DETERMINANTS OF CAPITAL STRUCTURE OF SMES IN MONROVIA, LIBERIA
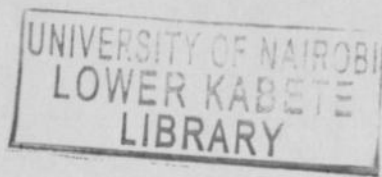
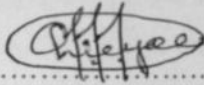**SUBMITTED BY**

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D61/60908/2011

A RESEARCH SUBMITTED TO THE SCHOOL OF BUSINESS FOR PARTIAL FULFILLMENT OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

UNIVERSITY OF NAIROBI
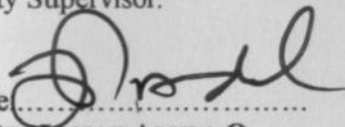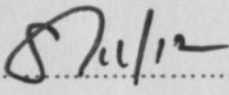
2012

DECLARATION

I, Malayah Tamba Chieyoe, hereby declare that this research is my original work and has never been submitted to any other University for assessment or award of a degree.

Signed.. Date.....11/09/2012.....

MALAYAH TAMBA CHIEYOE

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

Signature.. Date:....8/11/12.....

DR. JOSIAH ADUDA O.

Dedication

This dissertation is dedicated to My Wife, Nenneh Kamara Chieyoe and My Daughter, Siah Tenneh Chieyoe and the entire membership of the Chieyoe family. This research is also dedicated to the people of Liberia especially those who believe-like me-that education is a strong driving force to move Liberia to Prosperity.

Acknowledgement

Abstract

This study investigated capital structure of SMEs in Monrovia, Liberia. SMEs finance themselves either by equity or debt. Literature on capital structure follows two main strands: the pecking order theory and MM model. In addition, debt market is prone to information asymmetry. The importance of this study comes from the basis that previous studies have focused on economies that have the sophistication of capital market(s). Researchers have not focused on economies that have no capital market(s). This study is particular important and somehow different in that Liberia is yet to establish a capital market (security exchange or stock exchange). Resource mobilization in Liberia rests mainly on banks and microfinance institutions. There is not an organized way by which resources are captured from the public through the sales of stocks or other securities. This study is different in that it was done on a non-capital market economy.

This study used multistage stratified random sampling technique to select SMEs that were interviewed to ensure that samples are representative of various parts of Monrovia. The research divided Monrovia into four zones. Each of the zones has fifteen (15) respondents. This was achieved by using random sampling technique in order to minimize the sampling bias. The study was done on three years including 2009, 2010 and 2011.

Regression Analysis was used to explain the data. Leverage (debt) is the dependent variable and independent variables are profitability, growth, asset structure, size and age. The study endeavored to establish the impact of profitability, growth, asset structure, size and age on leverage (same as debt). The study found that profitability, asset structure and age determine capital structure but Size and growth do not influence capital structure. Profitability was found to have a negative relationship with leverage which supports the pecking order theory. Asset structure and age were found to have positive relationship-this positive relationship explains the concept of information asymmetry.

Contents

LIST OF ACRONYMS

APV	-	Adjusted Present Value
CSU	-	Colorado State University
GAC	-	General Auditing Commission
OECD	-	Organization for Economic Co-operation and Development
LD	-	Liberian Dollar
MM	-	Modigliani and Miller
MOCI	-	Ministry of Commerce and Industry
MSME	-	Micro, Small, and Medium Enterprises
NPV	-	Net Present Value
IYM	-	International Year of Microcredit
L-IYM	-	Liberia- International Year of Microcredit
SMEs	-	Small and Medium Enterprises
UON	-	University of Nairobi
USA	-	United States of America
USD	-	United States Dollars
WACC	-	Weighted Average Cost of Capital

CHAPTER ONE
INTRODUCTION

1.1   Background of the Study

Small and Medium Enterprises (SMEs) contribute immensely to economic progress as it relates to poverty reduction and job creation. Unemployment remains a major challenge in the world economies. Large businesses do contribute towards the alleviation of this problem but the contributions being made by the Small and Medium Enterprises (SMEs) are immense. (Neumark et al., 2008)

The contribution of Small and Medium Enterprises (SMEs) to an economy can also be viewed from the point that all consumers would prefer products that are more, rather than less, personalized which creates inherent pressures towards making markets smaller and smaller same as to say, more and more particularized to the demands of individual consumers. The managerial costs of satisfying the demands of small markets are high as compared to big and generalized markets. SMEs serve an economy by satisfying the demands of small markets for which there are no or lower scale economies of production or distribution. SMEs also serve an economy by satisfying demands where the managerial costs of large business are greater than the market transaction costs of dealing by contract rather than by control within a firm. The lower the market transaction costs, the larger the scope of SMEs - higher the market transaction costs, the smaller the scope of SMEs and this influence the specialized demands of small markets. The lower the market transaction costs, the larger the scope of SMEs and the more that the specialized demands of small markets will be satisfied. (Priest, 2003)

The establishment and development of SMEs are vital ingredients in creating dynamic market economies in the economic and social development of transition and developing countries. Entrepreneurship should be encouraged as it significantly drives economic growth, innovation, regional development and job creation. Strengthening Small and Medium Enterprise sector serves as a strong foundation to increase standards of living and to reduce poverty (OECD, 2004).

SMEs account for 60 to 70 per cent of jobs in most OECD countries. Italy and Japan have the largest of jobs created by SMEs and the United States has a relatively smaller share of jobs

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created by SMEs. SMEs also account for a disproportionately large share of new jobs, especially in those countries which have displayed a strong employment record, including the United States and the Netherlands. Some evidence points also to the importance of age, rather than size, in job creation: young firms generate more than their share of employment. However, less than one-half of start-ups survive for more than five years and only a fraction develop into the high-growth firms which make important contributions to job creation. High job turnover poses problems for employment security; and small establishments are often exempt from giving notice to their employees. Small firms also tend to invest less in training and rely relatively more on external recruitment for raising competence. (OECD, 2002, 2004)

The world has acknowledged the importance of SMEs but also recognized the challenges in many developing countries. SMEs entrepreneurs are challenged with industry/business entry, survival and growth. These Challenges can be linked to unavailability of financial resources. (OECD, 2004)

The way small business mobilize and structure the capital is a subject of interest. Capital refers to the resources that a business owns. These resources can have the input of the owner(s) and or non-owner(s) or debtor(s). The input of the owner(s) is called equity and the input of non-owner(s) for the purpose to repay with interest is called debt. The composition of capital with respect to debt and equity is referred to as capital structure. Both debt financing and equity financing have very different potential incentive problems. If the firm uses equity financing, the manager (being an employee) may expend too little effort but on the other hand, with debt financing, the manager (being the owner) may keep the cash flow and default on debt. The dominance of either debt or equity is dependent on the two incentive problems. (Dybvig and Wang, 2002)

Modigliani and Miller (1958), in their seminar paper described that the firm's market value equals the present value of the cash flows it generates regardless of the capital structure it chooses. They made assumptions that the markets were efficient and there were no taxes. MM relaxed the assumptions by introducing taxes into their model in which case the method of financing become relevant (Modigliani and Miller 1963). Modigliani and Miller's seminal papers (1958, 1963) gave rise to two alternative discount rates for project and firm valuations: the Weighted Average Cost of Capital (WACC) and Adjusted Present Value (APV). For Adjusted Present Value, the cash flows are discounted before allowing for debt

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capital but allowing for tax relief obtained on the debt capital.

The value of the firm is obtained by discounting the free cash flow to the firm at the weighted average cost of capital. Embedded in this value are the tax benefits of debt in the use of the after-tax cost of debt in the cost of capital and expected additional risk associated with debt in the form of higher costs of equity and debt at higher debt ratios (Modigliani and Miller 1963; Copeland et al, 2000).

SMEs may face difficulties in raising finance (debt component) due to information asymmetry and other inefficiencies in loan markets. Inevitably, this has a serious impact on their capital structures. Taking cognizance of exceptions, asymmetric information can also explain the dominance of debt financing over equity issues in practice, as the bulk of external financing is expected to come from commercial banks and micro-finance institutions (Bebczuk, 2003). Strong financial systems, which provide loans/credits to investors/businesses, can directly and indirectly create employment and alleviate poverty in an economy (Honohan and Beck, 2007). Credit system also facilitates the process of job creation in which some will become self-employed entrepreneurs while others involved in other business related activities (Thomas, 1992).

The economic activity of Liberia has largely been concentrated in the informal sector as private investors are not engaged. The under-employment or unemployment rate in the formal sector stands at 85%, and 76.2% of the population is living below the USD 1 per day poverty line. The informal sector accounts for at least one-third of the labor force and 37% of the urban labor force. SMEs in Liberia (especially the small enterprises which are in large number) operate in the informal sector; hence there is no official document or listing that could be referenced as a sample frame for the conduct of the survey. (IYM, 2005; MOCI, 2010; Barchue, 2011)

Economists and financial researchers have sought to establish the factors that determine the capital structure. It has been researched in various locations but with varied results as will been shown in the next charter, Literature Review. The factors that appear to determine capital structure are many but this research will still within the parameters of five factors including profitability, growth, size, asset structure and age. Profitability refers to the net income with respect to capital-net income to capital ratio. This means that the higher the net

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income to capital ratio, higher the profitability and vise-versa. Growth shall be defined as a consistent increase in the number of employees. Size refers the number of employees. Asset structure refers to the value of fixed asset with respect to capital. Finally, age is the number of years of existence with respect to the years being studied.

1.1.1 Determinants of Capital Structure of SMEs

Profitability is an important determinant of capital structure. The tax trade-off models show that profitable firms will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk (Ooi, 1999). Ooi, (1999), seems to be consistent with Modigliani and Miller (1963) relative to the tax benefit of debt financing. Studies done by Zhang, 2011, produced a positive relationship between profit and debt which supports the MM, 1963, agreement of debt advantage as explained earlier. However, Myers (1984) prescribes a negative relationship between debt and profitability on the basis that profitable companies do not need to depend much on external funding. Profitable firms, instead, rely on their internally generated funds or reserves accumulated from past profits. Titman and Wessels (1988) and Barton et al. (1989), agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to internally generate such funds from internal sources.

Myer and Majluf, 1984, suggest the concept of information asymmetry. Information asymmetry (Myer and Majluf 1984) accounts for the cause of positive relationship between leverage and growth, because high growth rate will tell outside financer that the borrowing firms are now in a growing market and is less likely to go bankrupt. Hall et al (2004) also raised the point "growth is likely to put a strain on retained earnings and push the firm to borrow and thus be positively related to leverage". On another side, Myer (1977) counter-argued that if a company, with high growth prospect, borrows, it will lead to wealth-transfer from equity investor to debt financer. Thus, companies with growth opportunities will try to avoid the profit generated from its high growth prospect to be taken away by loan providers through restraining on using debt. Small firms are managed by their owners who would not be willing to lose their control as the exchange of loan from outside financers.

A firm with more tangible assets is likely to have more debt since the tangible assets can be used as collateral in securing loan. Banks and other financial institutions would preferably

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give loan to firms with tangible assets and place lien on the tangible assets as a way of protection against default. The pecking order theory suggests that firms holding more tangible assets will be less prone to asymmetric information problems and reduce the agency cost. Agency costs of secured debt such as tangible assets are lower than those of unsecured debt. It is more secure to give loans to firms that have more tangible assets compare to firms with fewer tangible assets.

Size plays an important role in determining the capital structure of a firm as small firms may find more costly to resolve the problem of information asymmetries thereby, disallowing them to source more external finance (Castanias, 1983). According to Berryman (1982), lending to SMEs is riskier because of the strong negative correlation between the firm size and the probability of insolvency. Marsh (1982) and Titman and Wessels (1988) report a contrary negative relationship between debt ratios and firm size. Researchers have taken the view that large firms are less susceptible to bankruptcy because they tend to be more diversified than smaller companies (Smith and Warner, 1979; Ang and McConnel, 1982). Following the trade-off models of capital structure, large firms should accordingly employ more debt than smaller firms.

Myer, 1977, in his concept of information asymmetries, suggest age as an issue of concern. The older a firm is, the more likely there is to be information on said firm thus reducing the problem of information asymmetries. Older firms have more information upon which they can be evaluated and predicted. Such firms are with less information asymmetric problem and are more likely to attract external funds to finance their projects.

Conversely, Pecking Order Theory (Myers, 1984) suggests a negative relationship between debt and equity. As firms tend to choose internal financing on the first opportunity, aged firms should have more capital reserves and are less likely to use external funds but to finance through their internal funds first. Additionally, Jensen's (1986) free cash flow theory pointed out the likely agency cost problem with aged companies if they refused to use debt. If aged firms have more capital reserves and more internal capital available, managers will use the surplus capital for personal pursuit at the expense of investor's interest. More debt for aged firms would be helpful on stimulating more effective management performance.

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1.1.2 SMEs in Monrovia, Liberia

The need to focus special attention and strengthen SMEs in Liberia is being recognized not only by this researcher but also by policy makers evident by the formulation of the MSME policy, spear headed by Ministry of Commerce and Industry, Republic of Liberia, entitled "Liberia Poverty Alleviation and Wealth Creation through Small Enterprise Development". The main source of income for the great majority of the Liberian people (about 80 percent), are microenterprises which are the lynchpin of family welfare in Liberia. Households with successful microenterprises that generate reasonable, steady revenues are positioned to finance better health services, housing and education for their families. The micro and small businesses are founded primarily by Liberians with the desire and potential to establish and grow their own businesses, small and medium enterprises (SMEs) are the emerging core of the domestic corporate private sector. If an enabling environment is provided for them, they will contribute substantially to national growth, job creation and exports. (MOCI, 2010)

1.2   Statement of the Problem

Focus on capital structure has directed to sophisticated economies that at least have a securities exchange in their financial system. Researches on capital structure focus on listed companies as shown in the literature review of this research. Liberia is yet to establish a stock/security exchange. The most known formal means of capital mobilization are commercial banks and microfinance entities. Moreover studies on this subject have focused on large business rather than SMEs. There is a need to investigate the factors that influence funding decisions of SMEs in unsophisticated economies that have no stock/security exchange market.

SMEs at times fail not due to poor management but due to lack of access to resources/finance. Welsh & White (1981), argued that "resource poverty" is one of the most frequently cited reasons for business failure. Bigger business can seize the opportunity and win the market. External forces such as government regulations and tax laws are felt more acutely by small ventures than by large ones. Frequently, small ventures cannot afford the professional expertise of accountants and attorneys to the degree that large firms can (Welsh & White, 1981).

Kuria, (2010) found that profitability and tangibility are significantly negatively related to

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leverage as also liquidity growth and taxation but are insignificant. While risk was seen to have a significant positive relationship but an insignificant one for dividend policy and non-debt tax shield.

Barchue, (2011) found that entrepreneur experience, electricity (the proxy for infrastructure), and access to credit positively influence efficiency of SMEs. Barchue, (2011), studies reveal that age of entrepreneur and electricity positively influence efficiency of SMEs. The studies also found that age of firm and access to credit negatively influence SMEs efficiency.

There is no evidence of any study done on capital structure in Liberia. The study done by Barchue, (2011) though looked at SMEs but it did not take into account the capital structure of SMEs. Therefore it was important to conduct a study that focus on the capital structure of SMEs.

Theory indicates that there is a complex array of factors that influence SMEs owners/managers' financing decisions. These processes are influenced by firm owners' attitudes toward the utility of debt as a form of funding as moderated by external environmental conditions (e.g., financial and market considerations). The form of business also has an impact on the owners' attitudes towards the utility of debt as a form of funding. For example, sole proprietorships and partnerships are sensitive to the risk of unlimited liability. A number of other factors have been shown to influence financing decisions including profitability, growth prospect, assets structure, size, age. This research seeks to examine whether the same factors influence capital structure of SMEs in Liberia. (Admati et. al. (2012); Briozzo, A. & Vigier, H. (2007); Fatoki, O. O. (2011))

1.3   Objective of the Study

The objective of this study is to establish the determinants of capital structure of SMEs in Monrovia, Liberia.

1.4   Significance of the Study

There can be no precision in terms of policy formulation without a scientific study that will identify areas that desire adequate attention. Policymakers will most likely misdirect more relevant attention to less relevant issues without research. This research will bring out issues

that can guide the policymakers in policy formulation. This research may close some existing debates as well as open new areas of debate relative to SMEs and Capital Structure. As third world countries focus on the problems of jobs creation and poverty reduction, there is a need to bring out information based on scientific studies. Such kinds of information if treated or manage diligently will positively contribute to jobs creation and poverty reduction as SMEs consistently account for an estimated 80% of employment in Liberia. (MOCI, 2010)

It is certain that findings emanating from this study are useful to entrepreneurs and would be business executives in Liberia. The results of the study serve as tools to corporate business executives in making informed decisions about the structure of their small businesses in term of its capital composition. Furthermore, the research methodology adopted for the purpose of this study is practical, supportive and provide to corporate executive the basic ways in solving immediate problems relating to what factors that controls or influence the composition of small businesses and once these factors are revealed, executives can use these result to withstand economy shock and insulate themselves from market failure.

There is not much done in terms of Research pertaining SMEs in Liberia. The government has recognized the importance of SMEs and their immense contributions to the economy. As mentioned earlier, policymakers will be less précised in form of policy formulation to account for the various problems in the SMEs sector. This research definitely brings out some issues which could serve as the basis for further research. The knowledge gap in this area is still wide particularly for Liberia. This research shows the contradictions which can be settled by further research. Researchers can use this research as one of the compasses that direct further studies.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter is committed to explaining the theories on capital structure. It also creates the foundation to understand the basis of this subject and how it has evolved and the contributions made by other researchers relative to the subject. This charter will analyze theories of capital structure and also find out what other researchers have uncovered with respect to the determinants of capital structure.

2.2 Review of Theories

2.2.1MM Theory

The initial theory of capital structure was first developed in 1958 by economists Franco Modigliani and Merton Miller known as MM Theory. The "Irrelevance Theory" showed that a firm's value is independent of its ratio of debt to equity financing with the assumptions that: (i) neutral taxes; (ii) no capital market frictions (i.e., no transaction costs, asset trade restrictions or bankruptcy costs); (iii) symmetric access to credit markets (i.e., firms and investors can borrow or lend at the same rate); and (iv) firm financial policy reveals no information. In their 1963 paper, Modigliani and Miller relaxed the assumptions by introducing taxes into their model in which case the method of financing becomes relevant.

In the relaxation of the assumptions of the Irrelevance Theory, Modigliani and Miller (1963), suggests that capital structure can alter the value of a firm in the world of corporate tax and a firm can maximize it value by the use of debt which provides an interest tax shield. A firm has more value if it uses debt financing because debt reduces the corporate tax. The savings due to the use of debt adds to the value of the firm. The firm that uses more debt saves more in the form of corporate tax shield. This suggests that debt is a preferable source of financing for less taxation is laid on debt. (Modigliani and Miller, 1963)

2.2.2 Static Trade-off Theory

Static Trade-off suggests that a firm sets a target debt-equity ratio and gradually follows it. Debt has an advantage of tax shield (MM 1963). However, debt cannot be indefinitely used as the source of financing as there is a trade-off between tax shield advantage on one hand and bankruptcy cost and financial distress on the other hand (Jensen and Meckling 1976).

Debt financing has one major advantage over equity financing-the interest on debt is deducted before corporate tax is paid. But debt also increases financial risk. This makes debt-financing not emphatically less costly than equity-financing. A firm that considers static trade-off, threats debt-equity decision as a "give and take" between the cost of financial distress and tax shield of debt respectively. "Give and take" as use here means cost and benefit. Capital structure reflects tax rates, assets type, business risk, profitability and bankruptcy costs (Myers, 1984).

Generally, if the cost of debt is low and the corporate tax rate is high to the extent that the firm benefit significantly from debt financing, the form will use more debt since the marginal tax-rate on debt is less than the corporate tax rate. This will lead the firm to a positive net tax advantage if it uses debt-financing. Here the firm's optimal capital structure will involve the trade-off between the tax advantage of debt and various leverage-related costs. (Niu, 2008)

Distinction in firms' characteristics leads to variation in the target debt-equity ratio. The trade-off theory predicts that safe firms, firms with more physical/tangible assets and higher tax rate will have higher debt-equity ratio. Firms that are risky (firms with more non-physical/intangible assets) ought to have more equity-financing. (Niu, 2008)

Static Trade-off theory suggests that a firm that is profitable is likely to have more debt as it would want to shield its income from taxes. This means that a firm that in its profitable period will use more debt-financing. Static Trade-off also predicts that a firm with growth opportunities will because it is more likely to lose value in financial distress. (Niu, 2008)

2.2.3 Agency Costs Based Theory

Theory based on agency costs suggests that the capital structure of firms is determined by agency cost which includes the costs for both debt and equity. The costs related to equity issue may include: i) the monitoring expenses of the principal (the equity holders); ii) the bonding expenses of the agent (the manager); iii) reduced welfare for principal due to the divergence of agent's decisions from those which maximize the welfare of the principal. (Niu, 2008)

In addition, when a firm issues debt, chances of investing in high-risk projects will be high. Managers/owners will invest in high risk project for the purpose of higher returns. The

interest on the debt-finance does not increase no matter how much return is obtained from such high risk project. However, the debtors stand at risk if the higher risk does not produce favorable outcome. If debtors anticipate investment in high risk project, a higher premium or interest will be required, which in turns increase the costs of debt. (Niu, 2008)

2.2.3.1 Shareholders-Managers Conflicts

This is a kind of conflict that comes about when the owners of the business are separated from the control of the business. Managers of firms may diverge from the goal of the owners which is the maximization of the firm value. Instead, managers may choose to behave in way that will satisfy their interest. This can be in the form of luxuriant office and cars, expensive travels, extravagant benefits etc. (Jensen and Meckling (1976))

The way to mitigate the chances of this kind of behavior from managers is by giving and or increasing the ownership of managers in the firm they manage. If the manager has ownership in the firm, it puts her/him in a position of unwillingness to loosely spend the firm's money. With this step (s)he will recognize and beware that the firm money (partly his money) should be carefully managed. Additionally, increasing the debt level also helps to mitigate the loss of conflicts between owners/shareholders and managers. Since debt forces managers to pay out cash, reducing the free cash flow managers can waste on the perquisites. (Jensen and Meckling, 1979; Niu, 2008)

From other perspectives, this conflict arises because managers may prefer short-term projects, which produce results early and enhance their reputation quickly, rather than more profitable long-term projects (Masulis, 1988). Managers may prefer less risky investments and lower leverage to reduce the probability of bankruptcy (Hunsaker, 1999). Managers want to stay in their positions, so they wish to maximize the unlikelihood of employment termination. Management may resist takeovers, irrespective of their effect on shareholder value as this will increase with changes in corporate control (Garvey and Hanka, 1998).

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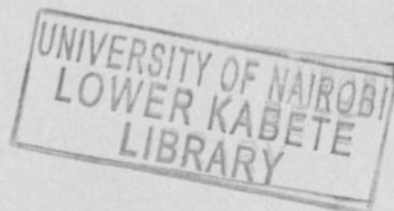
2.2.3.2 Shareholder-Bondholder Conflicts

This kind of conflicts is one in which the owners or their representatives make decisions that transfers wealth from creditors owners. Certainly, the creditors are mindful of the situations in which this wealth expropriation may occur. Because of this expectation, the creditors will demand more in the form of high interest on the loans given the firm. Debt is the foundation of agency conflicts between firms' owners (equity owners) and creditors (debt owners). This conflict can be analyzed into three categories. Wealth can be directly transferred from creditors to owners. Owners can increase their wealth at the expense of bondholders' interests by increasing the dividend payment in the case of corporations. Additionally, the issuance of debt with higher priority will expropriate wealth from current bondholders. Asset-substitution is another source of the conflicts. When signing debt contracts, creditors demand an interest rate according to the riskiness of the firm's investment activities. While debt contracts gives owners an incentive to invest in risky projects because if it succeeds the returns above the face value of debt will be owned by firms owners but in case of failure, the consequence is born by all but mainly creditors in the case of corporations (shareholders' limited liability). This excessive return from risky projects makes safe projects less attractive to shareholders since returns from the safe projects suffice to pay the creditors. If creditors can anticipate shareholders incentive of substituting safe projects by risky projects, they will ask for a higher risk premium. Also the anticipation of wealth expropriation will lead to the increase in risk premium. The increased costs of debt are then born by owners/shareholders since they are residual claimants of the firm. (Jensen and Meckling, 1976; Smith and Warner, 1979; Niu, 2008)

Underinvestment is another agency problem of owner-creditors conflicts (Myers, 1977). Financial distress due to overhang of debt can reduce managers incentives to invest in new projects (even the projects with high growth opportunities will be passed through) because the profits from these projects will be exhausted in debt repayment. One way to minimize these conflicts is that firms with high growth opportunities should have lower debt and use a greater amount of long-term debt than firms in more mature industries. The conflicts can also be mitigated by adjusting the properties of the debt contracts, for example, the adjustment can be done by including covenants such as adding limits on the withdrawals or dividends payment or setting restrictions on the disposition of assets (Smith and Warner, 1979).

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Alternatively, debt can be secured by collateralization of tangible assets in the debt contracts (Stulz and Johnson, 1985).

2.2.4 Asymmetric Information

The theory of asymmetric information is focused around the idea of information gap. Firms' managers will have more information relative the outsider even if the outsiders have interest in the firms. In other words, firm managers and insiders possess private information about the firm's characteristics of return stream or investment opportunities that are rarely known by outside investors. Debt-equity ratio under this framework is used to mitigate the inefficiencies of investment decisions that are caused by information asymmetry (Myers and Majluf, 1984). It is also used as a signal to outside investors about the information of insiders (Ross, 1977).

The pecking order theory can be used to explain asymmetric information. Firms prefer internal to external financing and debt to equity (Myers (1984)). To issue equity means sharing the ownership of the firm with others. Asymmetric information is that insiders (managers) know more about the companies' prospects, risks and values than do outside investors. Outsiders, due to information gaps, will tend to undervalue firms as they would likely accept at most the moderate not the best case when valuing a firm. Therefore, firms will use internally generated funds before the use of debt and equity (sharing the ownership) is the last resort as the cost of capital is at an increase at each option. The managers may even forgo a positive-NPV project if it would require the issue of new equity, since this would give much of the project's value to new owners/shareholders at the expense of the old. (Myers and Majluf, 1984)

2.3 Determinants of Capital Structure

Following from these theoretical standpoints, a number of empirical studies have identified firm–level characteristics that affect the capital structure of firms. Amongst these characteristics are age of the firm, Size of the firm, asset structure, profitability, growth, firm risk, tax and ownership structure. In the case of SMEs, other heterodox factors such as industry, location of the firm, entrepreneur's educational background and gender, form of business, and export status of the firm may explain their capital structure. (Omondi 1996, Kiogora 2000)

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2.3.1 Profitability

Corporate performance (Profitability) has been identified as a potential determinant of capital structure. The tax trade-off models show that profitable firms will employ more debt since they are more likely to have a high tax burden and low bankruptcy risk (Ooi, 1999). Ooi, (1999), seems to be consistent with Modigliani and Miller (1963) relative to the tax benefit of debt financing. Studies done by Zhang, 2011, produced a positive relationship between profit and debt which supports the MM, 1963, agreement of debt advantage as explained earlier. However, Myers (1984) prescribes a negative relationship between debt and profitability on the basis that profitable companies do not need to depend much on external funding. Profitable firms, instead, rely on their internally generated funds or reserves accumulated from past profits. Titman and Wessels (1988) and Barton *et al.* (1989), agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to internally generate such funds from internal sources. Cole, (2008), also found that profitable firms use less debt compare to the unprofitable counterparts. Empirical evidence from previous studies (Chittenden *et al.*, 1996; Michaelas et al 1999), appear to be consistent with the pecking order theory which shows that the relationship between profit and debt is negative that is higher profit less debt and the reverse is true. Therefore, this research wants to establish a negative relationship between profitability and debt/leverage.

2.3.2 Growth

Studies on this issue have not been consistent rather it has been quite controversial. Myer and Majluf, 1984, suggest the concept of information asymmetry. Information asymmetry (Myer and Majluf 1984) accounts for the cause of positive relationship between leverage and growth, because high growth rate will tell outside financer that the borrowing firms are now in a growing market and is less likely to go bankruptcy. Hall et al (2004) also raised this point *"growth is likely to put a strain on retained earnings and push the firm to borrow and thus be positively related to leverage"*. On another side, Myer (1977) counter-argued that if a company, with high growth prospect, borrows, it will lead to wealth-transfer from equity investor to debt financer. Thus, companies with growth opportunities will try to avoid the profit generated from its high growth prospect to be taken away by loan providers through restraining on using debt. Small firms are managed by their owners who would not be willing to lose their control as the exchange of loan from outside financers.

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Michaelas et al. (1999), argued in favor of a positive relationship between leverage and growth. They justified that short-term debt can smooth over the tension between debt investor and equity investor, and debt investor will not intervene with the use of money for growth by equity holder for their money will come back in a much shorter term. Moreover, firms with high growth rate normally don't have enough money to fund their growth by themselves and will seek funding from outside sources (Cassar and Holmes 2003). Additionally, there is also a benefit associated with the use of debt as postulated by MM, 1963. Firms with high growth rate normally don't have enough money to fund their growth by themselves and will seek funding from outside sources (Cassar and Holmes 2003).

Zhang, (2011), found that there is a negative relationship between debt and growth. That is firms experiencing growth will have less debt relative to their counterparts. Michaelas *et al.* (1999) found future growth positively related to leverage and long-term debt, while Chittenden *et al.* (1996) and Jordan *et al.* (1998) found mixed evidence. The measurement of growth can be done in different dimensions. Growth can be measured on the sales, profit, etc. For the purpose of this study, growth shall be measured based on the sales. A consistent increase in the sales of the firm shall be considered growth.

2.3.3 Assets Structure

Asset structure is an important determinant of the capital structure of a new firm. The extent to which the firm's assets are tangible and generic would result in the firm having a greater liquidation value (Harris and Raviv, 1991; Titman and Wessels, 1988). Studies have also revealed that leverage is positively associated with the firm's assets. This is consistent with Myers (1984) argument that tangible assets, such as fixed assets, can support a higher debt level as compared to intangible assets, such as growth opportunities. Assets can be redeployed at close to their intrinsic values because they are less specific (Williamson, 1988; Harris, 1994). Thus, assets can be used to pledge as collateral to reduce the potential agency cost associated with debt usage (Smith and Warner, 1979; Stulz and Johnson, 1985). Feri and Jones (1979), Marsh (1982), Long and Matlitz (1985) and Allen (1995) provide empirical evidence of a positive relationship between debt and fixed assets. The empirical evidence suggests a positive relation consistent with the theoretical arguments between asset structure and leverage for large firms; Chittenden *et al.*, (1996). Therefore, the researcher projects a positive relationship between Asset structure and debt or leverage.

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2.3.4 Size

Size plays an important role in determining the capital structure of a firm as small firms may find more costly to resolve the problem of information asymmetries thereby, disallowing them to source more external finance (Castanias, 1983). Researchers have taken the view that large firms are less susceptible to bankruptcy because they tend to be more diversified than smaller companies (Smith and Warner, 1979; Ang and McConnel, 1982). Following the trade-off models of capital structure, large firms should accordingly employ more debt than smaller firms. According to Berryman (1982), lending to SMEs is riskier because of the strong negative correlation between the firm size and the probability of insolvency. Marsh (1982) and Titman and Wessels (1988) report a contrary negative relationship between debt ratios and firm size. Marsh (1982) argues that small companies, due to their limited access to equity capital market tend to rely heavily on loans for their funding requirements. Titman and Wessels (1988) further posit that small firms rely less on equity issue because they face a higher per unit issue cost. The relationship between firm size and debt ratio is, therefore, a matter for empirical investigation.

2.3.5 Age

A firm will try to increase the debt proportion of capital structure so as to take advantage of taxation shield (Modigliani and Miller 1963). The accumulated efforts of financing through debt will increase along with age and age is thus positively related to leverage (Zhang, (2011)). Conversely, Pecking Order Theory (Myers, 1984) suggests a negative relationship between debt and equity. As firms tend to choose internal financing on the first opportunity, aged firms should have more capital reserves and are less likely to use external funds but to finance through their internal funds first. However, Jensen's (1986) free cash flow theory pointed out the likely agency cost problem with aged companies if they refused to using debt. If aged firms have more capital reserves and more internal capital available, managers will use the surplus capital for personal pursuit at the expense of investor's interest. More debt for aged firms would be helpful on stimulating more effective management performance.

Myer, 1977, in his concept of information asymmetries, suggest age as an issue of concern. The older a firm is, the more likely there is to be information on said firm thus reducing the problem of information asymmetries. Older firms have more information upon which they can be evaluated and predicted. Such firms are with less information asymmetric problem and are more likely to attract external funds to finance their projects. Consequently, age will have

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appositive relationship with debt.

2.4 Empirical Studies

Researchers in the fields of Economics and Finance have been analyzing the processes of economic value creation as far back as 1958 (Modigliani and Miller). Modigliani and Miller in their 1958 and 1963 seminar papers set the basis for academic exchange that is long ongoing. Their assertion that capital structure is a major determinant of value is the main issue of debate. Modigliani and Miller (1963) assert that the use of debt-financing was a way of adding value to the firm since the firm saves as a result of tax shield. This is sufficient reason for someone think that a firm should use more and more debt to finance its projects.

However, Jensen and Meckling (1976) partially agree with Modigliani and Miller (1963). They too are of the view that debt financing creates value, the tax shield advantage but this value comes with cost of bankruptcy, financial distress (Jensen and Meckling, 1976). They further argue that firms should target a balance between debt and equity which is an indication that there is an optimum capital structure. This optimum capital structure is the ratio at which a firm gets sufficient tax shield advantage without suffering the bankruptcy cost and financial distress (Jensen and Meckling, 1976). The optimum capital structure is the selection of debt-equity ratio that maximizes the firm value. It is the best selection that gives the highest value to firms (Myers, 1984).

Myers (1984) and Myers and majluf (1984) identify the pecking order approach as the way by which firm determine the capital structure thus refuting the static trade-off approach. They agree that firms do not have targeted capital structure that they follow rather they will invest the internally generated capital (retained earnings) follow by debt and then equity (Myers (1984) and Myers and majluf (1984)).

These arguments have attracted lot of attention to the subject of capital structure. These arguments have created controversy in establishing the validity of these theories has engendered attempts to find solutions that underpin theoretical hypotheses and improve econometric models (Harris and Raviv, 1991).

Solomon, (1963), argues that a firm with certain structure of assets and that offers net offers net operating earnings of given size and quality, and given a certain structure of rates in the capital markets there should be some specific degree of financial leverage. At this degree of leverage (debt-equity ratio), the market value of the firm security will be higher (or the cost

of capital will be lower) than at other degrees of leverage (Solomon, 1963).

Durand, (1959 as cited by Kuria, 2010), suggested The Net Income Approach in which the market value for the firm is not affected by the capital structure changes. The market value of the firm is ascertained by capitalizing the net operating income at the overall cost of capital which is constant (Durand 1959 as cited by Kuria, 2010).

The net income approach is based on the following assumptions: the overall cost of capital remains constant for all the degree of debt-equity mix; the market capitalizes the value of the firm as a whole thus the split between debt and equity is not significant; the use of less costly debts increase the risk of shareholders/owners and this cause equity capitalization rates to increase. Consequently, the advantage of debt is off set exactly by increase in the equity capitalization rate; there are not corporate taxes and cost of debt is constant. Under NOI approach, since overall cost of capital is constant, there is no optimum capital structure rather every capital structure is as good as any other one (Durand, 1959 as cited by Kuria, 2010).

If the study accepts the assumptions of NOI, then the capital structure decisions are unimportant (Gapenski et al, 1988 cited by Kuria 2010). However, in the world of corporate taxes, both the Net Income and the Net operating Income approaches would indicate that the optimum capital structure calls for virtually a hundred per cent debt (Gapenski& Eugene, 1988 cited by Kuria 2010). Empirical results also indicate that the major trends in debt-equity correlation are determined primarily by uncertainty of expected inflation. Korajczy and Levy (2000 cited by Kuria 2010) found that a firm choice of security issuance is dependent on the macroeconomic conditions and firm-specific variables. They, Korajczy and Levy (2000 cited by Kuria 2010), postulated that firms tend to time the issuance of securities to period of favorable macroeconomic conditions.

When ascertaining the impact of macroeconomic factors on the speed of adjustment towards targeted leverage that firms adjust in favorable macroeconomic conditions (Drobetz and Wanzenried, 2006). This implies that when interest rates are low and the risk of disruptions in the global financial systems are negligible; firms speed to adjust towards target leverage is faster. Banjeree et al, (2004 cited by Kuria 2010) have also argued that economy-wide factors should impact the speed of capital structure adjustment (Loof, 2004 cited by Kuria 2010). Antoniou et al. (2002 cited by Kuria 2010) find that the capital structure of choice of a firm is

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not only affected by its own specific characteristics, but by its surrounding environment such as the general economy, the existence of a stock market as well as the size of banking sector. Choe et al (1993 cited by Kuria 2010) argued that adverse selection costs vary counter-cyclically to explain the general increase in equity issues during expansion.

Karkbarthet al. (2006 cited by Kuria 2010) document that macroeconomic conditions determine both the pace and the size of capital. Therefore, the timing g of capital structure target should not only consider firm kevel characteristics, but due consideration should be also be given to the state of the economy. Henderson et al. (2006 cited by Kuria 2010) document that for debt issue a negative relationship between the level of interest rate and the quantity of long and short term debt issued (Graham and Harvey 2001 cited by Kuria 2010). In all of it, the direction of the impact of the macroeconomic factor on capital structure decisions of firms is not clear.

As stated earlier, in the study to find the determinants of capital structure of companies quoted in the Nairobi Stock Exchange, she found that profitability and tangibility are significantly negatively related to leverage as also liquidity growth and taxation but are insignificant. While risk was seen to have a significant positive relationship but an insignificant one for dividend policy and non-debt tax shield. (Kuria, 2010)

It was found that the capital structures of companies in the same sector are similar and that there are differences in the capital structure among industry groupings and firms within a given sector tend to cluster towards some target equality / total asset ratio. Kiogora (2009)

There is a trend to avoid debt by companies that have not state interests (Ndirangu, 1992 and Matibe, 2005 as cited by Kuria 2010). Study,(Ndirangu 1992 as cited by Kuria), of the companies listed on Nairobi Stock Exchange, showed that as debt increases the risk operation also increases which is an indication of a deviation from Modigliani and Miller (1963).

As mentioned earlier, it was found that entrepreneur experience, electricity (the proxy for infrastructure), and access to credit positively influence efficiency of SMEs in Monrovia, Liberia., It was reveal that age of entrepreneur and electricity positively influence efficiency of SMEs. The studies also found that age of firm and access to credit negatively influence SMEs efficiency. Barchue, (2011)

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2.5 Conclusion

Amongst these theories, the major contending are Static Trade-off theory and Pecking Order theory *and* Market Timing theory. Static Trade-off theory argues the existence of an optimum capital structure which the management of a firm will choose. Oppose to Static Trade-off theory, Pecking Order theory argues that a firm does not observe an optimum capital structure rather it would only solicit debt when there is no internal generate funds (retained earnings). Partly siding with Pecking Order theory, Market Timing theory suggests that a form will use equity if the market value of its shares is high but debt if shares market value is low. Market Timing theory disagrees that a firm will choose a targeted capital structure, (Niu, 2008).

There is no evidence that there has been any study ever been conducted in Liberia on the determinants of capital structures. There is a study done on SMEs efficiency which has been reviewed. However, there have been many studies done on the subject accept that these studies have focused on economies that have Security Exchange or Stock Exchange Markets. The chapter reviewed theories and empirical studies which exposed the contradictions of the various theories and findings.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This Chapter is aimed at explaining the population size of interest, the type of data used, source of the data and the technique of analysis used. This chapter is divided into research design, the population, the sample, data collection, data analysis, multiple regression variables and the model used to measure the relationship between the variables. The study is done to cover the years 2008 to 2011. These years are used to establish the determinants or factors that influence capital structure in Liberia.

3.1. 2 Research Design

One of the ways to gather information is to conduct a survey. Survey is a common type of quantitative, social science research. Survey allows the researcher to select sample of respondents from a population. Survey is a technique that is widely used by researchers. Survey research follows the following steps: establish the goals, determine your sample, choose interview methodology, create your questionnaire and pre-test the questionnaire (if applicable). Angus and Katona (1953 cited by CSU) argued that survey technique is greatly useful because of its wide application and coverage. Survey technique has various types including written surveys, oral survey, Electronic Survey and example survey. For the purpose of this research, written survey used in the form of questionnaires that respondents filled. The method is convenient and still produces the solution of the problem being researched. It establishes whether or not there is a relationship between variables identified and the capital structure of firms. (CSU)

3.1.3 The Population and Sample Size

There has been not convictional definition for SMEs. What has been agreed upon is the factor size which has been measured by the number of employees. There is still no clear definition for SMEs-however, number of employees is a generally accepted tool to measure the size of the business. What has been practiced is the customization of definitions to suit the conditions of a particular economy or country. Base on this practice, Liberia has defined SMEs as businesses that have less than fifty (50) employees. Hence the SMEs being studied in this research are businesses with less than fifty (50) employees. (MOCI, 2010)

SMEs in Liberia (especially the small enterprises which are in large number) operate in the informal sector; hence there is no official document or listing that could be referenced as a sample frame for the conduct of the survey. The advantage of this sampling technique is that it does not require any sampling frame and it is most appropriate for this study. This study used primary data collected from 60 small and medium enterprises (SMEs). Managers/entrepreneurs of the businesses responded to the questionnaires with aim of achieving the researcher objective. Managers/entrepreneurs of SMEs (Businesses with less than 50 employees) provided data that were analyzed to find the determinants of capital structure in Monrovia. (MOCI, 2010; Barchue, 2011).

3.1.4 Data Collection Technique

This study used multistage stratified random sampling technique to select SMEs that were interviewed to ensure that samples are representative of various parts of Monrovia. The research divided Monrovia into four zones. The zones consist of Central Monrovia, Sinkor (including Fiamah, Air Field, Congo Town and Old Road), Paynesville-Gardnerville, and Bushrod Island. Each of the zones has fifteen (15) respondents. This was achieved by using random sampling technique in order to minimize the sampling bias. The study was done on three years including 2009, 2010 and 2011.

The instrument of the research was based on questionnaires. A list of questions was drawn up by the researcher. According to Mugenda (2003) the pre-requisite to questionnaires design is definition of the problem and the specific study objectives. The study also used interviews to unearth and get more information in order to increase the accuracy and reliability of the study. (Barchue, 2011; MOCI, 2010; Mugenda, 2003).

3.1.5 Data Validity and Reliability

Validity refers to the exactness of scientific investigation carried out and the accurateness of the instruments and Models. The instruments and models used in a scientific investigation should align with the purpose. The instruments of investigation are tested to establish whether or not they measure their target. The Information used in this study has been compiled from reliable and credible sources justifying the completeness and accuracy of the data used. All pieces of information contained in this research are from sources well quoted. The self-administered questionnaire was validated using the content validity. This process involved

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careful and critical examination of items in the questionnaire. Entrepreneurs and managers validated the questionnaire.

The reliability of data implies that instruments used should measure with consistency. The instrument used should not give contradicting results in same situations or environment. Reliability suggests that other researchers should be able to come to the same results if they use the same method(s). A test was conducted to ascertain the internal consistency of the instruments.

3.1.6 Data Analysis

The data collected for this study were cleaned, edited and tested for completeness. This was done to ensure that the data used are adequately reflective, accurate and reliable for conclusion and realization of the research objective of this study. SPSS software was used to carry out the analysis of the data obtained. The study used seven independent variables. The researcher constructed a regression model to analyze the reliance leverage (the dependent variables) on the independent variable outlined below. Regression has become one of the most widely used techniques in the analyzing such data (Bryman, 1998).

3.1.7 Model

The model adopted by this study is the multiple regression models. "Multiple regression" is a technique that allows many factors to enter the analysis separately so that the effect of each can be estimated. It is valuable for quantifying the impact of various simultaneous influences upon a single dependent variable. (Sykes, 1993)

Data collected on the variable of interest within the period of study were analyzed through descriptive statistics. Further multiple regressions and correlation analysis will be used to explain the nature and significance of relationship between changes in the response variables (leverage) and change in the prediction variables (determinants) identified in the study. The regression model used is shown below:

Equation #1.: Regression Equation

$Y=B0+B1X1+B2X2+B3X3+B4X4+B5X5+e$

Where:

Y=Leverage-Dependent Variable (ratio of debt to total capital)

$X1$-$X5$= (Independent Variable)

$X1$=Profitability (ratio of net profit to total capital)

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X2=Growth (ratio of increase in the number of employees to the total employees)

X3=Size (number of employees)

X4=Asset Structure (ratio of fixed asset to total capital)

X5=Age (years of existence)

B1-B5=regression coefficients define the amount by which Y is changed for every unit change in predictor variables. Leverage/capital structure is the dependent variable. On the other hand, Profitability, Growth opportunity, Size of the firm, Asset structure, and Age of the firm are all independent variables. This indicates that X1, X2, X3, X4 and X5 are factors that influence how much debt(Y) a firm will have.

The test is whether the independent variables (profitability, size, growth, assets structure and age) are capable of predicting the leverage. The means for all the factors were calculated on an annual basis. Regression analysis was used to compute the significance of the relationship between capital structure (debt) and each factor respectively.

In as much as correlation analysis computed shows strength and direction between the variables that enter the regression model, the magnitude of correlation coefficient among explanatory variables is used to measure the level of multicollinearity. Multicoliearity is said to exist when correlation between explanatory variables is greater than 0.8. Multicollnearity makes parameter estimates inefficient and inconsistent such that parameters are insignificant despite high coefficient of determination (Gujarati, 2007). On possible solution to this problem is to drop variable that are collinear. In our case age size and growth are reputational variables, since they reduce information asymmetry and tend to be highly correlated.

Greatest advantage with regression analysis is that the parameters estimated show causality between explanatory variables and regressors. Parameters estimated suggest magnitude and direction the independent variables have on the explanatory variables. But in the regression model, some variables may not influence the dependent variable but overall significance of the model or fitness of the model is important. The overall fitness of the model is discerned from the coefficient of determination and the F-statistics. Coefficient of determination provides the proportion of variation in the depended variable due to explanatory variables. F-statistics measures joint significance of the explanatory variable. High coefficient of variation shows that, a large proportion of variation in leverage is due to the explanatory variables. A highly significant F-statistics indicates that jointly, all variables influence leverage.

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3.1.8 Expected Results

As has been expressed in chapter I, there have been substantive arguments that support both positive and negative relationships between the dependent variable (debt) one on hand and the independent variables (profitability, growth, asset structure, size and age) on the other hand. The empirical studies on this subject have not been able to settle the issues as shown in the two previous chapters.

However, the researcher had projected the following results as shown in the table below:

Table 1: Expected signs

Dependent Variable	Independent Variable	Definition	Relationship	Supportive Theories and studies
D E B T	Profitability	Ratio of netprofit to total asset	-	Pecking Order Theory; Titman and Wessels (1988) and Barton *et al*. (1989)
	Growth	Change in the number of employees	+	Information Asymmetry; Hall et al (2004) and Michaelas et al. (1999)
	Asset Structure	Ratio of Fixed Assets to total assets	+	Agency Theory-Agency Cost; Harris and Raviv, 1991; Titman and Wessels, 1988
	Size	Number of employees	+	Information Asymmetry; Berryman, 1982 and Castanias, 1983
	Age	Years of existence	+	Free Cash Flow Theory; Agency Theory-Agency Cost; Information Asymmetries;

CHAPTER FOUR

ANALYSIS AND FINDINGS

4.1 Introduction

This paper investigates factor that determine capital structure of SMEs in Monrovia Liberia. Titman and Wessel (1988) argues that capital structure is explained by profit age, growth, size and assets structure. This chapter presents empirical results from survey questionnaire administered in Monrovia. The Study begins by showing descriptive statistics, and then correlation analysis and finish with regression results from ordinary least square estimates. Descriptive statistics

4.2 Descriptive Statistics

Table 2: Descriptive statistics

Statistics

		debt	fasset	profit	Size	age	growth
N	Valid	60	60	60	60	60	60
	Missing	0	0	0	0	0	0
Mean		.2945	22.9667	22.8333	21.5000	16.4500	9.0667
Median		.2845	17.0000	18.5000	23.0000	16.0000	10.0000
Mode		.27[a]	40.00	14.00	28.00	16.00[a]	14.00
Std. Deviation		.12555	11.82638	11.52325	8.92815	6.67001	4.82180
Variance		.016	139.863	132.785	79.712	44.489	23.250
Skewness		.535	.542	.476	-.379	-.327	-.342
Std. Error of Skewness		.309	.309	.309	.309	.309	.309
Kurtosis		.014	-1.216	-1.376	-1.264	-.579	-1.237
Std. Error of Kurtosis		.608	.608	.608	.608	.608	.608
Minimum		.04	8.00	8.00	3.00	2.00	.00
Maximum		.60	48.00	45.00	33.00	27.00	15.00

a. Multiple modes exist. The smallest value is shown

The sample size is 60 firms and from Table 2 all the variables have equal number of observations, hence the study has equal amount of information on all the variables. Debt is

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the ratio of total debt to total equity and it is a measure of leverage. Average leverage for this sample is 0.2945 with a standard deviation of 0.126 and a mode of 0.27. This suggests that most firms are lowly leveraged; hence most assets are financed by equity. This is particularly true since small firm have difficulties in accessing loans from financial institutions in developing countries (Atieno, 2009).

Most of small businesses tend to have small base of fixed assets like land and buildings and thus their tendency to operate in rented premises (Bigsten et al., 2000). Firms in our case have average fixed asset of $ 22.97 thousand. This very small and in economies like Liberia where credit market has information asymmetry such that loans are collaterized, makes access to debt finance difficult.

Regarding profitability, these firms make an average profit of $ 22.8 thousand with least and maximum profit being $8 and $45 thousand. Size is measured by the number of employees. Average size for firms in the sample is 22 employees but the smallest company has 2 employees and the largest firm has 33. As compared to other developing countries this firms are small (Aryeetey, 1997). Bringing age in the picture, reveals that despite these firms being relatively older, they have not increased in size substantially, because firm have an average age of about 16 years with the oldest being 27 and youngest has 2 years. But, in as much as the firms have existed for long their growth is stunted hence transition from small to medium and eventually to large has been for a long time been impaired, although, firms have grown significantly for the last 3 years.

4.3 Correlation coefficient

Correlation coefficient indicates strength and direction between variables. Specifically, partial correlation coefficient shows correlation between two variables holding others constant. Table 3 show Pearson partial correlation coefficients of variables of our interest.

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Table 3: correlation matrix

Correlations

		debt	Profit	fasset	Age	Growth	Size
Debt	Pearson Correlation	1	-.836**	.920**	.837**	.779**	.850**
	Sig. (2-tailed)		.000	.000	.000	.000	.000
	N	60	60	60	60	60	60
Profit	Pearson Correlation	-.836**	1	-.776**	-.778**	-.847**	-.763**
	Sig. (2-tailed)	.000		.000	.000	.000	.000
	N	60	60	60	60	60	60
Fasset	Pearson Correlation	.920**	-.776**	1	.761**	.718**	.830**
	Sig. (2-tailed)	.000	.000		.000	.000	.000
	N	60	60	60	60	60	60
Age	Pearson Correlation	.837**	-.778**	.761**	1	.729**	.783**
	Sig. (2-tailed)	.000	.000	.000		.000	.000
	N	60	60	60	60	60	60
Growth	Pearson Correlation	.779**	-.847**	.718**	.729**	1	.783**
	Sig. (2-tailed)	.000	.000	.000	.000		.000
	N	60	60	60	60	60	60
Size	Pearson Correlation	.850**	-.763**	.830**	.783**	.783**	1
	Sig. (2-tailed)	.000	.000	.000	.000	.000	
	N	60	60	60	60	60	60

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

From Table 3, all correlations are significant at 1%. Profit is negatively related to leverage while the rest of the variables are positively correlated with leverage. Negative correlation between profitability and leverage suggests that most profitable firms do not finance themselves using debt but rely on retained earnings. This is consistent with (Myers 1984; Jensen and Meckling 1984; Titman and Wessells, 1988). Positive correlation between leverage on one hand and size and age on the other indicates that credit market is riddled with information asymmetry and as size and age increases asymmetry reduces thus making it easier to obtain debt finance. High growth firms require additional financing for expansionary purposes, hence are more likely to go for debt finance, thus positive correlation between growth and leverage. The positive relation between leverage fixed asset suggests

that firms with high tangible asset can use the tangible asset as a guarantee or collateral to source loans. Credits that are based on collaterals are viewed to be more secured since those collaterals can be used to repay the loans in the case of bankruptcy.

4.4 Regression results

Correlation coefficients indicate strength and direction of relationship between variables but they do not suggest causality. To explain determinants of capital structure of SMEs in Monrovia, The study estimates linear least square model in which the dependent variable is the leverage measured by the ratio of debt to equity and explanatory variables are profitability, size, growth and assets structure. Explanatory variables are essential asymmetry variables and a measure of finance using retained earnings as measured by profitability. Table 4 shows regression results of ordinary linear regression model for determinants of capital structure of SMEs.

Table 4: Regression results

$ANOVA^b$

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.843	5	.169	104.325	$.000^a$
	Residual	.087	54	.002		
	Total	.930	59			

$Coefficients^a$

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.101	.048		2.120	.039
	growth	.001	.002	.036	.416	.679
	Size	.001	.001	.095	1.071	.289
	Age	.004	.001	.206	2.699	.009
	Profit	-.002	.001	-.155	-1.694	.096
	f-asset	.006	.001	.539	6.502	.000
a. Dependent Variable: debt						

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.952[a]	.906	.898	.04020

a. Predictors: (Constant), fasset, growth, age, size, profit

4.4.1 Summary and Interpretation of Findings

From Table 4, standardized coefficients show the change in leverage due to change in respective explanatory variables by a unit; the t statistics is the ratio of the respective coefficient and the corresponding stand error. Significance of individual parameter is evaluated using the t ratio and the probability where probability greater than 0.1 indicates the study accepts the null that the coefficient is equal to zero otherwise the study fails to reject the null.

Coefficient on growth is 0.036. This indicates that as growth of the firm increases by 1 percent leverage increases by 0.036. However, this increase is insignificant at 10%. Therefore, firms that have high rate of growth do not necessarily demand debt finance.

Profitability is a ratio of net profit to total assets. Profitability coefficient is negative 0.02 and is significant at 10 percent. This indicates that an increase in profitability by 1 percent leverage reduces by 0.02. This confirms the Pecking Order Theory which argues firms will exhaust the internally generated funds before engaging external funding (Myers, 1984). This traces cost hierarchy in the financing options where a cheaper source is utilized first, followed by an expensive source. The findings also support the studies done by Titman and Wessels (1988) and Barton et al. (1989). Titman and Wessels (1988) and Barton et al. (1989), agree that firms with high profit rates, all things being equal, would maintain relatively lower debt ratio since they are able to internally generate such funds from internal sources.

This study has disapproved the proposition of Modigliani and Miller (1963). Modigliani and Miller (1963) propounded the trade-off theory which suggests that firms will use debt financing for the benefit of tax reduction. The finding of this study also disagrees with studies, by Ooi (1999) and Zhang (2011), which seem to be consistent with Modigliani and Miller (1963) relative to the tax benefit of debt financing.

The result shows that growth positively related to leverage. The coefficient for Growth is indicates that if growth increases by 1 unit leverage increases by 0.001. This increase is in highly insignificant at 10 per cent. This positive and insignificant relationship can be attributed to information asymmetry (Myer and Majluf, 1984). Information asymmetry (Myer and Majluf 1984) accounts for the cause of positive relationship between leverage and growth, because high growth rate will tell outside financer that the borrowing firms are now in a growing market and is less likely to go bankruptcy. Hall et al (2004) also raised the point *"growth is likely to put a strain on retained earnings and push the firm to borrow and thus be positively related to leverage"*. While the result shows positive relationship but the relationship does not significantly matter.

On another side, the result disagrees with Myer (1977). Myer (1977) argued that if a company, with high growth prospect, borrows, it will lead to wealth-transfer from equity investor to debt financer. Thus, companies with growth opportunities will try to avoid the profit generated from its high growth prospect to be taken away by loan providers through restraining on using debt. Small firms are managed by their owners who would not be willing to lose their control as the exchange of loan from outside financers.

The result shows that Asset structure (represented by fixed assets) has a positive relationship to leverage. The coefficient for Asset structure is positive (0.006) and highly significant. When value of fixed assets increases by 1 USA Dollar, leverage increases by 0.006 and this increase is significant at all levels of significant, indicating that fixed assets are a determinant of leverage. This is consistent with the argument that a firm with more tangible assets is likely to have more debt since the tangible assets can be used as collateral in securing loan. Banks and other financial institutions would preferably give loan to firms with tangible assets and place lien on the tangible assets as a way of protection against default (Stiglitz and Weiss, 1981). Myers (1984) the pecking order theory suggests that firms holding more tangible assets will be less prone to asymmetric information problems and reduce the agency cost. Agency costs of secured debt such as tangible assets are lower than those of unsecured debt. It is more secure to give loans to firms that have more tangible assets compare to firms with fewer tangible assets.

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The result shows that size, which is measured by the number of employees, has a positive relationship to leverage. When size increases by 1 employee, leverage increases by 0.095, indicating a positive relationship. Size is signal that the firm is good borrower and the larger the size the stronger is the signal of debt worthiness of a firm especially in the debt market where the lender does not have accurate information on the quality of the borrowing firm(Stiglitz, 1971). From the coefficient of size, as much as a reduction in asymmetry motivates firms to use more debt finance, this increase in the amount of debt finance is not significant at 10 per cent, providing evidence that size is not an important signal for credit worthiness of firms and hence there capital structure in Monrovia.

The result shows that age has a positive relationship to leverage. This position is backed by estimates, where an increase in the age of the firm by 1 year leads to significant increase leverage by 0.206. The coefficient for age is significant at 5 per cent indicating that age influences leverage. Reputation in debt market is also acquired by age. Petersen and Rajan (1994) small enterprises do not have solid asset to provide as collateral when seeking debt finance. However, the place of collateral is taken by relationship built between the firm and the lender through continued interaction between the two, which allows the lender to discern the quality of the firm and the firm to be informed of the available financing services (Petersen and Rajan, 1994). In addition, the older the firm the more it creates networks which makes it easier to get guarantors for debt finance and also lenders get to know it (Titman and Wessels, 1988).

This finding is in support of (Myer, 1977). Myer (1977), in his concept of information asymmetries, suggest age as an issue of concern. The older a firm is, the more likely there is to be information on said firm thus reducing the problem of information asymmetries. Older firms have more information upon which they can be evaluated and predicted. Such firms are with less information asymmetric problem and are more likely to attract external funds to finance their projects (Myer, 1977).

In relation to Pecking Order Theory, with respect to age, (Myers, 1984) suggests a negative relationship between debt and age contradicting regression results. Myers (1984) argues that firms tend to choose internal financing on the first opportunity, aged firms should have more capital reserves and are less likely to use external funds but to finance through their internal funds first. Additionally, Jensen's (1986) free cash flow theory pointed out the likely agency

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cost problem with aged companies if they refused to using debt. If aged firms have more capital reserves and more internal capital available, managers will use the surplus capital for personal pursuit at the expense of investor's interest. More debt for aged firms would be helpful on stimulating more effective management performance.

The overall fitness of the model is discerned from the coefficient of determination and the F-statistics. Coefficient of determination provides the proportion of variation in the depended variable due to explanatory variables. From the regression results F-statistics is 104.325 with a probability of 0.00. This shows that jointly all the independent variables in the regression model influence leverage measures joint significance of the explanatory variable. Coefficient of determination is given by adjusted R squared. In our case, adjusted R squared is 0.898 implying that 89.8 percent of variation in leverage is due to independent variables.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

The objective of this study is to investigate determinants of capital structure of SMEs in Monrovia, Liberia. The research analyzed primary data collected between June and August 2012 using correlation coefficient and estimated multiple regression model. The study selected five independent variables and a dependent variable. The independent variables included profitability, Growth, Size, Capital structure and Age and Debt or leverage was the only dependent variable. Therefore, these variables were used in regression model to establish the relationships the independent variables has with the dependent variable.

The study reviewed Static trade-off theory, pecking order theory and agency cost theory to find out how they relate and explain financing behavior of SMEs in Monrovia. The study also reviewed information Asymmetry theory to better appreciate it affects leverage. All these theories possess the different traits to explain the corporate capital structure. Static trade-off theory suggests that the optimal capital structure is a trade-off between net tax benefit of debt financing and bankruptcy costs (MM, 1963). Firms with higher tangible assets will be in a position to provide collateral debts, so these firms can attract more external finance.

Larger or high profitable firms maintain a low debt ratio, while firms with high growth rate used less debt financing. Pecking order theory states that firms prefer internal financing to external financing and risk debt to equity due to information asymmetric between insiders and outsiders firm. Agency cost shows the financial behavior of firms in relation of agent and principle relationship.

The results of this study reveal that Asset Structure has a positive relationship to financial leverage. This relationship is significant thereby making Asset structure an important factor in determining capital structure. Size plays a positive but insignificant relationship with

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financial leverage and therefore not a determinant of determinant of capital structure in Monrovia, Liberia. This finding supports static trade-off theory and Agency cost theory but contradicts with pecking order theory.

For profitability, the study obtained an inverse relationship that supports picking order theory but opposes to static trade-off theory. The results suggest that firms that are more profitable do not often finance their investment by debt source.

Positive relationship between growth and leverage also found but this relationship is not important thereby making growth an important determinant of SMEs' financial behavior.

5.2   Conclusions

The focus of capital structure has been more sophisticated economies. The focus has not been economies like Liberia which has not capital market (security or stock exchange).This study investigated capital structure of SMEs in Monrovia, Liberia. The two main ways firms finance themselves are either by equity or debt. Percentage of debt was used to represent capital structure. The study endeavored to establish the determinants of capital structure in Monrovia Liberia-an economy without a capital market. There is not an organized way by which resources are captured from the public through the sales of stocks or other securities. This study is different in that it was done on a non-capital market economy.

Literature on capital structure follows two main strands: the pecking order theory and MM model. In addition, debt market is prone to information asymmetry. The importance of this study comes from the basis that previous studies have focused on economies that have the sophistication of capital market(s). Researchers have not focused on economies that have no capital market(s). This study is particular important and somehow different in that Liberia is yet to establish a capital market (security exchange or stock exchange). Resource mobilization in Liberia rests mainly on banks and microfinance institutions.

This study used multistage stratified random sampling technique to select SMEs that were interviewed to ensure that samples are representative of various parts of Monrovia. The research divided Monrovia into four zones. Each of the zones has fifteen (15) respondents.

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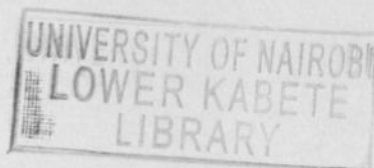
This was achieved by using random sampling technique in order to minimize the sampling bias. The study was done on three years including 2009, 2010 and 2011.

Regression Analysis was used to explain the data. Leverage (debt) is the dependent variable and independent variables are profitability, growth, asset structure, size and age. The study endeavored to establish the impact of the independent variables (profitability, growth, asset structure, size and age) on dependent variable (leverage same as debt). The study found that Size and growth do not influence capital structure, but profitability, asset structure and age explain capital structure. Profitability was found to have a negative relationship with leverage while asset structure and age was found to have a positive relationship. In addition empirical results support pecking order theory and also information asymmetry influence debt finance.

5.3   Policy Recommendations

The policy implication for Liberia with it economy being largely rested on the informal sector, is significant. Liberia is yet to establish a capital market (security or stock exchange market). The economy is significantly underdeveloped. This means this Liberia has more distance to cover in terms of improving its economy.

This study has brought out that most firms are lowly leverage. Average leverage for the sample is 0.2945 with a standard deviation of 0.126 and a mode of 0.27. This indicates that firms are 27% leveraged on the average.

Also judging from our sample, the average age of firms is 16 years which means firms have existed for long their but growth is stunted hence transition from small to medium and eventually to large has been for a long time been impaired, although, firms have grown significantly for the last 3 years.

As Liberia endeavored to transition from an economy of more informal to formal, attention can be given to SMEs. A significant improvement in the way SMEs do business will indicate a major step from informal to formal. The improvement of SMEs is important to the improvement of the overall economy. This improvement cannot be supported by equity on a 83% basis as discovered by this study. SMEs can take advantage of debt to finance their growth and improve the way they do business. Therefore, policies should be formulated and

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promulgated to enable SMEs access credit to support their growth.

Additionally, there may be a huge demand on the loanable funds in the economy as there is no capital market. The loanable funds with financial institutions may not be adequate to supply its demand.

Developing countries, including Liberia, continue to face major challenges owing to the high shares of workers that are underemployed, poorly paid, have vulnerable job conditions or lack access to any form of social security. At the same time, open unemployment rates remain high, at well over 10 per cent in urban areas, with the situation being particularly acute in a number of African and Western Asian countries. The "10 per cent" as mentioned here is the estimated average for developing countries and not particularly Liberia. Long-term unemployment has also increased in developing countries (United Nations 2011).

Jobs creation and poverty reduction remain a major challenge for third world countries. The growth and improvement of SMEs will have an effect on employment and poverty reduction. Growth and improvement in this sector will certainly increase employment. The more support policies makers focus on the improvements SMEs the farther away the country from poverty.

5.4   Limitations of the Study

The study considered only firm specific variables but did not consider other extended factors that could affect the financing decision of firms.

There was also limitation of time because the study was carried out as a partial requirement for the award of Master of Business Administration Degree-the limited timeframe limited the scope for a wider research. The study was further limited by the lack of finances.

The study could not independently verify the information given by managers or proprietors but only relied on such data for the research. The data used for the study was unaudited.

5.5 Suggestions for Further Studies

The study has investigated the determinants of capital structure of SMEs in Monrovia, Liberia by using 60 SMEs to represent SMEs of Monrovia, Liberia. There is still gaps and need for further research as there has been fewer studies on Liberia as it relates Finance particularly Capital Structure. The study therefore recommends another study to be done with an aim to investigate the capital structure but being more industry base to include, for example, insurance companies and telecommunication industry. The study also suggests a study of capital structure of State Owned Enterprises (SOEs).

In future work, it would be appropriate to focus on following aspects:

Differentiating between long term and short term debts

Ownership structure should be considered for instance non debt tax shield could be adjusted for inflation to find out the actual economic depreciation.

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SECTION 1: GENERAL FIRM AND PROPRIETORS CHARACTERISTICS

1. Name of the business (optional) ....

2. Position of the respondent:

Manager (   )   Proprietor (   )   Manager and Proprietor (   )

Other_____

3. When did the business start? (Specify year and month)

....

4. Tick the legal status of your business.

a) Sole proprietor   [ ]   b) Partnership [ ]

c) Limited company   [ ]   d) Others (specify).........

4. What kind of Assistance would you want from government and or NGO? (Rank in order of 1st, 2nd, 3rd etc.):

        Loan (credit)   [   ]
        Training   [   ]
        Grant   [   ]
        None   [   ]

Others (specify) _____

5. Type of activity.

    Manufacturing   [ ]   Trade   [ ]
    Services   [ ]   Construction   [ ]

1. What was the total capital of the Business in the following in:

Year	LD	USD
2009		
2010		
2011		

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2. What was the total debt of the Business in the following in:

Year	LD	USD
2009		
2010		
2011		

3. What was the total fixed asset of the Business in the following in:

Year	LD	USD
2009		
2010		
2011		

4. What was the total number of the Business in the following in:

Year	Number of Employees
2009	
2010	
2011	

5. What was the net income (net Profit) of the Business in the following in:

Year	LD	USD
2009		
2010		
2011		

6. What was the total taxes paid to government by the Business in the following in:

Year	LD	USD
2009		
2010		
2011		

12. What was the principal source of funds you used to finance your assets?

Personal savings   [ ]

Relatives   [ ]

Government agency   [ ]

Nongovernmental organization   [ ]

Commercial bank   [ ]

Others specify...

13. If your firm has never applied for a bank loan, why not?

Inadequate collateral	[ ]
Don't want to incur debt	[ ]
Process too difficult	[ ]
Didn't need one	[ ]
Didn't think I'd get one	[ ]
Interest rate too high	[ ]
Already heavily indebted	[ ]
OTHER (SPECIFY_____)	