terms to be able to better understand the regression results.

Finally, except for Mumias Sugar Company, the rest of the companies are not listed in the Nairobi Securities Exchange. They had no electronic way of storing data; hence it took a lot of time to retrieve data from the archives.

5.7 Suggestions for Further Research

Several recommendations for future research can be formulated.

First, this study concentrated on financial gearing and financial performance of the sugar companies in Kenya using the annual financial statements. A further study to

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determine the effect of management and board changes on the performance of the sugar industry could be beneficial.

Second, the study noted wide variations in the production, operational and financial costs among the sugar companies in Kenya. It would be desirable to carry out further research into the factors influencing these costs.

Third, Mumias Sugar Company started as state-owned mill in 1973 then was privatized in 2001. It would be interesting to carry out a study on the impact of this privatization with a view of informing the policy makers.

Finally, it would be interesting to analyze extend of the owner-agency problem within the sugar companies in Kenya.

REFERENCES

Abor,J., (2007) "Debt policy and performance of SMEs: Evidence from Ghanaian and South African firms", *Journal of Risk Finance, The, Vol. 8* Iss: 4, pp.364 – 379.

Abor, J., (2008) "Determinants of the Capital Structure of Ghanaian Firms" *African Economic Research Consortium, Nairobi*, Research Paper 176.

Abor, J. & Biekpe, N. (2005) "What determines the capital structure of listed firms in Ghana?" *African Finance Journal*, 7 (1).

Altman, E., (1984) "A Further Empirical Investigation of the Bankruptcy Cost Question", *Journal of Finance 39*, 1067-1089.

Ang, J., (1991)"Small business uniqueness and the theory of financial management", *Journal of Small Business Finance 1*, pp.1-13

Bancel, L. and Mittoo, U. (2004) "Cross- Country Determinants of Capital Structure Choice: A Survey of European Firms", *Financial Mangement Vol. 33,* No. 4, pp. 103-132.

Bangassa, K., Buferna, K. and Hodgkinson, L. (2008) "Determinants of Capital Structure Evidence from Libya," *Research Paper Series No. 2005/08*, Management School, University of Liverpool, Liverpool, Great Britain.

Baltagi, B.H., (1995) *"Econometric Analysis of Panel Data"*, Chichester: Wiley. *African Journal of Business Mangement, Vol. 2 (5)*, pp. 170-171.

Baral, K. J. (2004) "Determinants of Capital Structure: A Case Study of Listed Companies of Nepal," *Journal of Nepalese Business Studies Vol. I* No. 1 Dec. 2004.

Baral, K. J., (1996) "Capital Structure and Cost of Capital in Public Sector Enterprises in Nepal," Ph.D thesis. Delhi University.

Barbosa, N., & Louri, H. (2005). Corporate Performance: Does Ownership Matter? A comparison of Foreign- and Domestic-Owned Firms in Greece and Portugal. *Review of Industrial Organization* , 27(1),73-102.

Barton, S.L. and Gordon, P.J. (1988) "Corporate Strategy and Capital Structure," *Strategic Management Journal 9,* 1988, pp. 623-632.

Barton, S.L. and Matthews, C.H. (1989) 'Small Firm Financing: Implications from a Strategic Management Perspective', *Journal of Small Business Management, 27(1):* 1-7.

Bas, T., Muradoglu, G., and Phylaktis, K., (2009) "Determinants of Capital Structure in Emerging Markets" Cass Business School, London.

Baxter, N., (1967) "Gearing, Risk of Ruin and the Cost of Capital", *Journal of Finance 22,* 395-403.

Beck , T.and Fuchs , M. (2004) "Structural Issues in the Kenyan Financial System:Improving Competition and Access", *World Bank Policy Research Working Paper 3363*, July 2004.

Bettis, R.A., (1983) "Modern Financial Theory, Corporate Strategy and Public Policy: Three Conundrums," Academy of Management Review 8, pp. 406-415.

Booth, L., Aivazian, V., Demirguc-Kunt, A.and Maksimovic, V. (2001) "Capital Structures in Developing Countries", *Journal of Finance, 55(1):* 87–130.

Bradley, M., Jarrel, G.A. and Kim, E. H. (1984) "On the Existence Of An Optimal Capital Structure: Theory And Evidence". *The Journal of Finance, 39*: 857–80.

Brealey, R.A. and S.C. Myers, (1996) "Principles of Corporate Finance", *5th Edn., McGraw-Hill, USA.*, pp: 447-473.

Capon, N., Farley, J. and Hoenig, S. (1990) "Determinants of Financial performance: A Meta Analysis,"*Management Science,* pp. 1143-1159.

Carter, J. R., (1977) "The Search for Synergy: A Structure Performance Test", *Review of Economics and Statistics, 59,* 279-289.

Chen, J., (2004) "Determinants of capital structure of Chinese-listed companies", *Journal of Business Research 57,* 1341-1351.

Cobham, D. and R. Subramaniam. (1998) "Corporate finance in developing countries: New evidence for India". *World Development, 26(6)*: 1033–47.

Correia C, Flynn D, Uliana E, Wormald M (2005). *Financial Management.* Lansdowne: Juta and Co.

Damodaran A (1999). *Applied Corporate Finance.* New York: John Wiley and Sons, Inc.

De Jong, A., Kabir, R. & Nguyen, T. T. (2008). Capital structure around the world: The roles of firm-and country-specific determinants. Journal of Banking & Finance, 32(9), 1954-1969.

DeAngelo, H., & Masulis, R. W. (1980). Optimal capital structure under corporate and personal taxation

Dare, F.D. and Sola, O. (2010) "Capital Structure and Corporate Performance in Nigeria Petroleum Industry: Panel Data Analysis," *Journal of Mathematics and Statistics 6 (2)*, pp 168-173.

Demirguc-Kunt, A., and Levine, R. Eds. (2001) *"Financial Structure and Economic Development"*, Cambridge, Mass.: MIT Press.

Durand, D. (1959) *"Cost of Debt and Equity Funds for Business: Trends and Problems of Measurement"*, In The Management of Corporate Capital, Edited by Ezra Solomon. New York: The Free Press.

Ebaid, E. I. (2009) "The impact of capital-structure choice on firm performance: empirical evidence from Egypt", *Journal of Risk Finance, Vol. 10* Iss: 5, pp.477 - 487

Frank, M. Z. & Goyal, V. K. (2009). Capital structure decisions: which factors are reliably important? Financial Management, 38(1), 1-37.

Frank, M. and Goray, V., (2003) "Testing the Pecking order Theory of Capital Structure," *Journal of Financial Economics Vol. 67*, pp. 217-248.

Gleason, K. C. and Mathur, L. K. and Mathur, I (2000) "The Interrelationship between Culture, Capital Structure, and Performance: Evidence from European Retailers", Bentley College, Waltham, MA USA

Green, C.J., V. Murinde and J. Suppakitjarak. (2002) "Corporate Financial Structure in India", *Economic Research Paper No. 02/4*. Centre for International, Financial and Economics

Research, Department of Economics, Loughborough University, Loughborough.

Harris, Milton and Arthur Raviv. (1991) "The Theory of Capital Structure", *Journal of Finance*, 46 : 297-355.

Harris, M. & Raviv, A. (1990). Capital structure and the informational role of debt, *Journal of Finance* 45, 321-349.

Jensen, M., and Meckling, W., (1976) "Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure", *Journal of Financial Economics 3*, 305-360.

Jõeveer, K. (2013). Firm, country and macroeconomic determinants of capital structure: Evidence from transition economies. Journal of Comparative Economics, 41, 294–308.

Kanyuru, M. M., (2010) "The Relationship between Capital Structure and Financial Performance of Firms listed at NSE," Unpublished MBA dissertation, School of Business; University of Nairobi.

Kayo, E. K. & Kimura, H. (2011). Hierarchical determinants of capital structure. Journal of Banking & Finance, 35(2), 358-371. doi: http://dx.doi.org/10.1016/j.jbankfin.2010.08.015

Kenya Association of Manufacturers (KAM), (2011) "Directory", *(http://www.kam.co.ke/?itemId=7)*.

Kilonzo, B. M., (2003) "The Relationship between Financial Structure and Performance of Micro and Small Enterprises in Nairobi," Unpublished MBA dissertation, School of Business; University of Nairobi.

Kinyua, J.M., (2005) "An empirical investigation of Capital Structure Determinants for Small & Medium Sized Enterprises in Kenya," Unpublished MBA dissertation, School of Business; University of Nairobi.

Kothari, C.R., (2008) *"Research Methodology: Methods and Techniques"*. Second Edition, New Age International Ltd. New Delhi, India.

Martin, John D. and others. (1988) *"The Theory of Finance: Evidence and Application."* Chicago: The Dryden Press.

Mazur, K. (2007) "The determinants of capital structure choice: evidence from Polish companies." *Int Adv Econ Res, 13.*

Miller, Merton H. 1977. "Debt and Taxes." *Journal of Finance 32*:261-275.

Modigliani, F. and M. Miller. (1963) "Corporate income taxes and the cost of capital: A correction". *American Economic Review, 53*: 443–53.

Modigliani, Franco and Merton H. Miller. (1958) "The Cost of Capital, Corporation Finance and the Theory of Investment." *American Economic Review 48*:261-297.

Mugenda, O. M., and Mugenda, A. G., (2003) "Research Methods-Quantitative and Qualitative," Nairobi-Kenya, African Centre for Technology Studies.

Mugdlwa, N. (2009) "Size and Other Determinants of Capital Structure in South African Manufacturing Listed Companies", *MTECH: CMA Dissertation*, Nelson Mandela Metropolitan University.

Munene, K. H., (2006) "Impact of Profitability on Capital Structure of Companies Listed at NSE," Unpublished MBA dissertation, School of Business; University of Nairobi.

Murinde, V., J. Agung and A.W. Mullineux. (2004) "Patterns of corporate financing and financial system convergence in Europe". *Review of International Economics, 12(4):* 693–705.

Mwaka, C., (2006) "Financial Structure & Growth of Small & Micro Enterprises in Nairobi," Unpublished MBA dissertation, School of Business; University of Nairobi.

Myers, S. C. (2001). Capital structure. The Journal of Economic Perspectives, 15(2), 81-102.

Myers, Steward C. and Gerald A. Pogue. (1974) "A Programming Approach to Corporate Financial Management" *Journal of Finance 29* : 579-599.

Myers, S.C. (1984) "The capital structures puzzle". *Journal of Finance, 39:* 575–92.

Myers, S.C. and N.S. Majluf. (1984) "Corporate financing and investment decisions when firms have information that investors do not have". *Journal of Financial Economics, 13:* 187–221.

Ngugi, R., Amanja, D., and Maana, I., (2009)"Capital Market, Financial Deepening and Economic Growth in Kenya," *(http://www.csae.ox.ac.uk/conferences/2009-EDiA/papers/513-Isaya).*

Obert, M., and Olwale, F. (2010) "Does debt really matter on the profitability of small firms? A perspective on small manufacturing firms in Bulawayo, Zimbabwe," *African Journal of Business Mangement, Vol. 4 (9),* pp. 1709-1716.

Pandey, I.M., (1999) *"Financial Management".* 8th Edn., Vikas Publishing House PVT Ltd. New Delhi, India, pp: 529-559.

Pettit, R. and R. Singer. (1985) "Small business finance:A research agenda". *Financial Management, 14(3)*: 47–60.

Psillaki, M. (1995). "Credit rationing and small and medium sized firms: a tentative of Linkage", *Revue Internationale PME 8*, 67-90.

Rajan, R. & Zingales, L.(1998) "Financial dependence and growth", *American Economic Review 88*, 559-587.

Rao, N.V., Al-Yahyaee, K. H. M., Syed, L.A.M. (2007) "Capital structure and financial performance: evidence from Oman". *Indian journal of Economics and Business.*

Republic of Kenya (2011) "Economic Survey 2011 Report"; Ministry of Planning and National Development, Nairobi.

Pratheepkanth, P. (2011) "Capital Structure And Financial Performance: Evidence From Selected Business Companies In Colombo Stock Exchange Sri Lanka", *International Refereed Research Journal, Vol.– II,* Issn 2231-4172

Robb A, Robinson DT (2009). The capital structure decision of new firms [online] Available: (*http://papers.ssrn.com/so13/papers.cfm?abstract-id=1345895*) [Accessed: 17 October 2009].

San, O. T. and Heng, T. B. (2011) "Capital Structure and Corporate Performance of Malaysian Construction Sector," *International Journal of Humanities and Social Science, Vol. 1,* No. 2; February 2011.

Scott, J. (1977). Bankruptcy, secured debt and optimal capital structure, *Journal of Finance 32*, 1-19.

Scott, James H. (1976) "A Theory of Optimal Capital Structure". *Bell Journal of Economics 7:* pp.33-54.

Shyan, R. C. and Chen, H. L. (2008) "The research on the effects of Capital Structure on Firm Performance and evidence from the non-financial Industry of Taiwan," National Kaohsiung First University of Science and Technology.

Singh, A. (1995) "Corporate Financial Patterns in Industrializing Economies: A Comparative Study". *IFC Technical Paper No. 2.* International Finance Corporation, Washington, D.C.

Singh, A. and J. Hamid, (1992) "Corporate Financial Structures in Developing Countries". *IFC Technical Paper No. 1.* International Finance Corporation, Washington, D.C.

Solomon, Ezra. (1963) *"The Theory of Financial Management"*. New York: Columbia University Press.

Stulz, R. (1990). "Managerial discretion and optimal financing policies", *Journal of Financial Economics 26*, 3-27.

Tian, G. G., & Zeitun, R. (2007). "Capital structure and corporate performance: evidence from Jordan". *Australian Accounting Bussiness and Finance Journal* , 1(4).

Titman, S. and R. Wessels. (1988) "The determinants of capital structure choice". *Journal of Finance, 43(1):* 1–19.

USAID (1982) *"A Strategy of the Development of four Districts in Western Kenya,"* USAID report for the USA and Kenyan Government.

Van Horne, J.C., (2002) *"Financial Management and Policy"*. 12th Edn., Prentice-Hall of India Private Ltd. New Delhi, pp: 253-287.

Wafula, N. (2014, February 5). Crises at Nzoia as the sugar market lacks market for its sugar. *The West F.M Mobile.* Retrieved from http://www.apastyle.org/learn/fags/cite-newspaper.aspx

Zutt, J. (2010) "Kenya Economic Update", Poverty Reduction and Economic Management Unit Africa Region, *World Bank Report*