

**CAPITAL STRUCTURES, AND SAVINGS AND CREDIT COOPERATIVE
ORGANIZATIONS - DEVELOPING A GROWTH MODEL FOR ZAMBIA**

By

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**A Dissertation submitted to the University of Zambia in partial fulfilment of the
requirements for the award of the Degree of Doctor of Philosophy in Business and
Management**

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LUSAKA

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DECLARATION

I, **Fidelity Milambo**, do hereby declare that this work is my original work achieved through personal reading and research. This work has never been submitted to the University of Zambia or any other Universities. All sources of data used and literature on related works previously done by others, used in the production of this Dissertation have been duly acknowledged. If any omission has been made, it is not by choice but by error.

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APPROVAL

This Dissertation by **Fidelity Milambo** is approved as a partial fulfilment of the requirements for the award of the Degree of Doctor of Philosophy Degree in Business and Management.

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ABSTRACT

Globally, countries are paying attention to the potential of Savings and Credit Cooperative Organizations (SACCOs) as one form of enterprise with a meaningful impact on the economic empowerment of their citizens. Despite SACCOs recording growth in various countries, the growth of SACCOs in Zambia driven by Capital Structure (CS) remains largely under-researched. The main objective of this study was to develop a SACCO Growth Model underpinned by CS. The study area was Lusaka Province. Data were collected from the target population of 59 active SACCOs that had audited financial statements for the period 2017 - 2021. The study was a mixed method, and adopted a multi-paradigmatic position. Epistemologically, the research was objectivist and positivist in paradigm. Ontologically, the study adopted a realist and parmenidean approach. Structured interviews and questionnaire surveys were used to collect data. Qualitative textual data was analysed manually using hierarchical coding frames. Statistical Package for the Social Sciences (SPSS) Version 26 was used to analyse Quantitative panel data. The results under objective one established growth patterns of increases in capital reserves by 54.5 percent, assets increased by 25.0 percent, membership increased by 149.5 percent; number of employees increased by 31.3 percent; member savings increased by 63.7 percent; retained earnings increased by 33 percent; equity financing increased by 5.0 percent; employee competency increased by 61.9 percent, and 50.0 percent of SACCOs reported increase in dividends. Under objective two, key determinants of SACCOs' CS at 97.6 percent was through savings, while 78.6 percent attribute profitability as a key determinant. The impact of CS on SACCO growth under Objective 3 revealed that for every 1 percent increase in savings, share capital, and retained earnings, the growth index increases by 0.17/100, 0.09/100, and 0.00/100, respectively, statistically significant (p value <0.05). A computerized SACCO growth model was developed under objective 4, which revealed that CS was a strong contributor to SACCO growth. The model was validated for usefulness and functionality with select 9 SACCOs. Seamlessly combining results from both methods in building a model was a challenge. The study recommended inclusion of CSs in SACCOs' bye-laws, revision of the Cooperative Act of 1998 to prescribe how capital structure should be raised, and a further study on optimal CS mix for SACCOs growth.

Key words - Capital Structure, Savings and Credit Cooperative Organizations, Growth.

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DEDICATION

In memory of my father, Vincent Kalabukila Milambo.

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LIST OF ABBREVIATIONS AND ACRONYMS

7NDP	Seventh National Development Plan
8NDP	Eighth National Development Plan
ACCOSCA	Africa Confederation of Cooperative Savings and Credit Association
ADB	Africa Development Bank
AGM	Annual General Meeting
ATM	Automated Teller Machine
CUSA	Credit Unions and Savings Association
FSD	Financial Sector Deepening
GRZ	Government of the Republic of Zambia
GDP	Gross Domestic Product
ICA	International Cooperative Alliance
ICT	Information, Communications and Technology
IMF	International Monetary Fund
MCTI	Ministry of Commerce, Trade and Industry
MFI	Micro Finance Institution
NAMBOARD	National Agricultural Marketing Board
NASCU	National Associations of Savings and Credit Unions
NGI	Non-Governmental Institution
NGO	Non-Governmental Organizations
SACCO	Savings and Credit Cooperative Organization
SDGs	Sustainable Development Goals
SME	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
UK	United Kingdom
WOCCU	World Council of Credit Unions
ZCF	Zambia Cooperative Federation

CHAPTER 1

INTRODUCTION

1.0 Introduction

In this chapter, the Savings and Credit Cooperative Organizations (SACCOs) sector is briefly introduced and contextualized insofar as its reliance on capital structures is concerned. A brief background shows why SACCOs heavily rely on capital structure to achieve growth. Then, the problem statement is defined representing a gap in knowledge that the study addressed, followed by research questions and objectives of the study. The scope of the study is outlined and justified, with definitions of operational terms outlined and the anticipated application of research results elaborated. The chapter ends with an overview of the dissertation in terms of structure and content.

1.1 Background of the Study

According to Saab (2023), the overarching goal of the Zambian government is to generate higher, better quality, and more inclusive and sustainable growth. A specific objective is to reach middle-income status by 2030. To achieve these goals, successive Zambian governments have been seeking to create a greater role for the private sector in driving the economy and financing growth. One of the key private sector channels through which economic growth can be achieved are Savings and Credit Co-operative Organizations (SACCOs). The extraordinary power of SACCOs – democratically owned and controlled enterprises, serving their members' needs, rooted in their communities is again proving popular, as co-operatives demonstrate themselves to be 21st century businesses (Smith, 2003).

Globally, there were 82,758 SACCOs, with over 404 million members, a combined asset base of US\$3.6 trillion, and a penetration rate of 13.9 percent by the end of 2022 (World Council of Credit Union, 2022). The global SACCO movement is the largest organization in the world, bigger in terms of membership than the trade union movement, economically more powerful than several Group 20 (G20) nations, and providing employment to many more people than all multinational companies taken together (Schwettmann, 2014). In theory, such a potent movement should be central to the international development agenda. The Sustainable Development Goals (SDGs) recognize this potential as can be noted in the adoption of cooperative principles of self-help in its targets 1.1 and 1.2 aimed

at poverty reduction, while target 8.3 refers to the role of cooperatives in formalizing the informal sector, including promoting financial inclusion and creating jobs (Schwettmann, 2014).

Africa has 43 million SACCO members, with total assets of over US\$24.6 billion, representing 0.79 percent of Africa's total Gross Domestic Product (GDP) of US\$3.1 billion (Africa Development Bank, 2023). The SACCO movement in Kenya is the largest in Africa, and among the top ten globally, accounting for around 45 percent of Kenya's GDP (Gicheru, 2020). Kenya's SACCO sector had total assets of USD21.8 billion in 2022 (World Council of Credit Union, 2022) compared to USD6.98 billion in 2017 (World Council of Credit Unions, 2017) – representing a growth of 212 percent. Kenya's Ministry of Trade, Industry and Co-operative Development estimates that 80 percent of Kenya's population derives their income either directly or indirectly through Co-operative activities. In addition, the sector employs more than 500,000 people whilst necessitating self-employment especially through lending (Cuevas and Buchenau, 2018). Unlike Tanzania, Uganda and Kenya where SACCOs are widespread and utilized by 4.3 percent, 7.2 percent and 21.3 percent of adults respectively as of 2015, SACCOs in Zambia are small and serve only 1.4 percent of the adult population in 2017, increasing to 2.1 percent as of 2020 (Bank of Zambia, 2020). The SACCOs in these reference countries are predominately based in rural areas and serve low to moderate income consumers, including large numbers of women and youth. However, in Zambia its mainly SACCOs related to formal or government employers which have remained after past crisis and closure of SACCOs in Zambia in part due to weak oversight (Ministry of Finance, 2017).

In the case of Zambia, SACCOs had total assets of USD18.97million in 2017 (World Council of Credit Unions, 2017), compared to USD USD25.3million in 2021, a notable growth of 33 percent and improved penetration rates from 0.3 percent in 2017 to 17.2 percent in 2021 – which was higher than the penetration rates for Africa at 15.7 percent and globally at 12.7 percent (World Council of Credit Unions, 2021). However, the growth margins were insignificant, considering that this sub-sector contributes less than 1 percent to Zambia's GDP, compared to 47 percent in the case of Kenya. Zambia' Seventh National Development Plan (7NDP) for the period 2017 to 2021 defined cooperative development as one of the important strategies to achieve enhanced job creation in the economy (Ministry of National Development Planning, 2017). The plan did not

specifically articulate how cooperatives such as SACCOs would be strong contributors to the economic development of the country. Further, even though the 2017 National Financial Sector Development Policy proposed the enacting of relevant legislation to provide for the formalization and supervision of SACCOs – these remained a pipe dream (Ministry of Finance, 2017). The 7NDP was succeeded by the Eighth National Development Plan (8NDP) for the period 2021 to 2026, focusing on among others, enterprise development. Unlike the 7NDP which did not explain how the cooperative sector would be supported, the 8NDP clearly states that it will support the cooperative sector by providing access to finance (Ministry of Finance and National Planning, 2022). However, it is evident from both national development plans that the government has not adequately explained in clear terms how the SACCO sub-sector would be catalyzed to achieve growth. Focus appears to be more on agricultural and production-focused cooperatives, with no mention of the SACCO sub-sector as a potential strong contributor to economic development in the two (2) plans. Further, even though the National Financial Inclusion Strategy for 2017 – 2022 articulated action items for strengthening the reach and sustainability of SACCOs, through expanding linkages between SACCOs and formal financial institutions, reviewing feasibility of incorporating SACCOs into financial sector legal and regulatory framework, and promoting sustainable SACCOs through technical assistance and expanded product offerings (Ministry of Finance, 2017) - largely missing in these good intentions was the concrete implementation of these plans.

1.2 Statement of the Problem

Zambia has one of the lowest growth rates of SACCOs in Africa with total assets of US\$25.3 million compared to Kenya at US\$21.8 billion, Ethiopia at US\$807.7 million, Tanzania at US\$381.8 million, Rwanda at US\$347.4 million, Ghana at US\$463.4 million, Botswana at US\$61 million, Malawi at US\$40 million – among others (World Council of Credit Union, 2022). Whereas the Zambia National Financial Inclusion Strategy 2017 – 2022 recognizes SACCOs as a key financial delivery channel and instituted strategies to grow this sector, not much success has been achieved as evidenced by the dismal contribution of SACCOs to the national GDP at only 0.3 percent (Bank of Zambia, 2015). A ZIPAR study of SACCOs in Zambia cited the lack of access to finance or capital as ranked one of the top three (3) problems impeding the growth of SACCOs in Zambia (Ministry of Finance, 2020).

Further, Taimni (1997) argues that SACCOs the world over are in a state of flux in that they face one or more of the following crises: crisis of ideology, crisis of capital, crisis of credibility and crisis of management. The challenges on capital mainly exist around how to set the balance from solvency resulting from capital adequacy and the liquidity resulting from adequate liquid assets meant to meet immediate obligations. This enables SACCOs to remain solvent using capital structure and liquid enough to be able to service the needs of its borrowers thereby generating more interest income. The right blend of capital or capital structure is the backbone for any SACCO to operate and achieve its objectives. It is evident that there exists a gap in determining how capital structure affects the growth of SACCOs, with the literature on academic research on this topic using actual operating data found to be limited.

Prior studies (Agrawal et al., 2002; Adeyemo & Bamire, 2005; Deji, 2005; Asher, 2007; Ogsi, 2001) have shown that lack of growth of SACCOs has threatened their sustainability such that they have not been able to absorb their operational losses. This has led to the losses being absorbed by members' savings and share capital, resulting into impairment. According to financial stewardship theories (Zetsche, 2007); capital structure theories (Ahmed & Hisham, 2009; Flannery & Hankins, 2007); funds allocation strategy theories (Chien, 2006) and growth theories (Gardner, 2006), stagnation in the growth of SACCOs is attributable to among other factors, inadequate capital structure. Notwithstanding this, it is not clear exactly what the relationship between capital structures and growth for SACCOs in Lusaka Province. Most studies on capital structure, Gleason (2000), Pandey and Chotigeat (2004), Coleman (2007) were conducted in Europe, Middle East, and United States of America; while some studies, Ondiek (2010), Gweji and Karanja (2014), Thurairara (2014), Ronoh (2015), and Mwenje (2016), have also been done in Kenya focusing on capital structure and financial structure.

Largely missing from these studies and literature is the focus on capital structure on the growth of SACCOs particularly in the Zambian context and Lusaka Province in particular. In a bid to close the existing knowledge gap, the study took an integrated approach to assess the impact of capital structure on SACCO growth. The findings of the research would contribute to the body of knowledge through the development of the SACCO growth model.

1.3 Research Questions

The study sought to answer the following questions:

- i) What are the growth patterns of SACCOs in Lusaka Province?
- ii) What are the determinants of capital structure for SACCOs in Lusaka Province?
- iii) What is the impact of capital structure on SACCOs growth in Lusaka Province?
- iv) How can a SACCOs growth model be developed and validated using the results?

1.4 Objectives of the research

The objectives of the research were broken down to the main objective, which the outcome of the study, and specific objectives which were the outputs.

1.4.1 Main objective

The overall objective was to develop a model which could be used to establish SACCOs' growth patterns relative to the SACCOs' Capital Structure. The model outputs would serve as a basis for encouraging SACCOs to appropriately mobilize and apply their capital structure if they are to achieve growth.

1.4.2 Specific objectives

To achieve the main objective, the following specific objectives were pursued:

- i) Establishing the growth patterns of SACCOs in Lusaka Province.
- ii) Identifying determinants of capital structure for SACCOs in Lusaka Province.
- iii) Assessing effects of Capital Structure on SACCOs growth in Lusaka Province.
- iv) Developing, validating, and using a SACCO growth model using study results.

1.5 Scope of the research

The study investigated capital structures on the growth of SACCOs in Lusaka Province. The study was a census all the 59 registered and active SACCOs in Lusaka Province for the period 2017 to 2021. SACCOs in the census were using different capital levels. The study was not able to establish if the capital structure was the most optimal for the SACCOs and hence future studies will attempt if there exists a more efficient optimal capital structure for SACCOs. The other limitation was the likelihood of non-technical response from the respondents in SACCOs where CEO's or Finance Managers were not professionally qualified.

1.6 Operational Definitions of Terms

The following operational definitions of terms were applicable to this Study:

<i>Capital Structure</i>	The mix of owners' Equity and debt, Buch <i>et al</i> (2014).
<i>Core Capital</i>	It means fully paid up members' shares, capital issued, disclosed reserves, retained earnings, grants and donations all of which are not meant to be expended unless on liquidation of the SACCO Society.
<i>Firm Growth</i>	Firm growth is simply a process by which a specific goal is accomplished, and the predicted optimal size reached. From this point, the firm is at the efficient state and there is no further demand for growth, which is believed to be reasonable (Wiklund and Shepherd, 2005).
<i>Penetration Rate</i>	The penetration rate or financial credit penetration rate is calculated by dividing the total number of reported credit union members by the economically active population, (McKillop & Wilson 2011).
<i>Financial Distress</i>	Financial difficulties leading to firm's external borrowing. Firms with greater risk of experiencing financial distress will borrow more than the firms experiencing low risk of distress (Ross, 1993).
<i>Liquidity</i>	Ability of the institution to own liquid assets. For the purposes of the regulations, liquid assets include, Notes and Coins, Balances held in banks, treasury bills and treasury bonds, deposits in other SACCO's, other assets as specified by the law (Cooperative Societies Act number 20 of 1998, Government Republic of Zambia).
<i>SACCO</i>	A financial institution that is owned and controlled by its members and operated for the purposes of promoting thrift, providing credit at low interest rates and providing other financial services to its members, and it is registered in line with the cooperative laws of the country (Makori, 2013).

1.7 Applications of the research

The findings from this research would be applied in the following ways:

1.7.1 Policy Makers

The findings of this study will be used to influence policy action aimed to resolve internal and external barriers towards the growth of SACCOs. This would be realized by providing valuable suggestions to policy implementers at national level, to in turn make recommendations to policy makers for them to devise pro-SACCO policies. These policies may include among others; the strengthening of the legal framework on SACCOs specifically repealing the Cooperative Act number 20 of 1998 and possibly enacting a new SACCOs Act to provide for formalization and supervision of the SACCO sub-sector as a standalone from the general Cooperative legislation and build capacity for the direct or delegated regulation of SACCOs, as espoused in the Zambian National Financial Sector Development Policy of 2017.

1.7.2 Investors and/or Stakeholders

One of the objectives of the study was to determine if capital structures played a role in the growth of SACCOs. Core capital strengthens SACCOs by increasing the amount of money available for lending to members through profit retention. The practice guarantees members of loans at cheap interest rates and efficiency in services rendered by the SACCOs. The savers who are also investors will find the study particularly useful in determining whether to increase savings in SACCOs or to invest in alternative institutions. Similarly, they will determine if SACCOs are the cheapest source of credit or other avenues existed. Additionally, prospective stakeholders such as non-governmental organizations (NGOs) that are interested in the advancement of SACCOs might be keen to establish the usefulness of the results of the study.

1.7.3 Scholars, Researchers and Students

The study will enable researchers appreciate the impact of capital structure on the growth of SACCOs and pursue the areas recommended for further research. Further, researchers may want to establish if better capital structure for SACCOs existed and hence enrich future research with relevant knowledge on SACCOs. The findings of this study would help to contribute to the existing body of knowledge by generating new insights on the key attributes that would help to stimulate the growth of SACCOs.

1.7.4 SACCOs

The Board of Directors, Management and Staff of SACCOs will appreciate the study findings for unpacking their capital structural needs as drivers for growth. The study findings would also increase members' confidence and loyalty to the SACCOs due to the safety of their deposits by establishing the adequate institutional capital levels. The study's findings would help practitioners of SACCOs who include; ordinary members, board members and employees to pro-actively resolve some root causes of SACCOs failure or inability to grow. The SACCOs would also adopt the proposed growth model as an instrument for enhancing their own growth.

1.8 Organisation of the Thesis

The thesis consists of nine chapters.

Chapter 1 is the Introduction and contains the background to the study; explains what the research problem is; the research questions that the study seeks to answer; objectives of the study; the significance of the study and how the thesis was organized.

Chapter 2 was a review of the literature on the capital structures and the growth of SACCOs. The chapter included the introduction, overview of capital and its structure, overview of SACCOs, SACCO growth, capital structures and SACCO growth: review of similar studies, critique of existing literature, lessons learnt and chapter summary.

Chapter 3 discusses the Theoretical Framework that guided the study, which included the following: Introduction, Theoretical Review, the philosophical underpinnings of the Study and chapter summary.

Chapter 4 covers the Conceptual Framework of the study, including the independent, moderating, and dependent Variables. The chapter also contains the Research Hypothesis and operationalization of the Hypothesis.

Chapter 5 focuses on the Research Methodology. It contains the introduction, research design, study location, target population, sampling frame, and data collection.

Chapter 6 presents the results and analysis of the research findings.

Chapter 7 presents the model development steps. The chapter also presents the model and its use in measuring the growth of SACCOs.

Chapter 8 presents a detailed discussion of the proposed theories and arguments. *Chapter 9* which presents the conclusions, limitations, and recommendations of the study.

1.9 Chapter Summary

The Chapter introduced the subject of the study by providing a background, statement of the problem, research questions, research objectives and application of the research. Chapter 2 will unpack literature that underpinned this study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The previous Chapter outlined an overview of SACCOs, growth and capital structure. It also presented the problem statement and objectives of the study. This Chapter covers a review of available literature on the subject of capital structure and the growth of SACCOs. The Chapter begins by examining capital and its structure, SACCOs, and growth. A critique of the relevance existing theories and literature are also presented.

2.2 Capital Structure

Modugu (2013) define capital structure as the different options used by a firm in financing its assets. Capital structure refers to the way a company finances its operations and investments through a combination of debt and equity. Moreover, Myers (2001) posits that capital structure attempts to explain the mix of securities and financing sources used by companies to finance real investment. It is a crucial aspect of financial management and plays a significant role in determining the overall value, growth, and performance of a company. The composition of a company's capital structure includes short-term debt, long-term debt, preferred shares, and ordinary shares. These funding sources, both internal and external, affect the value of the company and its ability to generate profits. The value of a company is influenced by its capital structure, which is determined by the combination of different sources of funds, including debt and equity (Arifin et al., 2023). Furthermore, the capital structure decisions made by a company can have a profound impact on its financial health and success (Indarto and Santoso, 2021). Therefore, Mursalim, Mallisa and Kusuma (2017) argue that one of the most important decision that a firm can make is the financing decision.

Modugu (2013) posits that capital structure decisions pose a lot of challenges to firms. Capital structure has its origin in the celebrated paper by Modigliani and Miller (1958), who proved that the choice between debt and equity financing has no material effects on the value of the firm or on the cost or availability of capital. They assumed perfect and frictionless capital markets, in which financial innovation would quickly extinguish any deviation from their predicted equilibrium (Harris and Raviv, 1991). Even though the logic of the Modigliani and Miller theorem is now widely accepted, capital financing

continues to be a pain point for most organizations. The chief reasons why it matters include taxes, differences in information and agency costs.

Determining an appropriate mix of capital structure is one of the most strategic decisions public interest entities are confronted with. A wrong financing decision has the tendency of stalling the fortunes of any business. Financing choices can be determined by a combination of many factors that may be related to the characteristics of the firm as well as to their institutional environments. Financing decisions by firms is called capital structure. In addition to influencing the overall value of the company, capital structure decisions also play a central role in shaping investment and dividend policy decisions. This underlines the importance of making informed and strategic choices in capital structure to achieve optimal business value and sustainable growth. Companies often utilize their capital structure to finance operating activities and acquire assets. By carefully balancing debt and equity, companies can effectively manage their financial resources and achieve growth (Arifin et al., 2023).

2.2.1 Historical Perspective of Capital Structure

It can argued that there five stages in the development of the capital structure theory from a historical perspective, distinguished:

- a) Traditional Approach (Before 1958):*** The first stage, based on practical experience and existed before the appearance of the first quantitative theory by Modigliani and Miller. Solomon and Weston (1963) advocated for the Traditional Theory of Capital Structure which states that when the Weighted Average Cost of Capital (WACC) is minimized, and the market values of assets are maximized, an optimal structure of capital exists. Thus, this traditional view asserts the existence of an optimum capital structure. In essence, the theory proposes that the cost of capital can decrease with reasonable use of debt to a certain limit. This theory is based on assumptions that: there are only two sources of funds used by a firm, that is, debt and equity, total assets are given and do not change, the firm pays 100 percent of its earnings as dividends, the total finance remains the same, the operating profits are not expected to grow, the business risk remain constant, the firm has a perpetual life and the investor behave rationally. However, some of these assumptions do not hold under the imperfect market and it has been widely criticized by a number of scholars including Modigliani

and Miller (1958). Relating this theory to our study variables, it is expected that the use of debt by a financial institution will potentially reduce the entity's cost of capital, up to a certain limit where the firm profitability is expected to be maximized. On the other hand, due to the increase in capital composition from debt and equity/retained earnings this will result to increase in investments in interest bearing assets by the financial institution thereby increasing interest incomes as well as profitability. However, most of the assumptions listed International above will not apply under this case, as the imperfect market conditions will come to force under the operation of any financial institution.

b) *Modigliani and Miller (1958 – 1963)*: The second stage was the development of the Modigliani and Miller Theory. They conjectured that in the perfect market, it does matter what capital structure a company uses to finance its operations. They theorized that the market value of a firm is determined its earnings power and by the risk of its underlying assets, and that its value is independent of the way it chooses to finance its investments or distribute dividends. The MM theorem is built on assumptions that: investors have homogeneous expectations regarding future cash flows, bonds and stocks trade in perfect markets, investors can borrow and lend at the same rate, no agency costs and investments and financing decisions are independent of one another. Modigliani and Miller (1958) came up with two propositions. Proposition I is based on assumptions of perfect market conditions. They argue that the percentage of either debt or equity in capital structure does not influence the market value of a given firm. In this proposition, the value of the firm is computed by capitalizing the net operating incomes. Thus, under this theory, the proponents conclude that there is no optimal capital structure. While proposition II proposes that the cost of equity financing is equal to the constant average cost of overall capital plus a risk premium. Ideally, this proposition holds that the cost of capital will remain constant even when excessive debt is raised. This is not true as the cost of debt varies with the level of debt raised. This implies that even with increase in debt, there is no added value created since the burden of individual risk is shifted between different classes of investors. This proposition introduces the aspect of arbitrage to further support the proposition. The market equilibrium will always be restored through an arbitrage process whereby the investors will engage in personal leverage for firms with similar firms except for the

degree of leverage. MM with taxes considers the tax deductibility of interest expense, which makes debt financing cheaper. An ideal capital structure would be made up of pure debt under MM II. Thus, under this proposition, for firms to increase their profitability, they should make use of more debt to equity since it results into a lower cost of capital. The MM theorem assumptions are however unrealistic, but they help us work through the effects of the capital structure decisions. Relating this theory to our variables, we note that the use of debt in addition to owners' equity to finance the operations of any entity including financial institution is considered more profitable due to tax shield mechanism as per MM proposition II. This slightly differs with MM proposition I which provides that the use of either debt or equity as a factor contributing towards the generation of operating incomes. Therefore, by applying this in financial institution, the use of either debt or equity will lead to increase in interest earning assets (which is the major commercial bank investment) and therefore it does not matter the source of funds since it would result to the same outcomes.

c) ***Modification of the Modigliani and Miller Theory (1964 - 2008)***: The third stage are the numerous attempts by Scholars to modify the Modigliani–Miller theory, including:

i) *Hamada Model*: The Modigliani–Miller theory, with the accounting of taxes has been united with CAPM (capital asset pricing model) in 1961 by Hamada (Hamada, 1969).

ii) *Cost of Capital under Risky Debt*: In the Modigliani–Miller theory, there are two assets types: risky equity and risk-free debt). However, assuming about the risk of bankruptcy of the company and the ability to nonpayment of debt may change the situation with debt. It has been shown by Stiglitz (1969) and Rubinstein (1973) that the assumption concerning risky debt does not change the company's value with respect to the Modigliani and Miller results under free of risk debt.

iii) *Account of Corporate and Individual Taxes (Miller Model)*: Modigliani and Miller considered only corporate taxes, but they did not consider the individual taxes of investors. Miller (1997) has developed the model with an account of the corporate and individual taxes and studied the impact of leverage on the company's value.

iv) *Miles–Ezzell Model Versus the Modigliani–Miller Theory*: Becker (2021) discussed the differences between the Modigliani–Miller theory and the Miles–Ezzell model Miles and Ezzell (1980), which deal with the stochasticity of free cash flows. The Modigliani–Miller theory considers a stationary process, while in the Miles–Ezzell model the process is stochastic. The author conducts a numerical experiment that allows you to determine the values and discount rates using a risk-neutral approach.

d) ***Brusov–Filatova–Orekhova (BFO) Theory (2008 - 2019)***: The fourth stage is the appearance of the BFO theory, which removed the main restriction of the Modigliani–Miller (MM) theory associated with the infinite lifetime of a company (Brusov, Filatova, Orekhova, and Eskindarov, 2018). In 2008 Brusov–Filatova–Orekhova (BFO) theory replaced the famous Modigliani and Miller theory. The authors have moved from the assumption of Modigliani–Miller concerning the perpetuity (infinite time of life) of companies and elaborated the quantitative theory of valuation of main indicators of financial activities of arbitrary age companies. Results of modern BFO theory turn out to be quite different from that of Modigliani–Miller theory. It shows that later, via its perpetuity, underestimates the valuation of cost of raising capital the company and substantially overestimates the valuation of the company value. Such an incorrect valuation of main financial parameters of companies has led to an underestimation of risks involved, and impossibility, or serious difficulties in adequate managerial decision–making, which was one of the implicit reasons of the 2008 global financial crisis. In the BFO theory, in investments at certain values of return–on–investment, there is an optimum investment structure. As well a new mechanism of formation of the company optimal capital structure, different from suggested by trade–off theory has been developed.

e) ***Brusov–Filatova–Orekhova and Modigliani–Miller (2019 up to now)***: Finally, the fifth stage is associated with the adaptation of the two main theories of the capital structure (Brusov–Filatova–Orekhova and Modigliani–Miller) to the established financial practice of the company’s functioning by considering the real conditions of their work.

2.2.2 Categorization of Capital Structures

When analyzing the categorization of capital structure, it is essential to consider both internal and external factors that influence the decision-making process. The optimal capital structure must consider the balance between debt and equity that can enhance the company's value while minimizing the cost of capital. This means that financial managers must carefully assess the proportion of debt and equity used in funding the company's operations. The repercussions of choosing the wrong capital structure are significant. Incorrect financial structuring can lead to severe financial risks and potential bankruptcy.

Therefore, the capital structure decision-making process is critical for long-term financial stability and business success. The choice of debt and equity in the capital structure is influenced by various internal and external factors. Internal factors include the company's profitability, liquidity, and sales growth. External factors, on the other hand, encompass market conditions, industry standards, and the availability of external financing options. It is crucial to consider these factors when making capital structure decisions.

Ultimately, the goal of optimizing the capital structure is to achieve a balance between debt and equity that maximizes the company's value and minimizes financial risks while ensuring long-term financial sustainability (Martini et al., 2021). *Table 2-1* below illustrates the differences between equity and debt as components of capital structure.

Table 2-1: Main difference between Debt and Equity

Characteristic	Debt	Equity
Security requirement	Demand of Collateral	No security collaterals
Payment of profit	Fixed Interest	Dividends
Payment priority	Primary Priority	Residual Claimant
Control allocation	No control rights	Managerial control rights
Tax Deductibility	Tax Deductible Interests	No tax deductions allowed
Maturity	Predetermined maturity	No maturity date
Repayment to Investor	Obligated repayment	No repayment obligations

Source: *Laurila (2008)*

2.2.3 Determinants of Capital Structure

The decision-making process for capital structure is influenced by various internal and external factors. Internally, a company's profitability, liquidity, and sales growth are key determinants of the optimal capital structure. For instance, a highly profitable company with strong cash flows might lean towards using more equity in its capital structure to avoid the financial risks associated with carrying a high debt load (Thippayana, 2014). Externally, market conditions, industry standards, and the availability of external financing options also play a crucial role in shaping the capital structure decisions of a company. For instance, in times of economic instability or high interest rates, companies might opt for more conservative capital structures with lower debt usage to mitigate the impact of external factors on their financial stability (Gupta and Khanna, 2022).

According to Serghiescu and Văidean (2014) and Gupta and Khanna (2022), making informed capital structure decisions is imperative for financial managers as these decisions directly impact a company's financial health, profitability, and risk profile. The careful consideration of the proportion of debt and equity in the capital structure can influence the cost of capital and the ability of the company to deal with its competitive environment. By optimizing the capital structure, a company can minimize the cost of capital, thus enhancing profitability and sustaining long-term growth. Moreover, the impact of the capital structure extends to investment and dividend policy decisions. A well-thought-out capital structure can provide the financial flexibility needed to pursue growth opportunities and distribute dividends to shareholders effectively while maintaining financial sustainability (Olando et al., 2012).

2.3 Importance of a sound Capital Structure

Bărbuță-Mișu (2014) argue that a sound capital structure is paramount for a company's financial health and long-term viability and growth. A well-structured capital framework offers numerous advantages, including the following:

2.3.1 Financial Flexibility

According to Chieh and Weber (2012), a balanced capital structure provides companies with financial flexibility, enabling them to pursue strategic initiatives such as expansion, innovation, and diversification. By effectively managing their mix of debt and equity,

companies can access the capital needed to capitalize on growth opportunities while mitigating the impact of financial constraints.

2.3.2 Cost of Capital Optimization

Optimizing the capital mix is essential for minimizing the overall cost of capital. Through prudent capital structure decisions, companies can achieve an equilibrium that maximizes the use of less expensive internal financing and strategically leverages external capital when necessary (Nderitu, Njeru and Waiganjo, 2022). This approach helps mitigate the impact of higher external financing costs, contributing to enhanced profitability.

2.3.3 Shielding against Economic Volatility

Sound capital structures provide a buffer against economic downturns and market volatility. By maintaining an optimal blend of debt and equity, companies can better withstand fluctuations in interest rates, market conditions, and economic cycles. This resilience enhances the company's ability to navigate challenging periods and emerge stronger in the long run (Yen, Miranda and Katchova, 2020).

2.3.4 Enhanced Value for Stakeholders

Pevná (2021) posits that a well-structured capital framework fosters value creation for shareholders, debt-holders, and other stakeholders. By aligning capital structure decisions with the overarching goal of maximizing firm value, companies can instill confidence in investors and secure access to favorable financing terms, ultimately contributing to sustained growth and profitability.

2.3.5 Strategic Risk Management

Striking the right balance between debt and equity empowers companies to manage financial risks effectively. A sound capital structure allows firms to mitigate the risks associated with excessive leverage while harnessing the benefits of debt financing where it adds value. This strategic risk management approach safeguards the company's financial stability and long-term viability (Cuevas and Buchenau, 2018).

2.3.6 Investor Confidence and Credibility

Lavorskyi (2013) argues that an optimal capital structure signals financial discipline and strategic acumen, bolstering investor confidence and credibility. By demonstrating a

prudently managed capital mix, companies can enhance their reputation in the eyes of investors, creditors, and other key stakeholders, laying the foundation for sustained support and long-term partnerships. In essence, implementing and maintaining a sound capital structure is integral to a company's financial success and resilience in a dynamic business environment. By leveraging the principles of capital structure theories and aligning them with strategic imperatives, companies can unlock a myriad of advantages that underpin their sustained growth and competitiveness in the marketplace.

2.4 Overview of SACCOs

This section provides an overview of what SACCOs are, including their origin, types of SACCO models, emergence of SACCOs in Africa, historical background of SACCOs in Zambia, objectives of SACCOs, and SACCO principles.

2.4.1 Objectives of SACCOs

The primary objective of SACCOs is to engage in financial intermediation, which involves bringing savers and borrowers together, pooling their money as savings and shares, and then providing loans to members who need financial assistance (Chieh and Weber, 2012). This objective is aimed at encouraging and promoting the development of a thrift culture among members and within the community, as well as teaching wise use of money and efficient management of limited resources. Furthermore, SACCOs aim to empower their members through the provision of credit and savings mobilization, allowing them to create assets that serve as collateral for further investments and wealth generation. The objective of SACCOs is also to bridge the financing gap for the economically active poor who are excluded from formal financial institutions due to lack of collateral and limited access to credit. Additionally, SACCOs play a crucial role in reaching clients in areas that are typically unattractive to banks, such as rural or poor areas. These areas often lack access to formal banking services, making SACCOs an important avenue for financial inclusion. Moreover, SACCOs aim to stimulate business growth and create employment opportunities within the communities they serve. By providing loans to members, SACCOs enable them to start or expand businesses, which leads to job creation and economic development.

SACCOs are not only financial institutions but also social movements with a focus on improving the social and economic well-being of their members. Their business models

differ from traditional financial institutions as their primary objective is not profit generation but rather the assistance of their members in achieving individual goals while still achieving group or organizational objectives. This emphasis on the holistic well-being of their members sets SACCOs apart from other financial institutions and underscores their commitment to social impact and community development.

To achieve their objectives, SACCOs must also prioritize institutional strength and sound financial stewardship. The growth of SACCOs' wealth is closely tied to effective loan management, institutional strengths, and innovativeness of SACCO products. It is crucial for SACCOs to continuously review credit policies, establish provisions for irrecoverable loans, develop robust staff recruitment policies, and use appropriate financing mixes in order to promote sustainable growth and ensure the long-term viability of the cooperative societies. By addressing the financial needs of their members and working towards their broader social and economic objectives, SACCOs play a vital role in promoting financial inclusion, fostering economic development, and enhancing the overall well-being of communities.

2.4.2 Principles of SACCOs

Chieh and Weber (2012) posits that the pioneers of the Rochdale Cooperative Society formulated a code of cooperative ethics, referred as cooperative principles. These principles gave them strength and vision in time of darkness and exploitation. The International Cooperative Alliance (ICA) reviews these principles from time to time and adopted the revised principles which any genuine Cooperative Society must strictly adhere too, and these are:

- i) *Principle 1: Voluntary and Open Membership* - One of the fundamental principles of SACCOs is voluntary and open membership. This principle ensures that individuals have the freedom to join the SACCO without any form of discrimination. It promotes inclusivity and allows individuals to become part of a financial institution that serves their best interests.
- ii) *Principle 2: Democratic Control, Administration, and Members' Leadership* - Democratic control and administration are essential aspects of SACCOs. Members have the opportunity to participate in decision-making processes and elect leaders

through a democratic process. This principle guarantees that the SACCO is managed in the best interest of its members.

- iii) *Principle 3: Member Economic Participation Service to Members* - SACCOs encourage active participation of members in economic activities. Members have the opportunity to contribute to the growth of the SACCO through their economic participation, which in turn benefits the entire community.
- iv) *Principle 4: Continuous Education and Training to Members and Leaders* - Continuous education and training are vital for the success of SACCOs. Members and leaders need to be equipped with the necessary knowledge and skills to effectively manage the SACCO and make informed financial decisions.
- v) *Principle 5: Autonomous and Self-help* - The principle of autonomy and self-help emphasizes the independence of SACCOs. They operate based on self-help and mutual assistance, ensuring that they can fulfill the financial needs of their members without relying on external assistance.
- vi) *Principle 6: Cooperation among SACCOs* - Cooperation among SACCOs is essential for fostering a strong and interconnected financial cooperative sector. Collaboration between SACCOs can lead to the sharing of resources and best practices, benefiting all members involved.
- vii) *Principle 7: Concern for the Community* - SACCOs have a responsibility to contribute to the overall well-being of the community. They should be actively involved in initiatives that benefit the community and promote economic empowerment and poverty alleviation.

These principles form the cornerstone of SACCO operations, ensuring that they remain true to their cooperative values and serve the best interests of their members and the community.

2.4.3 Origins and global overview of SACCOs

The origins of SACCOs can be traced back to the 19th century in Germany, where the first cooperative credit society was established in 1849. After that, the concept spread to other parts of the world, including Africa. According to a study by Shilimi, SACCOs have become a predominant form of external financing for small and micro-enterprises in developing countries (Shilimi, 2021).

In the USA and Canada, Savings and Credit Cooperative Societies have seen widespread success since 1954, with credit unions providing technical assistance programs in developing countries, particularly in Latin America and East Africa. These cooperatives have established themselves as attractive to customers and have become deeply entrenched in the financial sectors of many countries, forming a stable and low-cost source of funding with low administrative costs (Bărbuță-Mișu, 2014). In Europe and Asia, SACCOs have also shown significant success in providing financial services to their members, contributing to economic empowerment and poverty reduction (Source: Provided). The role of SACCOs in supporting women entrepreneurs has been particularly highlighted in countries like Tanzania, where SACCOs have demonstrated commitment to providing services such as savings, loan services, training, and business opportunities to support women entrepreneurs (Sivalingam and Kengatharan, 2018; and Bazzana and Catturani, 2021).

2.4.4 Historical Overview of SACCOs in Africa

In Africa, the cooperative movement, including SACCOs, has a rich historical background. The cooperative movement in Kenya, for example, dates back to 1908 when European farmers at Lumbwa near Kericho established cooperative production and marketing. However, before 1930, cooperative development was slow due to discouragement by the colonial rulers, making it difficult to develop SACCOs during that era (Kahuthu and Kenyatta, 2016).

The development of SACCOs faced challenges with the colonial government expressing doubts about finding individuals in Africa who could command trust and keep accounts for the movement. However, the government's involvement in cooperatives began in 1931 with the enactment of the first cooperative ordinance to regulate the operations of cooperative societies in Kenya (Olando, Jagongo and Mbewa, 2013). Even after independence in 1963, the cooperatives and SACCOs movements continued to be seen as a means to involve people in modern economic development within a short period. These movements were aimed at wealth creation, food security, generating employment, and alleviating poverty in the country.

Presently, World Council of Credit Union (2022) posits that Kenya has over 8,744 registered SACCOs with a membership of about 10.8 million and over USD 21.8 Billion

in mobilized savings. The cooperatives have not only provided employment to over 300,000 people but have also offered opportunities for self-employment. SACCOs play a crucial role as financial intermediaries in the Kenyan financial landscape, focusing mostly on personal development, and they have been instrumental in providing financial services, especially to the unbanked. Moving forward, it's essential to address various challenges encountered by Kenyan SACCOs, including the issues related to the board of directors and the lack of adequate guidelines for various stakeholders. This will help the SACCOs to effectively provide financial services, particularly to the unbanked, and contribute significantly to the country's economic development and poverty alleviation.

2.4.5 Resurgence of SACCOs in Zambia

The cooperative movement in Zambia has a profound historical background, dating back to 1914, when European farmers formed cooperative societies for marketing their agricultural produce. Over time, these cooperatives extended to the indigenous Zambian community, becoming a driving force for mass economic empowerment (Lolojih, 2009). At independence in 1964, Zambia is reported to have had only six SACCOs (Ministry of Finance, 2020). These initial SACCOs were established to promote savings and provide credit to members. To support the development of SACCOs in Zambia, the Credit Union Savings Association of Zambia (CUSA) was created in 1977 (Simamba, 2018). In 1969, the Chifubu declaration endorsed the cooperatives as vital economic organizations, leading to the establishment of the Ministry of Cooperatives with the mandate of administering the operations of cooperative societies (Chabu, 2022). These cooperatives rapidly flourished, becoming the third-largest employer in Zambia and creating employment opportunities at the grassroots, district, and provincial levels. What began as agricultural-focused entities expanded to diverse sectors of the economy, including transportation, insurance, and micro-finance.

By the advent of the second republic in 1991, SACCOs had grown to over 1,000. However, the landscape for cooperatives in Zambia underwent significant changes post-1991 when the country transitioned from a single-party state to a multi-party democracy (Chabu, 2022). This shift impacted the cooperatives, which were previously perceived as state entities, as a new government embarked on policies aiming to privatize state entities and liberalize the economy. Due to government intervention SACCOs involved themselves in financing agricultural activities, which unfortunately was impacted by

drought - leading to most SACCOs granting amenities for loans. This effectively led to CUSA being bankrupt, resulting in SACCOs losing funds they had placed in it. This spelled an end to the SACCO sector in Zambia (Shilimi, 2021).

However, in recent years there has been a resurgence in the development of SACCOs in Zambia, attributable to factors such as a growing recognition of the importance of SACCOs in promoting financial inclusion and empowerment, as well as a more favorable regulatory environment, starting with the enactment of the Cooperative Societies Act number 20 of 1996 (Shilimi, 2021). According to the Ministry of Small Enterprise Development, Zambia had more than 1,197 active SACCOs across the ten provinces at the end of 2021 (Ministry of Finance, 2020). On the other side, the World Council of Credit Unions (WOCCU) estimates that Zambia has 1.5 million SACCO members, with total assets of USD 25.3 million. SACCOs in Zambia have significantly evolved and expanded over the years, playing a crucial role in the economic empowerment of the people and the alleviation of poverty. The resurgence in the development of SACCOs can be attributed to a growing recognition of their importance in promoting financial inclusion and empowerment. Additionally, a more favorable regulatory environment, starting with the enactment of the Cooperative Societies Act number 20 of 1996, has contributed to this resurgence. Moreover, SACCOs represent 0.3 percent of Zambia's Gross Development Product (GDP). This is on the lower end compared to countries such as Kenya, the country with the strongest SACCO movement in Africa, where SACCOs account for as much as 45 percent of the country's GDP (Bwana and Mwakujonga, 2013). A study of SACCOs in Zambia cited lack of access to finance or capital as one of the top three problems impeding the growth of SACCOs (Ministry of Finance, 2020).

Zambia' Seventh National Development Plan (7NDP) for the period 2017 to 2021 defined cooperative development as one of the important strategies to achieve enhanced job creation in the economy (Ministry of National Development Planning, 2017). The plan did not specifically articulate how cooperatives such as SACCOs would be strong contributors to the economic development of the country. Further, even though the 2017 National Financial Sector Development Policy proposed the enacting of relevant legislation to provide for the formalization and supervision of SACCOs – these remained a pipe dream (Ministry of Finance, 2017). The 7NDP was succeeded by the Eighth

National Development Plan (8NDP) for the period 2021 to 2026, focusing on among others, enterprise development.

Unlike the 7NDP which did not explain how the cooperative sector would be supported, the 8NDP clearly states that it will support the cooperative sector by providing access to finance (Ministry of Finance and National Planning, 2022). However, it is evident from both national development plans that the government has not adequately explained in clear terms how the SACCO sub-sector would be catalyzed to achieve growth. Focus appears to be more on agricultural and production-focused cooperatives, with no mention of the SACCO sub-sector as a potential strong contributor to economic development in the two (2) plans. Further, even though the National Financial Inclusion Strategy for 2017 – 2022 articulated action items for strengthening the reach and sustainability of SACCOs, through expanding linkages between SACCOs and formal financial institutions, reviewing feasibility of incorporating SACCOs into financial sector legal and regulatory framework, and promoting sustainable SACCOs through technical assistance and expanded product offerings (Ministry of Finance, 2017) - largely missing in these intentions were concrete implementation of these plans.

Further, SACCOs in Zambia still face challenges that hinder their development. The lack of trained officials, proper administrative frameworks, bureaucratic processes, and the inability to raise sufficient financial resources continue to plague the sector. Policymakers and governments in Zambia must formulate policies and strategies aimed at addressing these constraints. Improving the training of officials, streamlining administrative processes, and encouraging greater financial resource mobilization are vital steps toward ensuring the long-term viability and effectiveness of SACCOs in Zambia. As the cooperative movement in Zambia continues to evolve, there is a critical need for proactive measures and initiatives to elevate the role of SACCOs in the country's financial landscape. Forging a sustainable path forward entails addressing the dynamics of the changing political and economic environment while harnessing the historical legacy of cooperative societies. Aligning the evolution of SACCOs with contemporary challenges and opportunities will be pivotal in ensuring their relevance and impact on Zambia's economic development.

2.5 Firm Growth

The concept of firm growth is complex and remains difficult to define due to the various aspects that contribute to growth (Correa, Torres, Sharma, and Morales, 2008). Many researchers have contributed to research on firm growth and its indicators (Talebi, Mehrjerdi, and Akbari, 2016). The fundamental concept originated in classical economic theory, in which the basic production function of an economy in general and a business in particular is how it makes best use of its available resources to deliver its products and services to the market (Foss, 1998). This theory of production function simply pays attention to the product's price and other economic outputs, while ignoring other factors. In addition, classic economists argued that any firm tends to grow and reach a specific size, which can be referred to as optimal firm value. Based on this argument, firm growth is simply a process by which a specific goal is accomplished, and the predicted optimal size reached. From this point, as mentioned in the theory, the firm is at the efficient state and there is no further demand for growth, which is believed to be reasonable (Wiklund and Shepherd, 2005; Foss, 1998).

This fundamental theory of production function was criticised by economists and researchers, who argued that companies can be free to adjust their product line or change the target market (Penrose, 1959). Based on this argument, the firm theory discussed above is believed to be unrealistic in the market. Instead, the theory of firm growth proposed by Penrose (1959) has been considered to be the most controversial idea in the economics literature, strongly focusing on the role of human and related human capital in terms of raising and allocating a firm's resource for future growth. As such, the author proposed that firm growth is the result of making full use of the firm's specific economic advantages, which is believed to be the origin of growth and not related to the competitive edge gained from its size (Penrose, 1959). However, the idea proposed by Penrose (1959) remains coherent in the context of the classic firm theory of an optimal firm size value at which companies have no further demand for growth, which is more likely considering the micro strategic management field. During the 1970s, the attention of academic scholars shifted to Small and Medium Enterprises (SMEs).

As stated by Davidsson (1989) and Wiklund (1998), the definition of firm growth and its measurement indicators have been carefully reviewed and more behavioural and entrepreneurial elements have been added to best match the research objects and deliver

most precise recommendation. Because of this change in research stream, since 1980, the subject of growth attracted the participation of other field researchers in entrepreneurship and strategic management (Delmar, Davidsson, and Gartner, 2003; Ostgaard and Birley, 1995; Siegel, Siegel, and Macmillan, 1993). Scholars began to examine the role of human capital in relation to entrepreneurial firm growth. A wide range of researchers such as Boone, De Brabander, and Arjen (1996) and Rotter (1966) indicated that the specific characteristics of the start-up founders – for instance, their attitudes, intention, and other psychological drivers – are the main forces driving the rapid growth of entrepreneurial firms. In addition to human capital, with the main attention placed on founders, different production functions of various types of firm growth have also been taken into consideration to clearly identify the speed of growth and the process of growth for each type. Types of growth include internal growth, in which the progress that involves the introduction and processing of the product occurs inside the company and immediately reflects on the sales revenue, and external growth, which refers to the merger and acquisition process. Indeed, the internal growth simply results in sales boosted. Meanwhile, external growth is made via merger and acquisition, with other firms simultaneously increasing not only sales revenue but also market share and employed labour workforce (McKelvie and Wiklund, 2010).

In the literature, most business growth studies have been based on the work of Penrose (1959), who proposed the theory of firm growth. Economists, however, have added many potential factors to explain business growth and have used regression models to examine the impact of these factors on the growth of businesses. Many factors affect business growth. These include internal factors within the enterprise, such as the quality of products/services, management ability, enterprise scale, and technological level, and external factors, such as legal frameworks, policies, and markets (Ta et al., 2006). In terms of internal factors, capital is always mentioned as the most important. In the production function theory of macroeconomics, capital is considered to be one of the factors contributing inputs directly to national economic growth.

From the perspective of the macroeconomy, SMEs are crucial job-creation units (Carrer and Klomp, 1996), especially when it comes to a developing economy such as Zambia, in which SMEs account for the majority of registered companies. Therefore, supporting and gaining insight into the issue of firm growth is essential for policy planners and makers.

In the literature, firm growth and related topics have been researched and discussed widely in various disciplines, such as economics, strategy, psychology, network theory, and business innovation (Zhou and de Wit, 2009). However, the knowledge and empirical results remain limited (Davidsson & Wiklund, 2000; Wiklund *et al.*, 2007), as the current literature is highly fragmented, with different approaches being used to define, measure, and determine firm growth. For example, regarding the psychological approach, scholars focused on the characteristics and behaviour of entrepreneurs and attempted to justify firm growth based on this determinant (Begley and Boyd, 1987). Several studies focusing on the strategy approach have concentrated on the relationship between the local environment, company strategies, and the company's growth potential (McDougall *et al.*, 1992); these types of research tend to answer questions regarding the sustainable development of business. Meanwhile, macroeconomics studies have focused on the correlation between firm growth and firm size (Audretsch *et al.*, 2004).

Based on these reviews, there are various points of view regarding the determinants of firm growth; however, none has been able to produce a holistic conclusion. According to Nelson and Winter (1982), firm growth can simply be understood as the business performance outcomes resulting from the combination of resources specific to the company level, of capacity, and of routines. Coad (2009) also stated that opportunities for business growth are significantly related to the business's own organisational production activities, and path-dependency was mentioned as a crucial background of business growth. Whether a business can grow in a specific period of time is also uncertain and dependent on external factors such as environmental conditions, global economic crisis, global pandemic, rivalry, or market dynamics. In the case of small firms, business growth is also largely affected by the personal vision and ambition of their entrepreneurs or founders. For example, Mosselman *et al.* (2002) believes that not every entrepreneur aims for their business to grow. The authors conducted a survey and concluded that only 16 percent of small-business owners in Netherlands desired their companies to grow bigger, while the others had various other reasons to run their business, such as for extra income or simply to live comfortably. Although most studies have attempted to explain and link the capital structure determinants on the basis of different contexts or measures (Baum *et al.*, 2001; Covin and Slevin, 1997; Lumpkin and Dess, 1996), their explanatory capacity is low due to the relatively limited number of variables (Davidsson, *et al.*, 2006). Thus,

Zhou and de Wit (2009) suggested that the best way to make a holistic and concrete indication for determinants of capital structure is to classify them into three measures: individual, organisational, and environmental aspects (Baum *et al.*, 2001).

Mehrjerdi and Talebi (2018) said that in order to provide the best definition of business growth, the overall goals of the firm should be taken into consideration; in other words, the authors believe that each business has its own means of defining growth. These different definitions could also influence the choice of business growth assessment method. This conclusion is consistent with Lumpkin and Dess (1996) in terms of measuring firm growth based on predetermined methods but they might lead to conflict with each other.

Dess and Robinson (1984) and Covin and Slevin (1989) suggested measurements of growth using several financial metrics, such as the level of sales revenue, changes in sales between financial years, changes in Return on Equity (ROE), changes in operating profit and net profit, and changes in returns on shareholder investment.

Nevertheless, Zahra (1991) noted that an issue with these measures is that firms sometimes sacrifice long-term growth for short-term growth, which might misdirect the analysis and recommendation of researchers; in addition, taking performance indicators as a growth measurement can be challenging and lead to certain mistakes in econometric models. Entrepreneurial firm growth is considered under operational perspectives by the way that the business makes specific decision for firm growth process. Thus, in order to measure this, researchers tend to assess the amount gained from either financial or non-financial aspects of business as the results of those management decisions.

The measurement of business growth has been discussed and adapted by researchers in various ways. Beck, Demirguc-Kunt, and Maksimovic (2005) used a unique firm-level survey database covering fifty-four countries to investigate the effect of financial, legal, and corruption problems on firm growth rates, measuring firm growth by the percentage change in firm sales over a period of time. This is consistent with the definition of Bei and Wijewardana (2012) and Huynh and Petrunia (2010), who described the growth of business as the expansion of total assets, sales, and operating profit.

Based on the work of Gupta (1968) and Hampton (1993), two types of firm growth have been identified in the field of financial management, namely, internal growth and external

growth. Both of these are believed to be directly influenced by the financial policies of the management.

Lang, Ofek, and Stulz (1996) provided a definition of firm growth focusing on three aspects of how the firm manages the resource input. The first aspect is about net investment, which is measured as capital expenditure in year t with depreciation deducted. The calculation takes net investment from year t and divides it by the book value of fixed assets of the previous year.

The second approach is to measure growth by the changes in the percentage of capital expenditure of the company. The final approach concerns the changes in percentage in terms of number of employees between a specific year and those of the next year. Although such measurements were proposed in the mid-1900s, the literature remains contentious regarding business growth and development (Wiklund *et al.*, 2007), especially in the case of small firms. Most studies have focused mainly on the factors leading to business growth with the aim of providing exploratory indication for growth, especially for entrepreneurs. Those mentioned factors include the size or the resources of company (Connor, 1991; Alvarez and Busenitz, 2001), its strategic orientation (Lumpkin and Dess, 1996), or the characteristics of the environment (Barney, 1991; Davidsson *et al.*, 2002).

Additionally, there are three primary research streams regarding the literature of firm growth (McKelvie and Wiklund, 2010). First, firm growth is believed to be a business performance outcome. As mentioned previously, this research stream focuses on the above-mentioned factors that lead to firm growth, which are treated as independent variables in econometric models, and growth is dependent on those factors (Barron, 1999; Batt, 2002; Baum *et al.*, 2001). Another research stream considers the results and consequences of growth. In this case, growth is the main focus and is believed to be the factor that influences other variables such as business decision-making or expertise. Researchers believe that firm growth or shrink is the cause of other business activities. The final research stream is simply about the firm growth process, which means the factors that lead to growth.

2.5.1 Understanding Firm Growth Models

When exploring firm growth models, it is important to consider the framework presented by Igor Ansoff, which outlines different growth strategies for companies. Ansoff's matrix delves into the concepts of market penetration, market development, product development, and diversification as viable strategies for firms to pursue growth (Martinet, 2010). In the realm of firm growth, it is essential to recognize the significance of firm strategy and innovation. Firm strategy encompasses resource heterogeneity and positioning for sustainable competitive advantage and growth. On the other hand, innovation plays a crucial role in generating the capabilities needed to fuel firm growth and maintain a competitive edge in the market. Both elements are fundamental in driving and sustaining growth for businesses. Considering these factors and the dynamic nature of markets, it is imperative for organizations to continually assess their growth strategies and make informed decisions on whether to focus on existing markets or venture into new market segments and growth opportunities. By doing so, firms can align their growth initiatives with their overarching business objectives and stay responsive to evolving market dynamics.

In order to gain a deeper understanding of firm growth, it is crucial to delve into the theories and factors that contribute to this complex phenomenon. The concept of firm growth can be approached from different perspectives, and one such perspective is the stochastic approach, as discussed by Gibrat's law (Almsafir et al., 2015). Gibrat's law presents a statistical model that views firms as independent entities, with their growth being a result of stochastic opportunities that they receive. According to this model, growth opportunities are exogenously created and randomly allocated across firms. The advantage of this model lies in its ability to explain the observed size distribution of firms while demonstrating simplicity and generality. However, it's important to note that there is a certain rationality and intentionality in the process of firm growth, despite the seemingly random nature suggested by the model.

Furthermore, another early model emphasizes the inherent tendency of organizations to drift upwards in size. This is driven by the behavior of individuals within the organization, guided by motives of prestige, power, and security. The example of an employee seeking assistants to divide her work highlights the intricate dynamics that contribute to the growth

of an organization. This model underscores the role of individual decisions and behaviors in propelling the growth of the organization, rather than top-down decisions.

Additionally, while Ansoff's matrix provides a structured framework for discussing different growth strategies, it is critical to consider the multitude of internal and external factors that influence firm growth (Hussain and Khan, 2013). These factors can include internal resources, industry-specific concerns, and the interplay of various predictors on firm growth under different circumstances. Understanding the depth and complexity of firm growth is instrumental in shaping effective strategies for businesses. It enables an organization to adapt to evolving market demands, leverage its capabilities for sustainable growth, and maintain a competitive edge in the dynamic business landscape. The depth of understanding firm growth goes beyond just acknowledging the existing models and theories. It involves a comprehensive analysis of the various firm-level and macroeconomic factors that contribute to the growth trajectory of companies.

Firm performance, a focal point in both management and economics literature, is a critical determinant of growth. Several firm-level factors, such as innovations, profit, productivity, ownership structure, trade-related practices, management capabilities, and human capital, play pivotal roles in shaping the growth rate of firms. Additionally, macroeconomic variables, including industrial policies, structural properties of the economy, dynamics of demand and supply, and the growth of the financial sector, also exert considerable influence on the growth of firms. Recognizing and understanding these multifaceted factors are vital in crafting strategies that align with the underlying drivers of firm growth.

The interplay of firm size and age also emerges as a key consideration. Smaller and younger firms often exhibit higher growth rates attributed to their higher marginal labor productivity and technological innovations, as indicated in studies by Agrawal, Singh and Mazumdar (2021). These internal factors significantly shape the growth trajectory of firms, challenging traditional assumptions and emphasizing the need to comprehend the nuanced dynamics of growth. Moreover, beyond the quantitative aspects, the formulation of vision, strategy, and internationalization plays a crucial role in nurturing the growth of smaller companies. Incorporating elements of internationalization and networking into the

firm's vision, alongside performing comprehensive analyses of market and competition, contributes to a holistic approach to growth.

In delving deeper into the realm of firm growth, it becomes evident that the intricate interplay of factors and strategies unfolds a complex narrative. By recognizing these multifaceted influences, firms can proactively shape their growth trajectories and remain responsive to the evolving dynamics of the business landscape. One way to measure firm growth is through the use of growth models. Growth models provide a framework for understanding the underlying mechanisms and drivers of firm growth. These models help identify the factors that contribute to growth and allow for analysis and prediction of future growth potential. Furthermore, firm growth can be measured using various quantitative indicators and formulas.

2.5.2 Analyzing Firm Growth Measurement Techniques

Measuring firm growth entails a comprehensive understanding of the multifaceted factors that shape an organization's trajectory. Utilizing growth models is essential in this pursuit, as they provide a structured framework for dissecting the underlying mechanisms and drivers of growth. One prominent measurement technique is the Z score method, which offers a quantitative approach to predict financial performance, thereby ensuring the rate of success (Molugaram and Rao, 2017).

Additionally, there is a need to emphasize the qualitative aspects of growth measurement. It's imperative to delve into the strategic dimensions of growth measurement and analyze how elements such as vision, strategy, and internationalization contribute to the growth narrative. A holistic approach that encompasses both quantitative and qualitative metrics is crucial for gaining a comprehensive understanding of firm growth.

Furthermore, in the dynamic landscape of business, it is essential to explore the longevity and sustainability of firm growth. Beyond just measuring current growth rates, there is a necessity to assess the potential for sustained growth and the capacity to adapt to evolving market dynamics. This long-term perspective requires an in-depth analysis of the factors that contribute to sustained growth and a proactive approach to addressing potential challenges or obstacles that may impede future growth. By engaging with various growth measurement techniques and embracing a comprehensive approach, organizations can gain valuable insights into their growth trajectories and effectively guide their strategic

decisions. These insights enable firms to align their growth initiatives with their overarching business objectives and navigate the complexities of the business landscape with clarity and foresight. In addition to the Z score method, another notable technique for measuring firm growth is the use of well-defined measures to stratify the sample. This involves developing and utilizing a well-defined measure of "growing" firms and "declining" firms to classify the sample. The average Tobin's q ratio of the firm can serve as the basis for this stratification, providing a quantitative approach to assessing growth (Cao, Lorenzoni and Walentin, 2019). Moreover, the incorporation of vision, strategy, and internationalization in the measurement process is essential. Analyzing how these elements contribute to the growth narrative through qualitative assessments can provide valuable insights into the strategic dimensions of firm growth. It is also crucial to consider the longevity and sustainability of firm growth while measuring performance. Therefore, utilizing growth models that allow for the analysis and prediction of future growth potential is instrumental in gaining a comprehensive understanding of the organization's trajectory.

Furthermore, a comprehensive approach to growth measurement encompasses both quantitative and qualitative metrics. By adopting a holistic perspective, firms can effectively analyze their growth trajectories and align their strategic decisions with their overarching business objectives. By engaging with various growth measurement techniques and embracing a comprehensive approach, organizations can gain valuable insights into their growth trajectories and effectively guide their strategic decisions. These insights enable firms to align their growth initiatives with their overarching business objectives and navigate the complexities of the business landscape with clarity and foresight. One commonly used growth model is the McKinsey 7-S framework, which examines seven key areas of a firm's performance: strategy, structure, systems, skills, staff, style, and shared values (Watson, 1983). These areas are interconnected and need to be aligned for successful growth.

2.5.3 Deep Dive into Firm Growth Formulae

Understanding the intricacies of firm growth requires a deep dive into the various formulae used to measure and analyze growth. These formulae provide a quantitative basis for assessing different facets of a firm's performance and potential for expansion. One significant formula for evaluating growth is the Tobin's q ratio, which measures a firm's

growth opportunities in relation to its market value. This forward-looking metric offers valuable insights into a company's potential for future expansion and development. By analyzing the Tobin's q ratio, organizations can gain a clearer understanding of their growth prospects and make informed strategic decisions (Cao, Lorenzoni and Walentin, 2019).

Similarly, the Altman Z-score serves as a crucial measure of default risk, providing an indication of a firm's financial stability and resilience. This formula allows for the assessment of the likelihood of financial distress, offering a vital perspective on the sustainability of a company's growth trajectory. Understanding the implications of the Altman Z-score is essential for gauging the long-term viability of growth initiatives and mitigating potential risks (Molugaram and Rao, 2017).

The McKinsey 7-S framework presents a holistic approach to analyzing firm growth by evaluating seven core areas: strategy, structure, systems, skills, staff, style, and shared values. This comprehensive model emphasizes the interconnected nature of these elements and underscores the significance of alignment for sustainable growth. By leveraging the insights derived from the McKinsey 7-S framework, organizations can identify areas for improvement and optimization, thereby enhancing their overall growth potential (Watson, 1983). Incorporating these formulae and frameworks into the measurement of firm growth enables organizations to gain a nuanced understanding of their growth trajectory. By delving into the quantitative and qualitative dimensions of growth, businesses can craft informed strategies, mitigate risks, and capitalize on opportunities for sustained expansion and success.

2.5.4 Factors Influencing Firm Growth

Beyond the quantitative measures and formulae utilized to assess firm growth, it is crucial to acknowledge the various factors that influence an organization's trajectory. While financial metrics provide valuable insights, an in-depth exploration of qualitative and strategic determinants offers a more comprehensive understanding of the dynamics shaping firm growth. Vision and strategy play a pivotal role in driving growth, serving as guiding principles that align and galvanize the organization towards its goals. A clear and compelling vision coupled with a robust strategic framework empowers firms to navigate complexities, seize opportunities, and adapt to evolving market dynamics. Understanding

how vision and strategy catalyze growth is fundamental in charting a sustainable path for the organization. Internationalization also represents a significant factor in firm growth, as global market expansion presents new avenues for revenue generation and market diversification. Assessing the impact of internationalization on growth necessitates an exploration of market entry strategies, cultural adaptation, and operational scalability in diverse geographical landscapes. Moreover, the interplay of organizational culture, leadership, and innovation profoundly influences firm growth. A vibrant and adaptive organizational culture fosters resilience and agility, enabling firms to embrace change, drive innovation, and capitalize on emerging trends. Effective leadership, characterized by visionary direction and adept decision-making, propels firms towards sustainable growth and competitive advantage.

Additionally, technological advancements and digital transformation are instrumental in shaping firm growth. Embracing innovative technologies, leveraging data analytics, and fostering digital agility are pivotal in enhancing operational efficiency, customer engagement, and market relevance. By delving into these qualitative determinants, organizations can gain a holistic understanding of the multifaceted forces propelling or impeding firm growth. This comprehensive comprehension enriches growth measurement techniques, providing a nuanced perspective that empowers organizations to strategize, optimize, and attain enduring growth and success.

2.5.5 Comparative Analysis of Firm Growth Models

In order to gain a comprehensive understanding of firm growth, it is imperative to conduct a comparative analysis of various growth models and their applicability in different organizational contexts. By comprehensively evaluating these models, organizations can discern the nuances of each and leverage the most suitable framework to enhance their growth strategies.

The McKinsey 7-S framework, as previously mentioned, provides a holistic perspective by examining the interconnectedness of strategy, structure, systems, skills, staff, style, and shared values. This model is particularly effective in assessing the alignment and coherence of various organizational elements, offering valuable insights into areas for improvement and optimization.

Another prominent growth model is the Ansoff Matrix, which delineates four growth strategies: market penetration, market development, product development, and diversification. This model enables organizations to systematically evaluate their growth options and make informed decisions about expanding their market presence and diversifying their product offerings.

Additionally, Porter's Five Forces analysis offers a structured approach to assessing the competitive dynamics within an industry, thereby illuminating the potential avenues for growth and the competitive landscape that organizations operate within. By scrutinizing the bargaining power of buyers and suppliers, the threat of new entrants, the threat of substitute products, and the intensity of competitive rivalry, firms can strategically position themselves for sustainable growth (Paksoy, Gunduz and Demir, 2023).

Furthermore, the Balanced Scorecard, a performance measurement framework, provides a comprehensive view of performance across financial, customer, internal business processes, and learning and growth perspectives (Kopecka, 2015). By adopting this model, organizations can align their growth strategies with a balanced approach that encompasses financial metrics, customer satisfaction, operational efficiency, and organizational development.

Conducting a comparative analysis of these growth models allows organizations to discern the unique advantages and limitations of each framework. By leveraging the insights derived from this analysis, firms can tailor their growth strategies to align with their specific organizational needs, thereby maximizing their potential for sustained success and expansion. When it comes to measuring firm growth, there are several formulas and metrics that can be utilized. One commonly used formula is the compound annual growth rate, which calculates the average annual growth rate over a specific period of time. Another widely used metric is the revenue growth rate, which measures the percentage increase in a company's revenue from one period to another (Serra & Ferreira, 2010). Other important metrics include the customer growth rate, which measures the percentage increase in the number of customers over a given period, and the market share growth rate, which measures the percentage increase in a company's share of the total market over time (Coad, 2009).

2.5.6 Practical Application of Firm Growth Measurements

In practice, firms can use these growth measurements and formulas to track their progress and make informed decisions regarding their growth strategies. For instance, by calculating the compound annual growth rate, a firm can determine how quickly its revenue or customer base is growing over a specific period. This information can be used to evaluate the effectiveness of current growth strategies and identify areas for improvement (Fitzsimmons et al., 2005). Additionally, firms can compare their growth rates to industry benchmarks to evaluate their performance relative to their competitors. Moreover, the balanced scorecard can be used to track growth across different perspectives. For example, a firm can use financial metrics such as revenue growth and profitability to assess its financial performance (Titus et al., 2011).

The choice of firm growth measures in academic research studies is considerably heterogeneous. Up to date, no agreement on a general firm size indicator in studies on firm growth exists. Consequently, researchers use a large variety of firm growth measures in academic studies (Birley and Westhead, 1990; Coad and Hölzl, 2012). Shepherd and Wiklund (2009) empirically deviated low concurrent results among the range of growth measures. For example, a high growth firm indicated by one growth measure may not be a high growth firm in terms of another growth indicator. Hence, the choice of growth measure potentially affects the findings of academic studies and thus needs to be selected wisely.

Shepherd and Wiklund (2009) provide the most comprehensive literature review on the choice of growth measure by analyzing 82 empirical firm growth studies. As illustrated in *Table 2-2* below, a company's sales are the predominant firm growth indicator used in the empirical studies under review appearing in 61 studies and representing 58.7 percent of all studies. The number of a company's employees represents the second most used growth measure selected in 13 studies and representing 12.5 percent of the sample. Additionally, a company's profit and its equity or assets were the growth measure of choice in nine and six studies, respectively. An accumulation of further, less frequently used growth indicators accounts for the remaining 15 indicator choices reviewed.

Table 2-2: Choice of Firm Growth Indicators from 82 Studies

Growth Indicator	Number of Studies	Share of Studies
Sales	61	58.7%
Number of Employees	13	12.5%
Profit	9	8.7%
Equity/Assets	6	5.8%
Others	15	14.4%
Total	104	100%

Source: *Shepherd and Wiklund (2009)*

The large variety of firm growth indicators in academic studies with sales and the number of employees being the most predominant ones is confirmed by the findings of an additional literature review of Weinzimmer et al. (1998). In 35 studies under review, sales represent the prevalent measure of growth being used in 29 studies. Analogue to the findings of Shepherd and Wiklund (2009), the number of employees is the second most important growth measure appearing in seven of the reviewed studies. In addition to these two predominantly used growth indicators, some academic studies based their analysis on further, less frequently used, growth measures. McDougall, Robinson Jr, and DeNisi (1992) used a firm's market share as growth respectively size indicator. Bourgeois (1985) employed return on investment as an indicator of growth. Hamilton and Shergill (1992) and Varaiya, Kerin, and Weeks (1987), amongst others, applied growth in dividends as a growth measure. Both studies, Bourgeois (1985) as well as Hamilton and Shergill (1992), additionally based their empirical analysis on growth in earnings per share as a second growth indicator. Finally, Van de Ven, Hudson, and Schroeder (1984) considered the number of customers as a metric of firm growth.

Moreover, depending on the sample focus, researchers applied industry-specific growth measures. For example, Weiss (1998), studying firm growth in the farming sector, applied the number of cattle and the number of cultivated acres as indicators of firm growth, whereas Bolton (1972) refers to the number of seats for the restaurant industry and the number of cars for rental car firms. Additional studies by Storey (1994), Ardishvili, Cardozo, Harmon, and Vadakath (1998) and Delmar (2006) also indicate both, the large variety of firm growth measures used in academic research as well as the predominant role of sales and the number of employees within this variety.

Several factors establish the leading role of sales as the leading firm growth indicator. First, sales apply to virtually all type of firms. Secondly, sales figures of companies are easily available. Thirdly, sales are relatively uncorrelated to the capital intensity of a company's business model. Fourthly, it is independent from a firm's level of integration (Delmar et al., 2003). Fifthly, every firm depends on the generation of sales in order to survive (Davidsson et al., 2010). Furthermore, it is the favorite growth indicator of choice for managers, investors, and entrepreneurs (Barkham, Gudgin and Hart, 2012). Finally, it is argued that it is the increase in sales that requires a rise in a firm's employees and assets potentially resulting in increasing market shares and profits (Flamholtz and Randle, 2012).

Despite these supporting factors for sales, some researchers choose the number of employees as an indicator of firm growth. Similar to sales, data on the number of employees are characterized by a high level of availability (Davidsson et al., 2010). Additionally, the number of employees is a key metric for policy makers and thus highly relevant for studies focusing on growth in employment (Davidsson and Wiklund, 2006). Moreover, the number of employees is insensitive to changes in currency rates as well as inflation.

Furthermore, if a company is regarded as an accumulation of resources, the number of employees, as one of the key resources, represents an appropriate choice of growth measure (Delmar et al., 2003). However, the choice of employment as a firm growth indicator entails several disadvantages. The number of employees does not reflect changes in labor productivity, any substitution of employees by machines, the level of a firm's integration as well as additional make-or-buy effects (Delmar et al., 2003).

Moreover, managers see a growth in the number of employees not as a primary goal (Robson and Bennett, 2000). Consequently, based on these arguments, in the meantime a trend among researchers to consider sales as the most relevant indicator of firm growth can be observed (Ardishvili et al., 1998; Hoy, McDougall and Dsouza, 1992; Weinzimmer et al., 1998). Alternative concepts to the selection of one specific indicator are the use of multiple indicators separately or the use of an index measure. The choice in growth measure for empirical studies needs to match the underlying theory and the respective research question. Academics are advised to invest time into the selection of an

appropriate growth measure (Davidsson et al., 2010). The study adopts a Growth Curve Model that is linear in terms of trajectory.

2.5.7 Growth Model Development

Model development is considered an effective research method. It assists investigators and scientists in relating more accurately to reality; it also aids them to describe, predict, test or understand complex systems or events. Thus, models often provide a framework for the conduct of research and might consist of actual objects or abstract forms, such as sketches, mathematical formulas, or diagrams. A model is an abstraction, a mental framework for analysis of a system. It involves simplified representations of real-world phenomena (Busha and Harter, 1980). According to Leimkuhler (1972), following are the characteristics of models; relatedness, to other models and techniques; transparency, in terms of ease to interpretation; robustness or sensitivity to assumption made; fertility or richness in deductive possibility, and; ease of enrichment or ability to modify and expand.

These can be applied in research in terms of theoretical constructs (Adeyemi, 1975); testing and understanding multifaceted system (Busha and Harter, 1980); and creating connections between research and society. Models provide guidance for the completion of work or the establishment of systems and refer to a representation of a real-world phenomenon. A model is a representation or abstraction of an actual object or situation. It shows the interrelationships (direct or indirect) and interrelationship of an action and reaction in terms of a cause and effect. Since a model is an abstraction of reality, it may appear less complex than reality itself. The model, to be completed, must be representative of those aspects of reality that is being investigated (Adeyemi, 1975). Busha and Harter (1980) have stressed that when models have not been properly validated, their employment as a knowledge source might be unwarranted. In addition, unless care is taken, models often invite over-generalizations.

2.5.8 Challenges in Firm Growth Assessment

Understanding the intricate dynamics of firm growth involves delving deeper into the multifaceted forces that shape the organization's trajectory. While quantitative measurements provide valuable insights, it is also crucial to acknowledge the qualitative determinants that significantly influence growth.

a) Vision and Strategy Dynamics

A comprehensive exploration of firm growth necessitates a profound understanding of the interplay between vision and strategy. These fundamental components serve as the cornerstone of organizational direction and fortify the framework for sustainable growth. Visionary leadership coupled with a robust strategic framework empowers firms to navigate complexities, seize opportunities, and adapt to evolving market dynamics. By understanding how these elements catalyze growth, organizations can fortify their strategic roadmap and align their endeavors with enduring success.

b) Internationalization Impact

Global market expansion presents new frontiers for revenue generation and market diversification, but it also brings about a myriad of complexities. Assessing the impact of internationalization on growth necessitates a deep dive into market entry strategies, cultural adaptation, and operational scalability in diverse geographical landscapes. Understanding the nuances of international expansion can equip organizations with the insights needed to leverage global opportunities and navigate the challenges inherent in diverse markets.

c) Organizational Culture, Leadership, and Innovation

The profound influence of organizational culture, leadership, and innovation on firm growth cannot be overstated. A vibrant and adaptive organizational culture fosters resilience and agility, enabling firms to embrace change, drive innovation, and capitalize on emerging trends. Effective leadership, characterized by visionary direction and adept decision-making, propels firms towards sustainable growth and competitive advantage. Apprehending the interplay of these qualitative factors provides organizations with the insight needed to cultivate an environment conducive to growth and innovation.

d) Technological Advancements and Digital Transformation

Embracing innovative technologies, leveraging data analytics, and fostering digital agility are pivotal in enhancing operational efficiency, customer engagement, and market relevance. The digital landscape continues to evolve, and organizations that can adeptly integrate technological advancements into their growth strategies are poised for sustained success.

By comprehensively comprehending these qualitative determinants, organizations can enrich their growth measurement techniques and embrace a nuanced perspective that

empowers them to orchestrate enduring growth and success. This depth of understanding equips organizations to not only measure growth but also to strategically optimize their path to sustainable and noteworthy expansion.

2.5.9 Comparative Analysis of Growth Models

In order to gain a comprehensive understanding of firm growth, it is imperative to conduct a comparative analysis of various growth models and their applicability in different organizational contexts. By comprehensively evaluating these models, organizations can discern the nuances of each and leverage the most suitable framework to enhance their growth strategies.

The McKinsey 7-S framework, as previously mentioned, provides a holistic perspective by examining the interconnectedness of strategy, structure, systems, skills, staff, style, and shared values. This model is particularly effective in assessing the alignment and coherence of various organizational elements, offering valuable insights into areas for improvement and optimization.

Another prominent growth model is the Ansoff Matrix, which delineates four growth strategies: market penetration, market development, product development, and diversification. This model enables organizations to systematically evaluate their growth options and make informed decisions about expanding their market presence and diversifying their product offerings.

Additionally, Porter's Five Forces analysis offers a structured approach to assessing the competitive dynamics within an industry, thereby illuminating the potential avenues for growth and the competitive landscape that organizations operate within. By scrutinizing the bargaining power of buyers and suppliers, the threat of new entrants, the threat of substitute products, and the intensity of competitive rivalry, firms can strategically position themselves for sustainable growth.

Furthermore, the Balanced Scorecard, a performance measurement framework, provides a comprehensive view of performance across financial, customer, internal business processes, and learning and growth perspectives. By adopting this model, organizations can align their growth strategies with a balanced approach that encompasses financial metrics, customer satisfaction, operational efficiency, and organizational development.

Conducting a comparative analysis of these growth models allows organizations to discern the unique advantages and limitations of each framework. By leveraging the insights derived from this analysis, firms can tailor their growth strategies to align with their specific organizational needs, thereby maximizing their potential for sustained success and expansion.

2.5.10 Future Trends in Firm Growth Analysis

As the business landscape continues to evolve, several emerging trends are poised to shape the analysis and understanding of firm growth. One such trend is the integration of artificial intelligence and machine learning algorithms in growth analysis. By leveraging advanced analytics and predictive modeling, organizations can gain deeper insights into market trends, customer behavior, and competitive dynamics, thereby enhancing their ability to make data-driven growth decisions.

Another significant trend is the increasing emphasis on sustainable and socially responsible growth. With a growing focus on environmental conservation and social impact, organizations are recognizing the importance of integrating sustainability metrics into their growth analysis. This entails evaluating the environmental footprint, ethical supply chain practices, and community engagement initiatives as integral components of growth measurement.

Furthermore, the proliferation of digital platforms and ecosystems is reshaping the dynamics of firm growth analysis. Organizations are increasingly leveraging digital data sources, such as social media analytics, online customer interactions, and digital marketing metrics, to quantify and assess their growth trajectories in the digital realm. This trend underscores the evolving nature of growth measurement in the digital age.

Moreover, there is a growing recognition of the interconnectedness between organizational culture, employee engagement, and firm growth. As a result, future growth analysis is likely to encompass qualitative indicators related to employee satisfaction, organizational resilience, and innovative capabilities as crucial determinants of sustainable growth. The advent of blockchain technology also presents novel opportunities for enhancing the transparency and accuracy of growth analysis. By leveraging blockchain-based data verification and smart contracts, organizations can

mitigate data manipulation risks and ensure the integrity of growth-related metrics and benchmarks (Gad et al., 2022).

The future of firm growth analysis is poised to be shaped by the convergence of advanced analytics, sustainable initiatives, digital ecosystems, qualitative indicators, and technological innovations. Embracing these trends will enable organizations to cultivate a holistic and forward-thinking approach to growth analysis, thereby positioning themselves for sustained success in dynamic and competitive markets. In order to effectively measure and analyze firm growth, multiple growth models and formulae can be employed.

2.5.11 The Importance of Studying Firm Growth

Understanding the intricacies of firm growth is crucial for organizations seeking to navigate the complexities of a dynamic business environment. The analysis and measurement of firm growth serve as pivotal tools for strategic decision-making, performance evaluation, and long-term sustainability. By delving into the diverse facets of growth models and measurements, organizations can gain a nuanced understanding of their growth trajectories and make informed choices to propel their success.

Moreover, as the global business landscape continues to evolve, the significance of studying firm growth becomes increasingly pronounced. The integration of cutting-edge technologies, the emergence of new market trends, and the evolving expectations of stakeholders necessitate a comprehensive understanding of firm growth dynamics. Through an in-depth exploration of growth models and performance indicators, organizations can adapt proactively to industry shifts, capitalize on emerging opportunities, and mitigate potential risks.

In essence, the study of firm growth encapsulates far-reaching implications for organizational resilience, competitive positioning, and value creation. By embracing a multifaceted approach to growth analysis, organizations can fortify their strategic acumen, foster sustainable growth, and position themselves as agile and adaptive entities in the ever-changing business landscape.

2.6 Impact of Capital Structure on SACCOs Growth

To further delve into the impact of capital structure on SACCOs growth in Zambia, it is essential to explore the specific financial challenges faced by SACCOs in the country. The

literature provides insights into the impediments such as late payments, loan defaults, illiquid assets, and high operating costs which hinder the financial performance of SACCOs in Sub Saharan Africa (Nderitu, Njeru and Waiganjo, 2022). Understanding how these challenges manifest within the Zambian context and their implications for the capital structure and growth of SACCOs will be instrumental.

In addition, the influence of leverage on the financial sustainability of microfinance institutions, as uncovered by Henock (2019) and Rutanga, Barayandema and Mutarindwa (2021), offers a lens through which to examine the potential impact of leveraging on the growth of SACCOs in Zambia. By applying these findings to the Zambian financial landscape, it is possible to gain valuable insights into the optimal capital structure for SACCOs to support sustained growth and stability. Moreover, the examination of the factors affecting financial performance of SACCOs in the Kenyan context by Olando, Jagongo and Mbewa (2013) provides a comparative framework for evaluating the potential influence of similar factors on SACCOs in Zambia. By adapting and applying these insights to the Zambian context, a comprehensive understanding of the interplay between capital structure and SACCOs' growth can be attained. It is evident that the unique challenges and opportunities within the Zambian financial landscape necessitate a tailored approach to understanding the impact of capital structure on the growth of SACCOs. By leveraging the insights from a diverse range of sources and contextualizing them to the specific dynamics of SACCOs in Zambia, the thesis can contribute to developing targeted strategies for enhancing the financial sustainability and growth of SACCOs in the country.

2.7 Critique of existing Theories and Research Literature

A systematic review of 41 recent studies was undertaken and a content analysis of key literature reviewed documented as depicted in Appendix V. Moreover, a number of studies have been conducted both locally and internationally on the variables of SACCOs capital structure and growth. These studies are summarized under the following:

2.7.1 Debt Financing Studies

Abor (2007) examined the effect of debt policy (capital structure) on the financial performance of medium firms both in Ghana and South Africa and found out that capital structure influences financial performance of firms, even though not exclusively. Further,

he indicated in his study that capital structure especially long term and total debt ratios, negatively affected performance of the firms, thus implying that agency issues may lead to the firms pursuing very high debt policy, thereby resulting in lower future performance.

Coleman (2007) in his study on the impact of capital structure on the performance of microfinance institutions indicated that most of the microfinance institutions are highly leveraged and employ long term debts as opposed to short term debt. Thus, highly geared microfinance institutions have a better performance since they are able to expand their clientele base and due to diversification of their portfolio they are able to manage the risks associated with lending better.

Gleason et al (2000) carried out study to determine the interrelationship between culture, capital structure and performance of retailers in European countries and established that indeed capital structure influenced the firm's performance. Further they established that capital structures varied through cultural clusters but in all cases, a negative relationship between the capital structure and financial performance. The negative coefficient pointed out that, those retailers used more debt in their capital structure than the required balance as per the trade-off theory which resulted to overleveraging which negatively affected the firm performance. Ondiek (2010) in his study titled the relationship between capital structure and financial performance of firms listed at the NSE and established that the use of debt financing by managers triggered increased growth of asset level and profitability but the shareholders equity played a big role in obtaining the debt finance. Therefore, the use of trade-off theory or pecking order theory may be applicable in achieving the required growth by the listed firms.

Pandey and Chotigeat (2004) with their study on theories of capital structure: evidence from an emerging market, examined the financial characteristics of Malaysian companies and their debt policies and concluded that profitability had a persistent and consistent negative relationship with all debt ratios.

Gweji and Karanja (2014) studied the effects of financial leverage on how deposit taking savings and credit co-operative in Kenya perform financially. Their sample comprised of 40 SACCOs and their performance was analyzed for a period of 13 years, between 2000 to 2012. The study found out that there was a strong positive relationship between the financial leverage where debt-equity ratio was compared to Return of Equity (ROE) and

on the other hand a weak positive relationship examined between debt-equity ratio compared to Return on Assets (ROA) and income growth.

Thaddeus and Chigbu (2012) on their study entitled the effects of financial leverage on performance sampled six banks from Nigeria and used secondary data of the published financial statements for a period of 5 years. Their results were mixed results where some banks showed a positive relationship between leverage and performance indicating that more debt could be employed to boost performance while others reported a negative relationship between leverage and performance.

2.7.2 Retained Earnings studies

Ronoh (2015) studied the effects of Capital structure on financial performance of listed commercial Banks in Kenya for a period of 5 years between 2009 and 2013. In the study, they observed that retained earnings had a positive but not strong relationship with the financial performance measured by return on asset of listed commercial banks in Kenya. This led to his conclusion that capital structure had a negative effect on the on the performance of commercial banks since debt, equity and deposits showed a strong negative relationship.

Thuranira (2014) in his study on the effect of retained earnings on the returns of firms listed in the Nairobi securities exchange found out that there is very weak (almost negligible) relationship between earnings retentions and the stock returns and consequently the value and performance of the firm. Kanwal (2012) in his study on the effects of Effect of Dividends on Stock Prices found out that there is have negative and statistically insignificant relationship to Stock Market Prices since investors of these industries in the Chemical and Pharmaceutical Industry of Pakistan still prefer dividends either cash or stock in spite of tax advantage on capital gain.

Shah (2015) in the study of Impact of retained earnings on Stock returns of food and Personal Care Good Industry listed in Karachi Stock Exchange found a moderate positive and significant relationship between retained earnings and stock prices.

2.7.3 Equity Financing studies

Shubita and Alsawalhah (2012) concluded in their study that firms that depend heavily on equity as their main source of funding are highly profitable. They also indicate that increase in debt position is associated with a decrease in profitability. Abubakar (2015)

on examining the relationship between financial leverage and financial performance of deposit money banks in Nigeria reported that Banks in Nigeria used less equity in their capital structure composition and therefore the Nigerian deposit money banks are generated very low return on equity for their shareholders. From Abubakar's study it is clear that there is a positive relationship between the equity ratio and performance of a firm.

Velnampy and Niresh (2012) in their study found a negative relationship between debt to equity ratio and profitability. This indicates highly geared banks are likely to make low profits compared to highly equity funded banks since their interest expenses are minimal.

Berger and Bonaccorsi di Patti (2006) in their study found out that highly geared firms are more efficient and profitable since the agency costs associated with equity funding are reduced. Thus, their findings were consistent with the agency theory on examining commercial banks in the US. Mwenje (2016) studied and reported that private equity highly contributes to enhancement of the value of a firm. This is so due to the improvement of functional and operational structures giving maximum value to the private equity owners. Private equity owners also provide valuable experience in streamlining the operations of the firm and also aiding in strategic decision making. Therefore, Mwenje concluded that there is a positive relationship between amount of private equity and performance of the firm.

2.7.4 Other studies

Gual and Clemente (1999) carried out a study on efficiency and size in the Spanish Cooperative banking between 1988 and 1996. The study used a sample of 697 cooperative banking institutions using stochastic methodology. The result is that there existed economies of scale on large SACCOs. Results were criticized by Ralston et al (2001) who stated that there was no relationship between size and efficiency.

The effect of size, adoption of technology and branch network on efficiency of SACCOs in Canada was assessed by Murray and White (1980). They used Cobb – Douglas production function and linear regression for analysis. The main finding of the study was that efficiency increased in size. They also stated that for smaller SACCO efficiency decreased with the use of technology.

A study of Chowdhury (2003) assessed the impact of information, communication and technology on efficiency. The study used Cobb – Douglas production function where firm output was a function of Information, Communication and Technology (ICT), capital and expenses among other determinants. Firm output was represented by return on assets. The sample was 327 commercial banks in Australia, Hongkong, Japan, Malaysia, New Zealand, Singapore, South Korea, Taiwan and Thailand. Data used was for the year 1999 in the institutions of the respective countries. The results were that investments in ICT had a significant and positive relationship with efficiency. Since the specified cost efficiency between inputs and outputs were determined using rigorous technical evaluation, the results obtained were susceptible to model misspecification errors.

Machauer and Schiereck (2004) studied the church-based SACCOs in Germany with regard to the strength of the bond, size (Total Assets), asset/liability structure and profitability. The study used ratios for fifteen institutions for the year 1997 and compared these with the industry averages. The results of the study showed that the church-based SACCOs appeared to be large and were profitable. The profitability and sustainability appeared to have been supported by moral behavior (less opportunistic behavior) among members. Results could have been more improved if it had used a statistically robust model.

The determinants of merger and acquisition transactions in Australian SACCOs were studied by Worthington (2004). The study considered the period 1992/1993 – 1994/1995. Data Envelopment Analysis (DEA) was used to obtain efficiency scores for all the SACCOs. The DEA input variables were share capital, call deposits, notice of withdrawal deposits, interest expenses and non-interest expenses. Outputs were personnel loans, investments, commercial loans, residential loans, interest incomes and non-interest incomes. Subsequently a logit model was used to predict the likelihood of a SACCO being acquired or acquiring another. Managerial competencies, regulatory and financial factors were used as the moderating variables. The key finding was that efficiency was significantly positively related to SACCOs acquisition of another.

A study to assess the relationship between financial performance and selected determinants for SACCOs in Nairobi, Kenya was carried out by Njoroge (2008). Sample size considered comprised of 30 SACCOs for the period between 2002 - 2007. Financial

performance was measured using ROA and ROE. Factors used for regression against ROA were size of the SACCO, loans to total Assets, liquidity to total loans, operating expenses to total assets and growth rate of loans. Asset Size, loans to total assets, liquidity to total assets and growth rate of loans were positively correlated to financial performance. Operating expense ratio was negatively related to performance. Capital ratio was also positively correlated to ROA.

Kilonzi (2012) carried out a study to establish the impact of regulations on the financial performance of SACCOs in Kenya. Sample size was 30 SACCOs for the period between 2008 – 2011. Financial performance was measured between ROA and ROE. Factors used for regression against ROA and ROE were capital to total assets, liquidity and management efficiency (Earning Assets/Total Assets). Regressions were run for 2008 – 2009, 2010 – 2011 and coefficients compared for differences which may have been caused by the regulations being applicable from 2010. The findings were that ROE, capital ratio, liquidity and management efficiency improved in the second period in comparison to the first. The sample size was biased as it included SACCOs in one region.

The relationship between agency and financial performance of SACCOs was assessed by Njenga (2012). The Study used three SACCOs with FOSA in Githunguri Division of Kiambu district in Kenya. The data collected was for five years period commencing from 2007 – 2011. Financial performance expressed through ROA was regressed against agency costs (total Director's expenses/Total expenses), Marketing expenses and size (measured by two variables loan and total members funds). The results were that ROA was weakly positively related to agency costs, positively related to marketing expenditure and weakly negatively related to size.

Karanja (2013) carried out a study to determine the relationship between size and cost efficiency of SACCOs in Kenya for the period 2008 – 2012. Efficiency ratio (operationalized as the ratio between non-interest expense and the sum of non-interest income and net interest income) was regressed against total assets, capital adequacy, management quality (Salaries plus benefits to average assets), ROE and liquidity. More efficient SACCOs were in the category of large and had more capital and higher ROE than the small ones.

In a study to establish the effect of credit risk management on financial performance of deposit taking SACCOs, Nyambere (2013), used a sample of 30 SACCOs in Kenya for the 3 years' period 2010 – 2012. Financial performance of ROE was regressed against capital adequacy, asset quality, management efficiency, earnings and liquidity. The results were that ROE was positively related to all variables.

Karagu and Okibo (2014) carried out a study to establish the effect of fund misappropriation, investment decisions, and loan defaulting and membership withdrawal on SACCO financial performance. The sample size was 34 SACCOs with FOSA in Nairobi County, Kenya for year 2013. The study was an opinion survey of employees working on the respective SACCOs. The results were that the employees believed that all the four variables adversely affected financial performance. However, the study never quantified the variables and hence none of the variables were statistically measured thus lacking precision.

McKillop and Ferguson (1998) investigated the relationship between borrower orientation on one hand and age and asset size on the other hand for 283 UK SACCOs for the year 1994. The results were that older SACCOs had less borrower orientation than the relatively newer SACCOs. SACCOs in large category were more efficient than the ones in the small category. The study would have been more appropriate if data of several years was used. An assessment of the diversification and financial performance of US SACCOs for the period 1993 to 2004 using 5784 SACCOs was carried out by Goddard et al (2008). They regressed return on assets (ROA) and also return on Equity (ROE) against some variables with key ones being scope (Non – interest income/Operating Income) and extent of penetration (actual members to potential members of the common bond). The findings of the study were that performance was positively related to increase in diversification for SACCOs in large category. The relationship was however negative for smaller SACCOs. There was no discernible relationship between performance and degree of penetration. The study greatly relies on the work done by Hyndman et al (2004) on SACCOs in Ireland, Spiegel and Yamouri (2004) and credit associations in Japan, McGrath (2008).

Olando (2013) study was on assessment of financial practice as a determinant of growth of SACCOs wealth in Kenya, a case study of Meru County. This study used a comparative design in soliciting information among 44 SACCOs. The research data methodology tool

used was a questionnaire and the questionnaires were distributed to the SACCOs in the county. The study found out that SACCOs which inadequately complied with their By-Laws and did not have incomes from their investments were unable to adequately cover their costs. The study recommended that the government should review legal framework to ensure that institutional capital was used to grow SACCOs wealth.

Owino (2011) reviewed the competitive strategies adopted by SACCOs in Mombasa county of Kenya to enable sustainability of operations. The researcher's findings indicated that government policies and resistance to change were the greatest challenges to strategy formulation and implementation. Other challenges faced were lack of financial resources and absence of good management to drive competitive strategies in the right direction.

Ademba (2012) reported on cash management and stated that cash management was the most important item in the operations of a SACCO. He asserted that financial institutions should manage cash adequately to avoid panic withdrawals by depositors. The SACCOs therefore should maintain cash and cash equivalents of 15percent ratio to short term deposits and short-term liabilities, as provided by the SACCO societies Act in Kenya (Government of Kenya, 2008).

Beck et al., (2000) study emphasized on growth of sources but lacked to indicate how these sources impact on the growth of SACCOs. The main concerns of the study by Davies (2001) were on governance. However, it failed to link governance to growth of SACCOs, it only talked of need for good governance. Ofei (2001) related growth to interest rates and self-generated funds. The study failed to show how these interest rates related to growth of the SACCOs and what rates should be charged to achieve this. Further, the study failed to show a relationship between sources of funds and growth of SACCOs. The study only talked of sustainability. The study by USAID (2001) very well showed the need for good stewardship but it did not emphasize on how growth should be achieved. It only said that they needed to deliver effectively. This delivery was not particular and never related to the two determinants; capital structure and funds allocation strategy to growth of SACCOs.

In a study by Agrawal et al., (2002), emphasis was on the usefulness of share capital but it failed to show how the management of the members' funds, other sources of funds and funds allocation strategy would result to growth of SACCOs. The study findings by

Remezani et al., (2002) were very much concerned with growth of wealth. It, however, only singled out the method of achieving this wealth (stewardship) but failed to include sources of funds and funds allocation in the findings. The study by Agrawal and Chadha (2005) and Agrawal and Cooper (2007) related the growth of surpluses to the stewardship. It neither touched on the capital structure, the allocation of funds nor growth of SACCOs. The study by Bowen (2004) related the growth of surpluses to good stewardship. It, however, never associated this growth to other factors such as the capital structure or the allocation of funds. The findings were similar to those of Det Wet (2004). The same was echoed by Sundaram-Stukel (2006), Nanka-Bruce (2006), Grell (2007), Wieland (2007), Ochoki (2007), Muruana (2007). The study by Kaloi (2004) only shallowly dwelt with issues that affected liquidity; financial stewardship, capital structure and allocation of capital. The main concern of the study by Mbaabu (2004) was on loan delinquency. The study, therefore, failed to identify other factors that lead to growth of SACCOs. It never stated what led to growth of SACCOs.

The study by Adeyemo and Bamire (2005) identified lack of funds and poor stewardship and the challenges to growth of wealth. It did not identify capital structure as a determinant of growth of SACCOs. The study by Deji (2005) showed how members would benefit from the SACCOs which is the main objective. However, it never showed how the SACCOs would grow. The study by Karki (2005) failed to show how growth of SACCOs comes about. It only touched on the stewardship but not on the capital structure and funds allocation strategy. The findings in the study by Rintaugu (2005) were very scattered and were not based on the main indicators of growth, financial stewardship, capital structure and funds allocation strategy. The main considerations in the study by Kaupelyte and McCarthy (2006) was risk management but not how the growth of SACCOs can be attributed to capital structures.

According to the Archer and Karim (2006) study, the reserves were only needed for covering fees not paid for service instead of using it to grow the firm. The study by Baral (2006) sincerely evaluated the SACCO's performance. The findings failed to introduce the stewardship as a measure of growth of SACCOs. The main concern of the study by Chege (2006) was loan default. The study never even showed how this default affected the growth of SACCOs let alone showing the determinants of growth of SACCOs' growth as capital structures. The main interest on Fiorillo's (2006) study was the effect of external

lending. Instead of the study encouraging alternative ways of sourcing funds, they still emphasized on wholesale lending. The study did not at all consider the determinants of growth of SACCOs. The study by Ogbimi (2006) was very important to educate SACCO members on how to manage their wealth but did not show how the SACCOs could grow. Tache (2006)'s study very heavily needed for formation of SACCOs and the usefulness of common bond, but it never showed how growth can be enhanced by the capital structure and funds allocation strategy.

Asher (2007) shows that sustainability was related to the stewardship. The study did not at all say how growth of SACCOs was related to determinants such as capital structure and funds allocation strategy. Nair and Kloeppinger-Todd's (2007) study shows that sustainability of SACCOs was related to the stewardship and legal framework. The study did not explain how growth of SACCOs would be achieved through capital structure and funds allocation strategy. According to the World Bank (2007), growth and sustainability of SACCOs was related to the stewardship and legal framework but not also to capital structure and funds allocation strategy. Wanyama's (2007) study highlighted the current trends on the performance of SACCOs in Kenya. In fact, the study did not show how growth was enhanced and the determinant of capital structure. The study by OCDC (2007) touched very lightly on the two determinants, stewardship and capital structure and totally failed to show how funds allocation strategy would contribute to success.

According to WOCCU (2007), growth and sustainability of SACCOs was related to the stewardship and legal framework. The study did not explain how growth of wealth would be related to capital structure and funds allocation strategy. According to Financial Sector Development Secretariat (2007), growth and sustainability of SACCOs was related to the economic environment but there was no relation to capital structure and allocation. The study by Huyssteen (2007) showed that growth and sustainability was related to the stewardship and legal framework. The study did not explain how growth of SACCOs would be achieved.

Ogsi et al., (2007) study showed that sustainability of SACCOs was related to the capital structure. The study did not explain how growth of SACCOs would be achieved. The study by Azhagaiah and Sabari (2007) indicates that growth of SACCOs was related to the capital structure. However, the study was undertaken more than 15 years ago and the

findings might not apply to the current context. Roselyne's (2007) study showed that growth of SACCOs was related to the control of loan default by the stewards. The study did not explain how growth of SACCOs would be achieved.

The study by Kinuthia (2007) reported that growth of SACCOs was related to the control of loan default by the stewards. The study did not explain how growth of SACCOs would be achieved. Gaita's (2007) study showed that failures in SACCOs were related to lending. Growth and sustainability were related to the stewardship and legal framework. The study did not explain how growth of SACCOs would be achieved. The study by Kimani (2007) identified the causes of inefficiency and ineffectiveness in credit administration in SACCOs; and growth and sustainability of SACCOs was related to the stewardship and legal framework. The study did not explain how growth of SACCOs would be achieved. The study by Margaritis and Psillaki (2007) investigated the relationship between firm efficiency and leverage but failed to show how growth could be achieved. The study by WOCCU (2007) showed that sustainability of SACCOs was related to the marketing. It did not explain how growth of SACCOs would be achieved.

According to Hein (2008), the growth of members' wealth was determined by shareholders' power. The study did not relate growth to capital structure. The study by Baker et al., (2008) did not at all talk about growth of SACCOs depending on capital structure and funds allocation strategy. The growth according to Barker et al. (2008) was related to product diversity. The study did not show any other determinants of growth. The main consideration in the study by Chava and Roberts (2008) was allocation of funds but the study failed to consider the other factors of growth. In the study by Lari (2008), the main considerations were capital structure which was considerably addressed but the study failed to consider the other factors of growth. The study by Papias and Ganesa (2009) examined the factors contributing to credit repayment behavior among the members of savings and credit co-operative societies in rural Rwanda.

Buch et al (2014) stated that increased capital led to decreased loans and hence reduction in income. However, Buch et al (2014) claim is only true under the environment where capital funds are strictly restricted from being loaned to members. However, Zambian SACCOs, capital is utilized for expansion programs and the rest utilized for loaning to members and hence not likely to draw the same conclusion made by Buch (2014). Thus,

the assertion by Makilop and Wilson (2014), Blanco and Barrios (2011), that capital adequacy regulation is effective in safeguarding deposits and stability of financial system is supported by the Cooperative Societies Act of 1998, which prescribes capital requirements in its regulation of SACCOs in Zambia.

Kilonzi (2012) used a casual research design targeting a sample of 30 SACCOs, to study the impact of regulations on the financial performance of SACCOs in Kenya. This study was limited in scope as it only sought secondary data from the financial performance reports for SACCOs in Kenya and hence missed the rich experience from the professional officers working in the SACCO subsector. The data collected was for four transitional years and therefore did not provide good trend evidence to support his findings. Macharia (2013) did a study on the effect of licensing requirements on the performance of cooperative societies in Nakuru County. He specifically used three deposit taking SACCOs in Nakuru county which is a very small sample to form any generalized conclusions for all deposit taking SACCOs in Kenya. The study sample of 3 SACCOs makes the results unreliable and biased because larger sample size may lead to different conclusions.

Mbui (2010) carried a research on the business opportunities for Stima SACCO in a new regulatory environment. The study used a case study and hence specific to that organization alone and it is not conclusive that the results could apply to others.

Ndung'u (2013) examined the relationships between risk management practices and financial performance of SACCOs in Nairobi. To use SACCOs in only one county is biased in that the results may not apply to deposit taking SACCOs in other counties.

Crapp (1983) carried out a study to determine the effect of size and adoption of technology on efficiency of SACCOs in South West Wales, Australia. The relationship between inputs and outputs were not established and thus making results deficient due to model specification errors. Similarly, Gual & Clemente (1999) carried out a study on efficiency of 697 SACCOs using stochastic cost frontier methodology. Just like Crapp (1983), the results were susceptible to model misspecification weaknesses. Machauer and Schiereck (2004) studied the church-based SACCOs in Germany using ratio analysis. The study findings would have been more appropriate if it had used robust statistical model.

A study to assess relationships between financial performance and selected determinants of SACCOs in Nairobi, Kenya was carried out by Njoroge (2008). Sample size used was

30 SACCOs for the period of five years 2002 – 2007. Financial performance was the dependent variable and the independent variables were operating expenses and profit before tax among others. The relationship between profit before tax and operating expenses is mathematically inverse and hence there is no need in including the latter in ROA and ROE regression analysis. Karagu and Okibo (2014) carried a study to establish effect on SACCO financial performance of fund misappropriation, investment decisions, loan defaulting and membership withdrawals. Financial performance and independent variables were not measured. McKillop and Ferguson (1998) investigated a relationship between a borrower orientation on one hand and the independent variables of age and size on 283 UK SACCOs on the other hand for the year 1994.

The study conclusions would have been more informative if several years averages were used instead of only one year. Olando (2013) carried a study on the assessment of financial practice as a determinant of growth for SACCOs' wealth in Kenya. The Study was a case study for SACCOs in Meru county and hence bias of results applicable in only one county. Moreover, the study obtained information from 44 SACCOs and did not distinguish which were deposit taking SACCOs and which ones applied to non-deposit taking SACCOs. According to SASRA (2012), the SACCO societies' regulatory framework aims at enhancing transparency and accountability in the management of deposit taking SACCOs. For transparency and accountability to be achieved, two important ingredients need to be present; maturity of the market which can self-regulate itself or presence of a regulator who provides basic minimum prudential standards to be observed by all the players in the market (Barrios et al 2003).

Therefore, the literature reviewed included the SACCO theories, core capital theory loanable funds theory, loan portfolio management theory, liquidity theory and membership recruitment, retention and growth approaches. These theories were found applicable to the research as they provided a background on the variables supporting financial performance in a depositing taking SACCOs. In addition, the theories supported the conceptual framework which is the core basis and fundamental base for this research. Thus, the study shall contribute to the theories of finance on the importance of the hypothesis postulated and tested on core capital, liquidity, loan quality and membership growth impact on financial performance.

2.8 Contribution of the research to literature

The research is aimed at closing the knowledge gap identified in Sections 1.2 and 2.4. The research would contribute towards developing a SACCO growth model based on capital structure. Growth patterns and variables that would lead to the growth of SACCOs would be identified and form a basis for the development of working model that can be used by SACCOs and other stakeholders, which would result in enhanced growth of this subsector of the economy, as has been noted in other comparable Sub-Saharan African countries.

2.9 Chapter Summary

The Chapter discussed a review of literature on the subject of Capital Structure and SACCO Growth. The literature demonstrated that there has been a great interest on the study of SACCOs with different variables such as financial performance, management, sustainability – but little on Capital Structure and SACCO Growth. Capital Structure studies have been more concerned with stock exchange listed firms, paying limited attention to SACCOs. It was also noted that there exists no study that directly attempts to deal with Capital Structure and SACCO Growth in Zambia, as such there exists no model to measure growth. It was from that premise that a motivation to undertake this study was drawn from. The next Chapter discusses the theoretical and conceptual frameworks adopted in the study, including justifications.

CHAPTER 3

THEORETICAL AND CONCEPTUAL FRAMEWORKS

3.1 Introduction

The previous Chapter reviewed literature related to the study. This Chapter examines the theoretical and conceptual frameworks of the study. The Chapter explains the various theories supporting the variables, which included the following theories: SACCOs theory, agency theory, loanable funds theory, signaling theory, liquidity management theory, the traditional theory on capital structures, Modigliani and Miller theorem, trade-off theory and Pecking Order theory. A conceptual framework is then developed which will underpin the study.

3.2 Theories underpinning the research

There are several theories that have been developed to explain and analyze the impact of capital structure decisions on a company's value and financial performance. These theories provide insights into the factors that influence the optimal mix of debt and equity in a company's capital structure. A theory is a set of systematic interrelated concepts, definitions and propositions that are advanced to explain and predict phenomena (Cooper and Schindler, 2011). In the study, the variable assessed was capital structures as represented by debt financing, retained earnings, equity financing, and member savings and deposits. The financial theories supporting the effect of capital structures on SACCO growth included, SACCO theories, core capital theory (Pecking order), loanable funds theory, risk and financial disclosure theory, liquidity theory and signaling theory.

3.2.1 SACCOs Theory

The theories explain the evolution of SACCOs from initiation in the early 19th century to the present position. The original mode of existence is supported by the shareholders theory where members unite with a view of solving a certain economical problem and then benefit from their efforts, Freindman (1970) and Coelho et al, (2003). The SACCO's corporate governance is in the hand of the "*invisible hand*" the Annual General Meeting where the joint principals (members) guide the destiny of the SACCO and delegate some responsibilities to the management Committee. As the SACCO expands both in membership and total assets, the need to hire a manager arises who acts as the steward responsible for protecting and maximizing shareholders value and hence the stewardship

theory (Davis et al, 1997). The steward is satisfied when the organizational objectives are achieved (Donaldson and Davis, 1991). Olando, Jagongo and Mbewa (2013) extended it and called it financial stewardship which is meant to increase and sustain SACCOs' value while satisfying the needs of the members at the same time. Davis et al (1997) propounded that stewards are satisfied and motivated when organizational objectives are achieved. The theory recognizes the importance of governance structures that empower the steward and offers maximum autonomy built on trust (Donaldson & Davis, 1991).

At registration, the SACCO board performs all the responsibilities and only later employs a manager to take responsibilities on extended tasks. The Managers are the stewards and success are attained when SACCO objectives of receiving deposits and granting loans to members is achieved. Abdullah and Valentine (2009), advanced "*stake-holders theory*" which acknowledged that all the stakeholders' interests in the SACCO need to be addressed adequately for the success of the institution and overall membership. The theory asserts that satisfying shareholders only is only beneficial in the short-term while satisfying all stakeholders is more sustainable and benefits shareholders more in the long-term. Jagongo et al (2013) proposed the Solow-Swan class growth theory which focuses on capital and labour with major findings that capital is added when SACCOs invest but is lost due to depreciation. The indication is that there is capital growth in wealth only when the investment exceeds depreciation (Gardner, 2006). He asserted that increment in total assets only increases if the monetary value of investments exceeds the monetary estimate of assets loss in value through depreciation. The theory is strongly supported by Damar (1946) which explains growth rate in terms of savings and productivity of capital. It explains that increase in investments leads to accumulation of capital. However, the degeneration theory can largely explain the diversity in the SACCOs objectives among the existing SACCOs. Cornforth et al (1988), appreciates the change in paradigm by the SACCOs due to pressure it receives from other market forces and amplified by members' demands for higher returns. The capitalistic attitude driven by expected returns on investments by members compromised the original principles of SACCOs.

SACCOs are subcategories of cooperatives dealing with savings and loans and are guided by distinct principles. Cooperatives are guided by cooperative principles, namely; voluntary and open membership, democratic member control, member economic participation, autonomy and independence, education, training and information,

cooperation among cooperatives and concern for the community (Mirie, 2014). The principles aforementioned are compromised and hence degeneration theory. As the SACCOs expand to become financial institutions like banks, they often respond to market pressures to operate like other financial institutions. Unlike the initial objective of saving with a major objective of obtaining credit, the shareholders start demanding more immediate services using the current technology like Automated Teller Machines (ATMs) and higher returns on their investments among others. The change in paradigm leads to increased risks and hence the prudential regulation on the deposit taking SACCOs by the government.

Thus, the importance of SACCO theories is to narrate how SACCOs have evolved over time and how the government regulations have changed over time. Particularly, at the current time where degeneration theory practices are prevalent, the government introduced prudential regulations to guarantee safety of members' deposits. Thus, membership is a critical variable.

3.2.2 Agency Theory

According to Jensen and Meckling (1976), agency theory defines an agency relationship as a contract that arises when one or more persons (principals) engage another person (agent) to perform certain service on their behalf, which may involve delegating some decision-making authority to the agent. Aboagye-Otchere et al. (2014) argued that the basic agency conflict in modern firms arises due to separation of ownership and management. The theory maintains that managers (agents) do not always act in the best interests of owners (principals). Instead, managers further their own self interests. This is further aggravated by the incomplete and asymmetric information between the principal and agent (Urquiza et al., 2010). Moreover, the Agency Cost theory dives deep into the conflicts of interest between different stakeholders in a firm, particularly between managers and shareholders. It highlights how higher levels of debt can lead to agency costs as managers may take more risks to pursue their own objectives, resulting in potential harm to shareholders. This theory underscores the importance of considering the impact of capital structure on agency conflicts and managerial behavior.

This leads to agency costs such as costs of monitoring managers, costs of preventing managers from harming owners' interests and residual loss - the difference in wealth due

to actions not being carried out by the principals themselves. The principals themselves may harm the managers by advocating for policies and laws which only strengthens the shareholding and not employees' interest. This is attributable to membership growth objective where more members join the SACCO due to ever growing dividends policy.

3.2.3 Loanable Funds Theory

Goddard et al (2010) summed up the importance of capital base as meaningful capital standards that are important in protecting the taxpayers and the stability of financial system. Since retained earnings form a key component of core capital, it forms an important source of loanable funds in SACCOs. Saunders and Cornett (2007) acknowledge Loanable funds theory as the amount of money available to borrowers due to changes in interest rates and other government laws. However, in SACCOs, it is the amount of money available to borrowers as mobilized by SACCOs. The funds retained in the SACCO business have assisted the ever-growing membership and the incessant demand for loans. Saunders and Cornet (2007) stated that most regulators acknowledge the owners' contributions (core capital) as important component primarily because it is the amounts available to stakeholders in the event of insolvency and liquidation. The financial institutions particularly fix high capital ratios in order to cushion depositors against any probable loss and the undesirable banking impact of panic funds withdrawal which may create destructive panic runs on other solvent but illiquid banks or SACCOs, (Bhattacharya and Thakor, 1993). SACCOs are exposed to many financial risks but the three direct ones are: credit, systemic and liquidity risks. In credit risk, the lender is uncertain if the loan provided will be repaid as per the contractual documents. It includes the default risk which states that the lender is unlikely to recover both the principal and the interest rate payable by the client. For the protection of deposits, the regulator must be assured that the organization can at least be able to pay a proportion of shareholders' funds in the event of insolvency and liquidation, (Mishkin & Eakins, 2011).

Since all the stakeholders, rely on the owners' funds for compensation in the event of financial difficulties, risk-based supervision with identical reporting format must be implemented by all deposit taking SACCOs or credit unions (Andrews, 2012). Croteau (1956) study utilized financial ratio analysis to suggest that US credit unions are characterized by increasing merger and growth due to compliance with capital requirements which was greatly contrasted by Koot (1978). To support increasing return

to scale similar to Croteau (1956), Wolken and Navratil (1980) and Fry et al. (1982) appreciated the importance of capital requirements in management of financial institutions. The prudential measure for loans granted to members is the allowance for loan loss. Therefore, SACCOs are expected to make policies on dividends and interest on members' deposit that would ensure enough retained earnings are left in the SACCO to sustain core capital.

3.2.4 Signaling Theory

Signaling theory was advanced by Watts and Zimmerman (1986) who stipulate that the asymmetric information surrounding an organization and investors causes adverse selection. In credit management, the lenders must acquire the correct information to avoid adverse selection and moral hazard problem. The loans disbursed must be recovered according to the loan contractual documents and if not allowance for loan losses must be provided. According to Graham and Harvey (2001) analysis, it is a valuation allowance to offset credit losses specifically identified in the quick cash portfolio. It is the management's best estimates of probable losses in the remainder of the portfolio as at the balance sheet date. Allowance for loan loss is a provision or reserve estimated showing the amount of loans made past due and likely to continue in default. The weaknesses in loans repayment led to the financial turmoil of 2007 and 2009. Brunnermiar (2009), Berger, Herring and Szego (1995) noted that inability to make loan losses provision lead to depletion of capital and hence losses in US banks in 1980's and similar findings were made by Peek and Rosengren (1995).

Olando et al (2013) recommended that SACCOs should review credit policies continuously and also develop loan loss provision policies to benefit from the loan portfolio held by SACCOs. Management estimates the allowance balance required using past same day loan experience, an assessment of the financial condition of individual borrowers, a determination of the value and adequacy of the underlying collateral, the condition of the local economy and an analysis of the levels of trend of the portfolio and a review of delinquent and classified loans. Actual losses could differ significantly from the amounts estimated by the management. The most critical asset in any financial institution such as SACCOs, is loans to members (Monteverde, 2000). Two characteristics that make SACCOs' loans to members critical is the materiality of the earning asset and the assets exposure to credit and default risk. Legally loans to members form the core

business of the SACCO and for it to continue to be in operations, the SACCO must sustain all activities surrounding savings and credit. This is supported by the loanable funds' theory (Mishikin & Eakins, 2012).

For a SACCO to be successful, it must be able to disburse loans and collect loan repayments from the members, (Saunders and Cornet, 2007). The impact of not collecting loan repayments are: direct reduction on SACCOs' liquidity and direct reduction on profitability. When provision for loan loss is not deducted from the comprehensive income, the income statement will be overstated and if the entity (credit Union) pays dividends it will be paying from capital which is illegal, Leventis, Dimitropoulos, Anandarajan (2012). If it is done periodically over a number of years, it can lead to insolvency, Saunders and Cornet (2007).

3.2.5 Liquidity Management Theory

Saunders and Cornett (2011) advocate for the prudential planning of cash flows by matching maturities of assets against maturities of liabilities. For an organization to operate in a positive cash flow the maturity of asset must be earlier than the maturity of liabilities. The ratio encourages SACCOs to be liquid always to enable them meet daily cash requirements for the members and a similar view was shared by Sutrisna (2009). Thus, matching different maturities of assets (loans to members) and maturities of liabilities is critical to both profitability and liquidity. This requires measurement of sensitivity to different interest rates of both assets and liabilities through income Gap analysis commonly known as Gap analysis, (Mishkin and Eakins, 2011). If liability loans like cooperative bank loans to SACCOs are maturing faster than repayment of loans by members, then the SACCO concerned will continue with loan dependence. Thus, SACCOs are expected to compute changes in income as: $\text{Change in income} = \text{Gap} \times \text{Net change in interest rates}$.

3.2.6 Trade-off Theory

This theory is also known as target adjustment theory as it suggests that if the adjustment of leverage ratios is costly, firms will not fully adjust. It holds that the optimal capital structure is achieved by proper balancing of the gains and losses of debt (Myers, 1984). It borrows from MM proposition II and bankruptcy model of Litzenger and Kraus, (1976). It takes into consideration the realities of the world; existence of bankruptcy costs

mainly legal and administrative related, and agency costs. Agency costs arise because of separation of ownership and control of a firm (Jensen and Meckling, 1976). The Trade-off theory delves into the intricate balance between the benefits of debt, such as tax shields and lower cost of capital, and the potential costs of financial distress and agency costs. It emphasizes the importance of finding the optimal level of debt that maximizes the benefits of debt financing while minimizing the accompanying costs.

According to Arnold (2008), the agency costs are as a result of owners of equity failing to provide managers with sufficient incentives in order to act in their best interest. While the use of debt results into a tax advantage, it also has its disadvantage; the bankruptcy costs and financial distress costs. As the use of debt increases, its marginal benefit decreases and at the same time the marginal cost increases. Therefore, firms have to balance between the use of debt and equity. Going with this model, a firm with an objective of maximizing its value should maximize the use of debt if the probability of going bankrupt is low.

As put out by Hovakiam (2001), high profitability indicates higher tax savings hence low probability of going bankrupt. This theory is built on the following assumptions: existence of both agency costs and taxes, no transaction costs, investors have homogeneous expectations regarding future cash flows, bonds and stocks trade in perfect markets, investors can borrow and lend at the same rate investments and financing decisions are independent of one another. This theory fairly relates to today's business operating environment whereby the equity holders and the management have to review the balance between the equity capital (including retained earnings) and the debt, in order to maximize on the tax shield benefits and minimize cost of financial distress and agency cost.

Due to tight regulations governing financial institutions operations, a balance between equity capital and debt financing has to be maintained in line with all statutory requirements. This ensures that a financial institution will be adequately liquid to fund their investments in interest bearing assets thereby resulting to positive operating incomes and profitability.

3.2.7 Pecking Order Theory

This is an advancement of the trade-off theory, in addition to considering bankruptcy costs; this theory further incorporates the costs of asymmetric information. Donaldson was the first to suggest this theory in 1961 which was later reinforced in 1984 by Nicolas and

Myers. According to this theory firms raise capital in a certain order, the first source is internal financing (retained reserves), then debt-financing and finally equity financing. The next source of financing is only considered when the latter is depleted. According to Myers et al, (1984) they assert that equity is least preferred source of financing because managers have an information advantage over investors and when they issue new equity, they tend to think that the firm is overvalued and are therefore taking advantage of this. This results in investors placing a lower value of new equity. According to this theory, it is easy to predict the financial health of a firm. The managers of any firm have an information advantage about risks, value and prospects over outsiders.

A debt issue is interpreted as the confidence with the management that an investment is profitable and the current stock prices are undervalued. Similarly, the issue of equity indicates that the management lacks confidence and the current stock prices are overvalued. In essence therefore, the issuance of equity would result into a decrease in share prices thus decreasing profitability while a debt issue would result in to increase in share price and profits as well (Graham and Harvey, 2001). This theory is built on the following assumptions: existence of agency costs, taxes, transaction costs and cost of asymmetric information, investors have homogeneous expectations regarding future cash flows, bonds and stocks trade in perfect markets, investors can borrow and lend at the same rate investments and financing decisions are independent of one another. Just as trade off theory, this theory relates even better with the variables of this study as it provides a sequence in which an entity should finance their business using the internal financing (retained reserves), then debt-financing and finally equity financing.

3.3 Conceptual Framework for the study

The conceptual framework provides a concise description of the phenomenon being studied accompanied by graphic depiction of the major variables of the study (Mugenda, 2008). It is a basic structure that consists of certain abstract blocks which represent the observational, experimental, and analytical aspects of a process being conceived (Bogdan and Biklen, 2007). Smyth (2004) argues that it is a tentative explanation of a phenomena under investigation relating to a conception or model of the study and items usually covered by questions such as what is going on with these things and why. The conceptual framework is illustrated by *Figure 3-1* below.

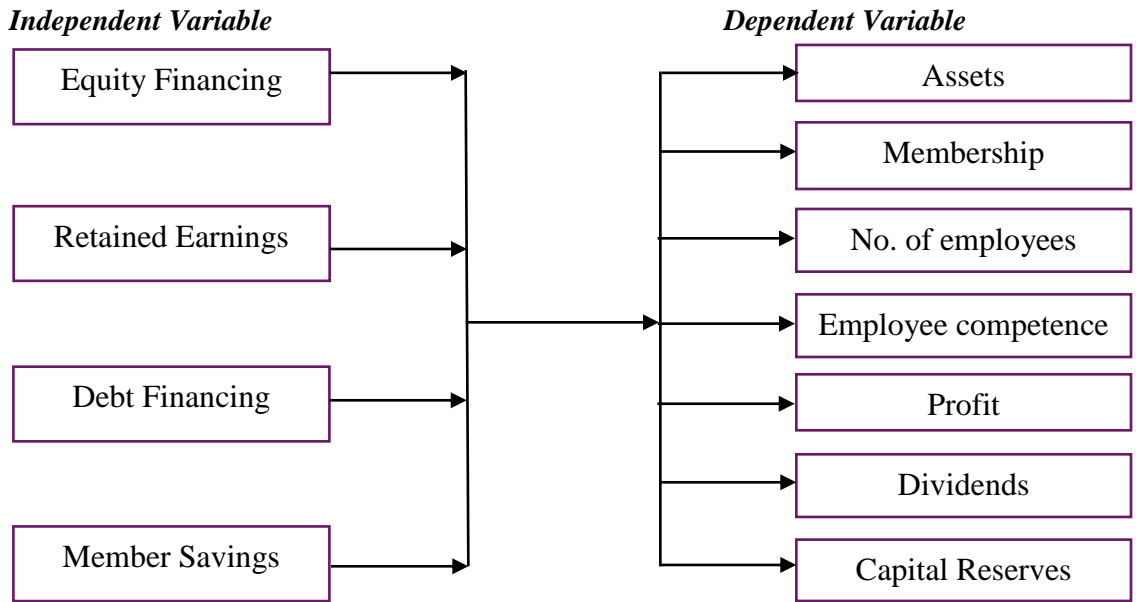


Figure 3-1: Conceptual Framework for the study

3.3.1 Independent Variable – Capital Structures

Everitt (2009) argues that an independent variable is an item which is presumed to affect or determine a dependent variable. It can be changed as required and its values do not represent a problem requiring explanation in an analysis but are simply taken as given. The dependent variable in contrast responds to independent variable (Everitt, 2009). It shows what a researcher measured in the experiments and what is affected during the experiment. The rationale behind the selection of these variables is that first, capital structures is viewed, in this study, as the key ingredient in the growth of any SACCO. Capital Structure of SACCOs comprises the various internal and external sources of finance, including Equity Financing, Retained Earnings, Debt Financing, and Member Savings/Deposits. SACCOs must employ the most optimal capital structure for a significant growth to be experienced.

3.3.2 Dependent Variable – SACCO Growth

The dependent variable was the growth of SACCO and was represented by the following; capital reserves, membership, number of employees, employee competency, profits, dividends, and assets. Sales in the form of loan disbursed is the core investment for any SACCO. The income from loans must achieve the SACCOs’ objective and growth of the SACCOs. The income generated from investment on loans must be sufficient to pay all the operating costs, grow the institutional capital, and finance rebates and dividend to the shareholders. When this happens, then there is growth of SACCOs as a result of growth

in total loans. If loans growth keeps pace with growth in total assets, there is likelihood that surpluses will be maintained. Higher growth in loan portfolio signals maintenance of surpluses. Growth in savings deposits affects the growth in loan portfolio and total assets. It is advisable that a SACCO maintains these short-term assets which can be converted into cash within a short notice to finance liquidity gaps. However, these assets should be capable of contributing towards the surplus. An increase in the number of employees is indicative of growth in that it speaks to the workload demands because of more services demanded by SACCO members. The growth in a SACCOs' assets is another area where this growth can easily be seen or felt. The key aspect affecting growth in this area is the choice of investments and the actual mix. Importantly, assets are the economic resource of the SACCOs acquired through investment of members' shares, savings deposits, institutional capital and loans.

3.4 Chapter Summary

This Chapter presented literature review, theoretical and conceptual frameworks that was considered in this research, including explaining independent and dependent variables. The next Chapter outlines the methodology that was adopted for this study.

CHAPTER 4

METHODOLOGY

4.1 Introduction

The previous Chapter looked at the literature review, theoretical and conceptual frameworks. This Chapter presents the methodology used in this research to achieve the study aim and objectives. The Chapter begins with a review of the methodological considerations that informed the adoption of a mixed method strategy of inquiry. Further, highlights of the several research methods that would be used in this research are presented. Furthermore, the Chapter articulates how the research problem was investigated and describes the tools for investigation.

4.2 Research Methodology

A research methodology refers to procedures of logical thought processes which are applied to a scientific investigation (Sutrisna, 2009; Fellows and Liu, 2003). According to Creswell and Clark (2007), the selection of research methodology and methods in management and social sciences represent the researcher's assumptions about the nature of the social world and the type of knowledge. These assumptions are important in the research because the chosen methods must reflect the context of the underlying assumptions.

4.2.1 Philosophical basis of research

Different philosophical assumptions about the nature of the social world are essential to settle on an appropriate philosophical position for the research. The assumptions explore the reasons for studying philosophical issues in research. According to Easterby-Smith et al. (2008), there are three reasons why the exploration of philosophy may be significant in research methodology:

- i) It could help the researcher to refine and specify the research methods. This includes the type of evidence gathered and its origin, the way it is interpreted and how it helps to answer the research questions.
- ii) The knowledge of research philosophy helps the researcher to evaluate different methodologies and methods in order to avoid inappropriate use and unnecessary work. The researcher therefore identifies the limitations of a particular approach at an early stage.

- iii) It may help the researcher to be creative and innovative in either selection or adaptation of methods that were previously outside the researcher's experience.

Therefore, the understanding of philosophical matters provides a solid basis for a methodological justification of the research.

4.2.2 Research Philosophy

Research philosophy refers to the assumptions which implicitly or explicitly guide an inquiry in a study. A literature scan of the various philosophical views reveals that the most prevalent positions are ontological or epistemological. Other views such as sociological and axiological assumptions could also be found in the research methodology literature (Easterby-Smith et al., 2008; Neuman, 2003).

a) Ontological Perspective

Ontology explains the nature of knowledge and assumptions about reality (Pathirage et al., 2007). The ontological perspective therefore refers to the researcher's position to the question about the nature of the reality under investigation, which in turn influences the selection of the appropriate research approach and methods. There are two seemingly opposing but competing ontological views in which researchers could base their methodology, namely Parmenidean and Heraclitean (Babbie, 2010; Neumann, 2003; Chia, 2002). According to Chia (2002), reality is composed of clear entities with identifiable properties and characteristics in the parmenidean context. On the other hand, in the Heraclitean world view, reality is seen as 'inclusively processual', meaning all things are in constant flux regardless of how they appear to the senses.

There are two types of ontological views; the realist and idealist ontologies (Johnson and Duberly, 2000; Sexton, 2004). Realists start with a stance of a commonly experienced external reality with predetermined nature and structure, whereas idealists assume that different observers may have different viewpoints and that what counts for truth varies in space and time. This view is consistent with the proposition by Gill and Johnson (1997) that research methods could be positioned by taking nomothetic (realist) and ideographic ontologies into account.

Gill and Johnson (1997) define nomothetic approach as that which utilizes quantified methods for data analysis while ideographic approach deals with analysis of subjective accounts generated through inside situations that involve one in the everyday flow of life.

Nomothetic approaches emphasise the explanation of laws and deductions using quantified operational concepts. Ideographic approaches on the other hand, emphasise the analysis of subjective accounts that is generated by getting inside situations. The emphasis is upon theory rounded in empirical observations to gain explanation and understanding. In sum, while experiments and survey methods are associated with the nomothetic view; action research, case study and ethnography are associated with the ideographic view (Pathirage et al., 2007). Further, Sutrisna (2009) posits that objectivism asserts that phenomena and their meanings have existence that is independent from the actors while constructivism asserts that phenomena and their meanings are continually being accomplished by their actors.

b) Epistemological Perspective

According to O’Gorman and MacIntosh (2016), epistemology concerns the way in which people obtain valid knowledge. Epistemology describes what the researcher knows about the reality and assumptions about how knowledge should be acquired and accepted. Epistemology therefore is concerned with how and what the researcher knows and the questions about how and what is possible to know (Fisher et al., (2004). Collins (2010), and Saunders and Thornhill (2007) listed four common research epistemological approaches, including: positivism, interpretivism, realism, and pragmatism. Although there are others, in recent studies, most researchers have focused more on positivism and interpretivism, which are sometimes referred to as objectivism and subjectivism.

According to Fisher *et al.* (2004), positivism research philosophy indicates an approach to achieve true knowledge through scientific observation and analysis. In other words, this refers to the research approach that scientists tend to use their points of views to evaluate and solve the social problems with the help of objectivity (Cooper and Schindler, 2006). Saunders *et al.* (2009) posit that an interpretivist philosophy refers to “understanding the meanings and interpretations of ‘social actors’ and to understand their world from their point of view, is highly contextual and hence is not widely generalizable”. In other words, Collins (2010) said that interpretivism does not emphasize reporting on a real objective, but instead focuses on justifying the world as it is experienced.

O’Gorman and MacIntosh (2016) argue that the interpretivist paradigm considers the multiple realities which are inevitably revealed by the perspectives of different

individuals, the contextual understanding and interpretation of the collected data, and the nature of the researcher's involvement. In other words, interpretivism emphasizes on understanding what is occurring in a specific context rather than simply measuring it (Patton, 1990; Klein and Myers, 1999). Easterby-Smith et al. (2008) in their review of research philosophies refer to the two ends of epistemological undertakings as positivism and constructivism.

The positivists believe that the social world exists externally and that its properties should be measured through objective measures where the observer must be independent of what is being observed. Social constructivism on the other hand stems from the view that reality is not objective and exterior; it is socially constructed and given meaning by people who are conscious, purposive actors with ideas about their world and attaching meanings to what is going on around them (Robson, 2011). These two fundamentally different and competing schools of thought demonstrate the complexity of the issues embodied in epistemological and ontological viewpoints.

4.2.3 Research Paradigm

A research paradigm refers to a set of very general philosophical assumptions about the nature of the world (ontology) and how people can understand it (epistemology). These are assumptions that tend to be shared by researchers working in a specific field or tradition (Maxwell, 2005). Paradigms also typically include specific methodological strategies linked to these assumptions and identify studies that are seen as exemplifying these assumptions and methods (Maxwell, 2005). Research paradigm includes the research methods and research philosophies. This combination in research helps researchers to develop the understanding and knowledge about topic research.

4.2.4 Research Logic

Logic of the research refers to the interpretation of the research, the role of existing body of knowledge gathered in the literature study, the ways the researchers collect data and subsequent data analysis (Sutrisna, 2009). The research logic links the researcher to the specific approaches and methods for collecting and analyzing data. Suffice to state that the research logic could be empirical, non-empirical or a combination of the two. For the empirical research, empirical evidence is required and this means that the research must be based on data obtained from observation or experience. The study of real organizations

may be based on the positivist or phenomenological paradigms (Easterby-Smith et al., 2008). There are three main dimensions of empirical research, namely: deductive and inductive research; quantitative and qualitative research; and subjective and objective research.

Non-empirical research is based on pre-existing body of knowledge in a particular field. Some researchers depend entirely on this method and are generally known for searching and reviewing literature on a certain subject where the subject may be one of an historical nature. In this case, the research does not lend itself to any other form of investigation (Saunders et al., 2012). The combined approach considered both empirical and non-empirical approaches to inform the structuring and execution of research activities. A summary of deductive and inductive; quantitative and qualitative; and subjective and objective approaches to empirical research, are presented in Table 5.2.

a) Deductive research

A deductive research approach focuses on theory been tested by empirical observation. Robson (2011) introduced five sequential stages of deductive research as: i) deducing a hypothesis from theory; ii) expressing the hypothesis in general terms; iii) testing the operational hypothesis; iv) examining the specific outcome of the enquiry; and v) if necessary, modifying the theory. According to Collis and Hussey (2010), deduction is the dominant research approach in the natural sciences where laws present the basis of explanation, allow the anticipation of phenomena, predict their occurrence and permit them to be controlled. A deductive research could be considered in line with objectivism and positivism due to its reliance on current body of knowledge in composing hypothesis. Since there is only one objective truth, the researcher's investigation could be based on the existing body of knowledge which have been significantly proved and therefore must represent the objective truth (Sutrisna, 2009).

b) Induction Research

An inductive research is a study in which theory is developed from the observation of empirical reality. In this regard, general inferences are induced from a particular instance which is the reverse of the deductive research. It involves moving from individual observation to statements of general patterns or laws (Collis and Hussey, 2010). Inductive

research tends to proceed from data to theory, that is, method, data, findings, theory (Gill and Johnson, 1997).

Sutrisna (2009) stated that inductive research intends to apply a less structured methodology to obtain richer and deeper information. Inductive researchers try to keep their minds open for any possible results while proposing further steps for data collection. In certain methodologies for example, the grounded theory, a methodology that allows the researcher to develop a theoretical account of the general features of a topic while simultaneously grounding the account in empirical observations or evidence, a literature review is not recommended in the early stages to minimize the possibility of the researcher being influenced by presuppositions. Explanations and theories are then developed from observations of the empirical world. Induction is the dominant research in the social sciences.

4.2.5 Research Position and Justification

All the philosophical viewpoints have their merits and demerits but adoption of a particular view point depends on the situation or context of the research. The research took a multi-paradigmatic approach. The justification for the adoption of the multi-method position include:

- i) epistemologically, the research is objectivist. It is also positivists in paradigm. It is positivist because the problem being investigated is an objective social reality requiring observation and survey of discrete and identifiable objects and phenomena;
- ii) ontologically, the research is parmenidean and realist because the objective of developing a growth model for SACCOs, with identifiable variables, provides evidence to support generalizations about SACCOs.

It can be noted from the review on research paradigms and logic that deductive/objective research could be associated with positivism while inductive/subjective research could be associated with phenomenology or constructivism. The research logic for this study is both deductive and inductive. The justifications put forward for the multi-method position of this study underpins this approach. Specifically, the rationale behind the deductive and inductive logic of this research is explained as follows:

1. deductively, the research moves from theory to data. This is evident in the review of pre-existing/current body of knowledge in Capital Structure and growth of SACCOs and thus used as a source of reference for research; and
2. from the perspective of induction, the exploratory approach is used to improve understanding of Capital Structures and Growth of SACCOs. This helps the researcher to obtain information on the stakeholders' opinion and perceptions about Capital Structures and the growth of SACCOs.

If the researcher is involved in or has an influence on the research outcome; then, the researcher is subjective. If on the other hand, the researcher is distanced from or independent in the execution of the field work; then, the researcher is said to be objective. Empirical research could be objective or subjective depending on the level of involvement of the researcher. The traditional assumption that in science, the researcher must maintain complete independence if there is to be any validity in the results produced supports the positivist research paradigm which is mainly objective (Easterby-Smith et al., 2008). However, phenomenology by its very nature is subjective. However, a subjective approach requires the recognition of any influence or limitation the subjectivity may have on the conduct or findings of the research. Saunders et al. (2012) argued that not only is it perfectly possible to combine deduction and induction within the same piece of research, but it is often advantageous to do so.

4.3 Research Methods

Data collection can be based on characteristics generally grouped as quantitative or qualitative. Quantitative data requires a quantitative approach or method and qualitative data requires a qualitative approach or method in the collection and subsequent analysis of data (Sutrisna, 2009). The selection of the research methods or approaches must consider the philosophical assumptions and research paradigms. Thus, the following sections provide an overview of these approaches to the research.

4.3.1 Qualitative Research

Qualitative researchers generally contend that 'reality is socially constructed' (Guba and Lincoln, 1994); social behaviour follows socially constructed norms. They argue that it is important to "get close" to their objects of study through participant observation so that they can experience for themselves the subjective dimensions of the phenomena they

study. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or to interpret, phenomena in terms of the meanings people bring to them (Denzin and Lincoln, 2000). Rather than using a standardized instrument or measuring device, the qualitative researcher asks the questions, collects the data, makes interpretations, and records what is observed. The qualitative approach assumes that there is no singular objective reality. Thus, the observed reality is related to the researcher's interaction with the phenomenon (Creswell, 2013; Sutrisna, 2009).

4.3.2 Quantitative Research

Quantitative researchers seek causal determination, prediction and general isolation of findings. Thus, the methods employed are also known as scientific methods. Sutrisna (2009) argued that the quantitative approach positions the researcher as a neutral observer of the phenomena in question in order to maintain distance or objectivity from the research subject. Quantitative research makes use of questionnaires, surveys and experiments to gather data that is revised and tabulated in numbers, which allows the data to be characterized by the use of statistical analysis (Hittleman and Simon, 1997).

Nahiduzzaman (2006) further claimed that quantitative researchers emphasise the measurement and analysis of causal relationships between variables. Quantitative methods are assumed to be repeatable and capable of isolation from reality without compromising the cause and effects being studied.

4.3.3 Methods adopted in the Research

The approach adopted for this research is a combination of both quantitative and qualitative, commonly referred to as a mixed method approach. Assumptions underpinning quantitative and qualitative approaches represent two extremes of the data continuum. While the quantitative approach is linked with the deductive-objective-generalizing domain, the qualitative approach is associated with inductive-subjective-contextual domain (Morgan, 2007; Sutrisna, 2009). Nevertheless, research problems do not usually tie neatly with the assumptions of these methods/approaches. Rather, research problems are better understood by employing both methods and using them in a complementary manner (Pathirage et al., 2007).

In mixed research, the researcher uses a mixture or combination of quantitative and qualitative methods, approaches, or concepts in a single research study or in a set of related

studies. The qualitative and quantitative parts of a research study might be conducted concurrently (conducting both parts at roughly the same time) or sequentially (conducting one part first and the other second) to address a research question or a set of related questions. Graziano and Raulin (2010) argued that qualitative research could be used as a precursor to the quantitative method in less explored areas. It could also be used to provide descriptive information for the generation of theory.

It is argued that no one research methodology is better or worse than the other as both are proven to be useful in most research endeavours (Cohen, Manion and Morrison, 2000; Silverman, 1997); what is critical is the selection of the appropriate research methodology for an inquiry at hand. In the same vein Merriman (1998) argues that getting started on a research project begins with examining one's own orientation to basic tenets about the nature of reality, the purpose of doing research, and the type of knowledge that can be produced. Given these descriptions, it can be summed up that the selection of research methodologies depends on "fitness for purpose" as opined by Tuli (2010). However, some researchers posit the incompatibility of quantitative and qualitative approaches. Guba and Lincoln (1989) argue that meta-theoretical assumptions underlying the two approaches are so different that any reconciliation would destroy the philosophical foundations of each. Ontological and epistemological postulates of each approach are so idiosyncratic that they cannot be combined. As Guba (1987) states, one paradigm rules out the other, just as surely belief in round world precludes belief in flat one. Nevertheless, some argue that it is possible to subscribe to the philosophy of one approach and employ the methods of another (Reichardt and Cook, 1979; Sale et al., 2002; Walle, 1997; Walsh, 2003). Sale et al. (2002) suggest that the fact that the approaches are ontologically and epistemologically incommensurate does not mean that multiple methods cannot be combined in a single study if it is done for complementary purposes. This reveals an additive outcome for mixed-methods research. On the basis of this account, it is concluded that qualitative and quantitative work can be done in a single study or series of investigations. Mixed research is based on the philosophy of pragmatism (i.e., what works is what should be considered to be important in answering research questions).

In this study, the quantitative approach will be deployed first, followed by the qualitative approach. This sequential explanatory design allows for the initial collection and analysis of numerical data to identify trends and patterns related to the effects of regulation on the

growth of the civil aviation industry in Zambia. By starting with quantitative data, the study can establish a solid foundation of measurable outcomes, such as passenger traffic, financial performance, and safety records. This data will provide an overview of the regulatory impacts and allow for statistical analysis to identify significant correlations or trends (Creswell, 2014).

Following the quantitative phase, the qualitative approach will be employed to explore the context and deeper meanings behind the statistical findings. Qualitative data collected through interviews, focus groups, or case studies will help elucidate how industry stakeholders perceive and respond to regulatory changes, enriching the understanding of the quantitative results. This two-phase approach ensures that the qualitative insights are grounded in the initial numerical findings, leading to a more comprehensive analysis of the regulatory impacts on the industry.

4.4 Study Location

It is important that the description of the study location is provided, to provide a context why the location was selected.

4.4.1 Introducing Zambia

Zambia is a landlocked country that is in the Southern part of Africa. It lies between latitudes 8° and 18° South and longitudes 22° and 34° East with a total surface area of 752,612 square Kilometres. The country is surrounded by eight neighbouring countries namely; the Democratic Republic of Congo to the North, Tanzania to the North-East, Malawi to the East, Mozambique, Zimbabwe, Botswana and Namibia to the South, and Angola to the West. While administratively, the country is divided into ten (10) provinces. These provinces are Central, Copperbelt, Eastern, Luapula, Lusaka, Muchinga, Northern, North-Western, Southern and Western. The country has 105 districts with its capital city being Lusaka.

Politically, Zambia is a democratic state which attained its independence from Britain on 24th October 1964. Demographically, Zambia's population is estimated at 15.9 million, with 7.9 million being males and 8.0 million as females. Economically, the country is dependent on copper mining, while agriculture remains the main economic activity of the vast majority of the population. The country is still poverty stricken with about 40.8 percent of the population being extremely poor (CSO, 2013).

4.4.2 Introducing Lusaka Province

Lusaka is the capital and one of the fastest developing cities in Southern Africa. According to the 2010 Census Report, the population density of Lusaka Province was 100.1 persons per square Kilometre. The population density increased from 63.5 persons per square Kilometre in 2000, representing an increase in density of 36.6 persons per Kilometre. The study was conducted in Lusaka Province owing to its being cosmopolitan with various SACCOs. It has diverse SACCOs accommodating different types of SACCOs (i.e., rural and urban), alongside representing 10.6 percent of the total active SACCOs that are operating in Zambia.

4.5 Target Population

The target population of the study comprised of 59 registered SACCOs in Lusaka Province between 2017 - 2021. The population size was determined by the number of registered SACCOs in line with the register held at the Registrar of Cooperatives pursuant to the Cooperative Society's Act number 20 of 1998. For primary data collection, the study targeted the General Managers or their designate of all the 59 SACCOs who had professional information on capital structures of individual SACCOs in the study.

4.6 Sampling Frame

The study used comparative design which was descriptive in nature that enabled the researcher to gather more information in analysis and ascertainment of accurate results. The studied population of 59 SACCOs represented the whole population of the registered and active SACCOs as 31 December 2021. Thus, the sampling frame was the whole population of the 59 SACCOs at 31st December 2021.

4.6.1 Sample and Sampling Technique

Regarding SACCOs as the unit of analysis, no sampling technique was necessary as the study collected data from all elements in the sampling frame which was equivalent to the target population. However, regarding primary data collection, purposive Sampling method was used. The importance of using the non-probabilistic method of sampling emanated from the technical nature of the research study whose questions could only be answered adequately by few people in the SACCOs establishment. Specific employees and particularly the General Managers or their designate, such as Finance or Business

Development Managers, answered the questionnaires in all registered 59 SACCOs in Lusaka Province.

4.7 Data Collection Techniques

One of the main stages in a research study is data collection that enables the researcher to find answers to research questions. Varying research approaches have different data gathering methods. Data collection techniques could be broadly classified as secondary and primary. *Figure 4-1* shows some of the data collection techniques.

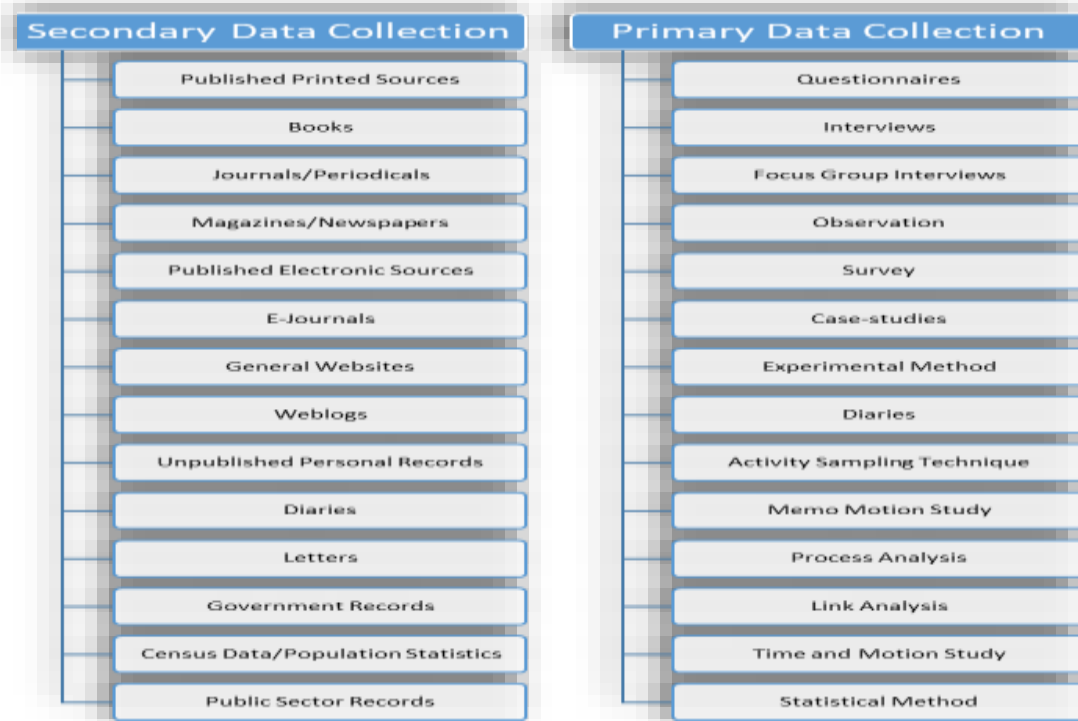


Figure 4-1: Secondary and Primary Data Collection Techniques

Source: *Taherdoost (2021)*

4.8 Research Design

To summarize the research design that was appropriate for this study and to outline the philosophical assumptions guiding this inquiry, a research design matrix as a heuristic tool was developed for this study as depicted in *Table 4-1*.

Table 4-1: Research Design Matrix

Research Question	Research Objectives	Population & Sampling	Data Collection Method	Data Analysis
What are the growth patterns of SACCOs in Lusaka Province? (Nominalist Ontology/Positivism, Deductive logic of inquiry)	To describe the growth patterns of SACCOs in Lusaka Province.	59 participants (key informants) were purposively sampled, who also constituted the population. These	Survey Questionnaire (Quantitative)	Principal Component Analysis
What are the determinants of capital structure for SACCOs in Lusaka Province?	To identify determinants of capital structure for SACCOs in Lusaka Province	comprised 59 General Managers and/or Finance Managers/Business Development Managers	Interview Questions (Qualitative)	
What are the effects of Capital Structures on the Growth of SACCOs in Lusaka Province? (Positivism, Inductive logic of inquiry)	To describe the effects of Capital Structures on the growth of SACCOs in Lusaka Province.	from the 59 SACCOs drawn from Lusaka Province.	Interview Questions (Qualitative)	Multivariable Analysis
How would a SACCO Growth Model be constructed, implemented and validated? (Pragmatic ontology and pragmatic logic of inquiry)	To construct, implement and validate a SACCO Growth Model.	62 key informants were purposively sampled, comprising 59 Managers from the 59 SACCOs, 1 Registrar of Cooperatives, and 1 NASCU.	Delphi Method (Qualitative)	Principal Component Analysis, Random Effect Regression

4.8.1 Ethical Considerations

Bryman and Bell (2007) posits that the following ten principles of ethical considerations have been compiled as a result of analyzing the ethical guidelines of nine professional social sciences research associations; research participants should not be subjected to harm in any ways whatsoever, respect for the dignity of research participants should be prioritized, full consent should be obtained from the participants prior to the study, protection of the privacy of research participants has to be ensured, adequate level of confidentiality of the research data should be ensured, anonymity of individuals/organizations participating in the research has to be ensured, any deception/exaggeration about the objectives of the research must be avoided, affiliations, sources of funding, or possible conflicts of interests have to be declared, any communication in relation to the study should be done honestly and transparently, and avoid misleading information or representation of primary data findings in a biased way. To address ethical considerations, the following measures were put in place:

- i) *Voluntary participation of respondents*: Participation in the research was on a voluntary basis. The interviewees and questionnaire respondents were not forced to participate.
- ii) *Use of appropriate language*: Use of offensive, discriminatory, or other unacceptable language was avoided. The questions in both the interview and questionnaire survey were constructed in an appropriate language.
- iii) *Acknowledgement of works of other authors*: All works of other authors were acknowledged and referenced appropriately.
- iv) *Privacy and anonymity*: Participants were assured of their privacy and anonymity. Throughout the study, the names of respondents were not disclosed pursuant to the assurance given at data collection stage.
- v) *Maintenance of the highest level of objectivity*: The study maintained a high level of objectivity in discussions and analyses throughout the research.

4.8.2 Data Collection

Data was collected using interviews and questionnaire surveys. Triangulation in data collection was used to enhance the confidence that could be placed on the research findings (Sutrisna, 2009).

a) Questionnaire Survey

The questionnaire survey was used as the main instrument for data collection and generalization of research findings. The choice was based on the advantages that a large coverage of population could be realized with little time or costs. The survey targeted all the 59 SACCOs in Lusaka Province that were in operation as of 1 January 2017. To effectively use this tool, respondents were assured of anonymity which in turn helped them to be honest in their answers. Bias due to personal characteristics of the interviewer was avoided, as no interviewer was present. This method allowed the respondents to have adequate time to consult where they were not sure thereby allowing adequate responses to questions. The research tool was also carefully designed to ensure that there was no ambiguity.

b) Interviews

Interviews were conducted were after the questionnaire surveys. They were aimed at validating that data that was collected from the questionnaire survey and other secondary data. The participants were well selected to ensure that the various views of the main stakeholders involved in the SACCO sub-sector are incorporated in the main survey. The participants were drawn from the Registrar of Cooperatives' Office, SACCOs, and NASCU. The selection method was based on convenience.

4.8.3 Data Pilot Testing

In this study the reliability of instrument was tested using Cronbach Alpha on the pilot study respondents. To obtain the sample size Babie (2004) recommendation of $N/10 + K$ was used. Where N is 59 and K is 10. The result obtained a sample of 6 respondents. A total of 6 questionnaires were distributed to 6 SACCOs with an intention of pre-testing the questions. Pilot testing was done to determine the flaws, limitations or other weaknesses within the interview design and made corrections of the errors possible.

Babie (2004) indicates that a pilot study is conducted when a questionnaire is given to just a few people with an intention of pre-testing the questions. To test for reliability, the study used the internal consistency technique which was assessed using Cronbach Alpha Coefficient. Internal consistency of data was determined by correlating the scores obtained from one time with the scores obtained at other times using the same research tool. The

coefficient obtained was 0.8 and the rule is that the absolute value greater than 0.7 is acceptable as adequate for the data being examined.

4.8.4 Data Validity

The researcher enhanced validity by discussing the questionnaires with the respondents before distributing them in line with Creswell (2003) assertion that validity is strength of qualitative research and it exists when the knowledge sought is arrived at thorough descriptions that make possible an understanding of the meanings and essence of experience, Castillo (2009). Consistency refers to the ability to obtain results that can be duplicated by another researcher when using same method. In the study, all information was at 31st December of a given year for the period 2015 to 2018 as represented in audited accounts and stamped by the relevant offices to enable consistency throughout the study.

4.8.5 Data Processing and Analysis

The quantitative data was collected and analyzed using the computer software known as SPSS version 26.0. Collected data were checked for errors of omission or commission before being keyed into the computer system. Multivariate analysis was conducted to extract the most important information of the data. The methodology selected was Principal Component Analysis (PCA) since, it leads us to generate an index of SACCO growth. The application of Principal Component Analysis in this study responds to the need of reducing the number of variables and extract the most important information from our dataset but retaining as much variance as possible (Conway and Huffcutt, 2003). Additionally, it is potentially used to generate an index such as the growth index (like those proposed in Sarma (2008) or Arora (2014), which is the outcome of this study, therefore, it is the most suitable methodology.

In literature, examples abound of the application of multivariate techniques in financial investigations. Using data from 500 surveys about loan granting of a German Bank, Ioniță and Șchiopu (2010) applies PCA to reduce the number of variables from 15 to 7 components. Here, the authors pinpoint which variables have more effect on credit scoring calculation. In this line, Arora (2014) uses this methodology to combine elements for creating an index of financial access, by weighting dimensions with PCA. Connor and Korajczyk (1993) and Aït-Sahalia and Xiu (2017) apply PCA in portfolio management. PCA was appropriate for this study because log transformation is often used because not

only does it make variance more homoskedastic in many cases, which is the main interest of this study, rather than normality only. Log transformation also has very useful mathematical properties in that it is easy to manipulate. A deeper reason, partially related to the above, is that log transformation naturally represents phenomena that operate on a multiplicative scale.

On the other side, the qualitative data was collected, coded and analyzed using thematic analysis. Data were hierarchically coded and the results discussed.

4.8.6 Development and Validation of SACCO growth model

Based on the research findings and data analysis, a model for measuring the growth of SACCOs relative to capital structure was developed. The model was generic so that it could be adapted for use universally. The model was validated for functionality and usefulness using professionals from SACCOs in Lusaka Province.

4.8.7 Recommendations and Conclusions

Recommendations were made based on the findings of the research. The results for all the research tools utilized were carefully analyzed to ensure that results were concisely documented. Based on the findings, the SACCO Growth Model was developed.

4.9 Chapter Summary

This Chapter described the methodology used to carry out the research and address its objectives. An explanation of how the research problem was investigated was highlighted, including describing tools used to undertake the investigation. It also described the characteristics of the research sample and the method of analysis that was employed. The next Chapter discusses the data collected and analyzed in the study.

CHAPTER 5

DATA COLLECTION AND ANALYSIS

5.1 Introduction

The previous Chapter outlined the methodology for carrying out the research and the methods used to analyze the data collected. This Chapter presents findings of the study. Data collected were both qualitative and quantitative. Principal Component Analysis was used for data reduction since the study aimed at establishing correlations between variables and ultimately establish a SACCO growth index. Data were presented using tables, graphs, and charts.

5.2 Questionnaire Survey Results

A questionnaire was designed, pretested and administered. The questionnaire survey was carried out over a period from March 2023 to September 2023, targeting SACCOs in Lusaka Province.

5.2.1 Survey Sample

The survey sample was drawn from Lusaka-based SACCOs that have were in existence as of 2017, with a track record of keeping proper records as evidenced by audited financial statements. As of 2017, 59 SACCOs had filed their audited financial statements and produced annual reports in Lusaka Province. The inclusion criteria for SACCOs was that they should have up to date audited financial statements and were registered in compliance with the Cooperative Act number 20 of 1998. The total number of respondents targeted was 59, consisting of rural and urban SACCOs. The sample was representative of all SACCOs in Zambia.

5.2.2 Questionnaire Design

The questionnaire had three parts. The first section was aimed at collecting the responsive SACCO's attributes as well as the respondents' profile. Closed ended and multiple-choice questions were utilized with the respondent restricted to only making one choice for each question. The second section was aimed at establishing SACCO growth patterns. The measurement used to collect data was ordinal. The last section was establishing capital structure for respondent SACCOs.

5.2.3 Response Rate

A total of 59 questionnaires were sent out to Senior Managers drawn from 59 SACCOs that were in operation during the period 2017 – 2021 in Lusaka Province, out of which 42 were returned, giving a response rate of 71.2 percent. Mugenda and Mugenda (1999) argue that a 50 percent response rate is adequate, 60 percent good and above 70 percent was very good. Based on this assertion the response rate for this study can be said to be very good at 71.2 percent. A no response rate of 28.8 percent may be explained by poor record keeping, deregistration of some SACCOs, and no audited financial statements to ascertain their financial standing.

5.2.4 Profile of Respondents

The profile of the Senior Managers and the SACCOs they work for are presented.

a) Registration Dates for SACCOs

The study sought to find out the year in which the SACCOs commenced operations and the findings revealed that the oldest SACCO commenced operations in 1954 with majority of them (40.5 percent) having been started between 1991-2001. The distribution of the year when the 42 SACCOs were registered is depicted in *Figure 5-1*.

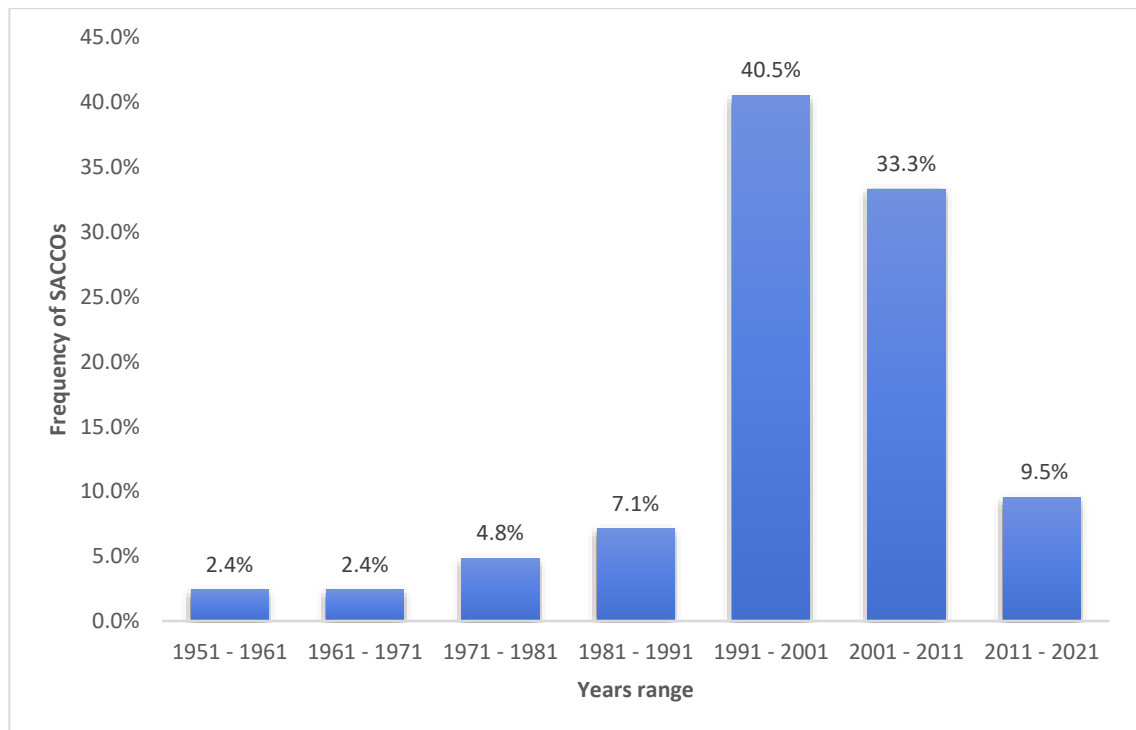


Figure 5-1: Registration Years for SACCOs in Lusaka Province

b) Respondents' Position and Duration in current Role

Majority respondents were General Managers (73.8 percent) of respondent SACCOs, with majority (57.1 percent) of respondents having worked between 1 – 3 years for their respective SACCOs, as shown in *Figure 5-2*.

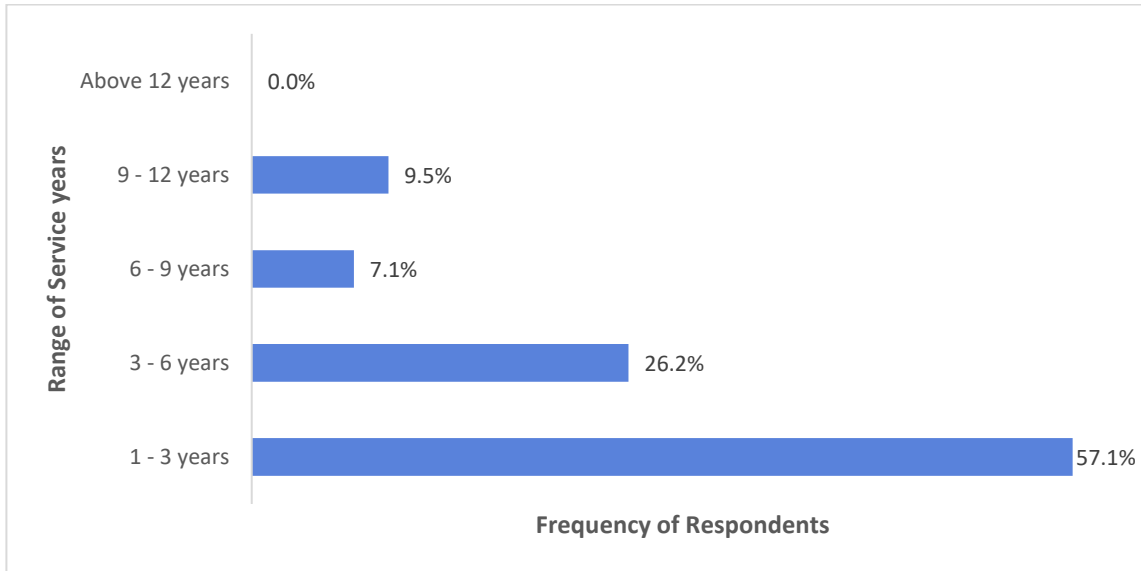


Figure 5-2: Years Respondents have worked for SACCOs.

c) SACCOs Affiliation

Figure 5-3 below illustrates that majority (47.5 percent) of the SACCOs were from the private sector while 19.0 percent, 21.4 percent and 11.9 percent were drawn from the government, NGO, and a combination of all categories, respectively.

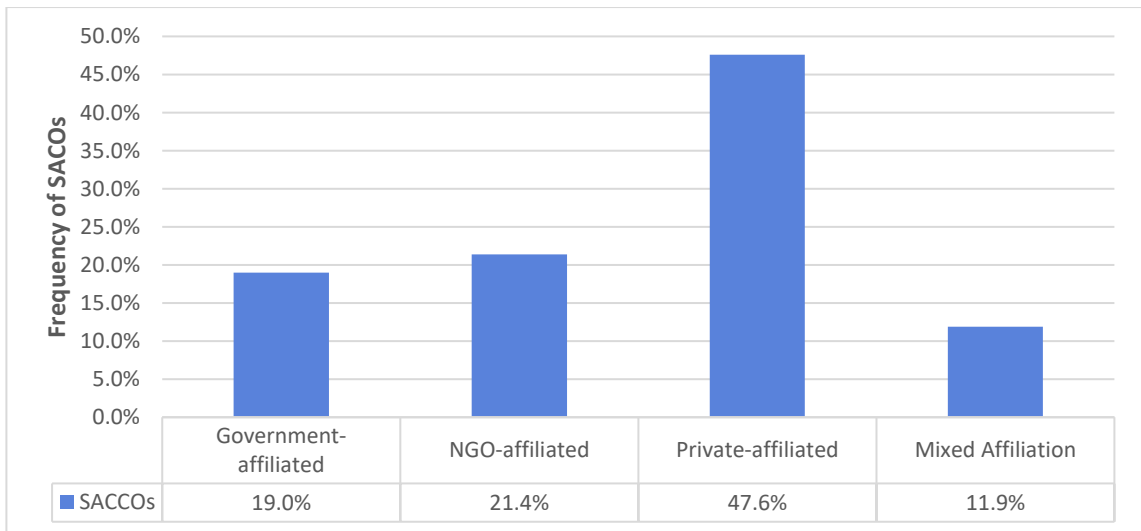


Figure 5-3: Classification of SACCOs by affiliation in Lusaka Province

d) SACCOs with audited financial statements

From the 42 respondents, 85.7 percent of the SACCOs had undergone annual audits either through privately contracted audit firms or the Office of the Auditor General for those SACCOs affiliated to the government, while 14.3 percent of the SACCOs did not undergo audit for variously reasons.

e) Classification of SACCOs by Location

Majority of the SACCOs at 48.8 percent were based in urban areas, while 32.6 percent were from peri-urban and 18.6 percent from rural areas – as depicted by *Figure 5-4*. The reason for this phenomenon was due to urban SACCOs being patronized by regular income earners who also embrace the saving culture.

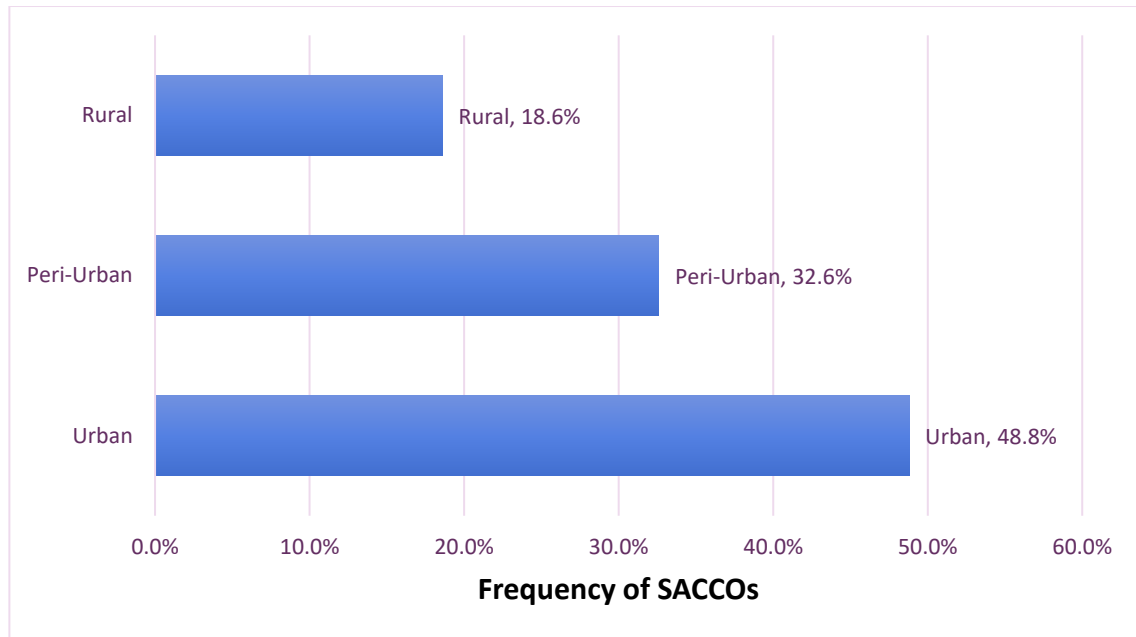


Figure 5-4: Classification of SACCOs by Location

5.2.5 Objective 1: Growth Patterns of SACCOs in Lusaka

To assess the growth of SACCOs, it was considered important to find out the indicators of growth of SACCOs.

a) Growth in membership, assets and employees

Figure 5-5 depicts growth patterns, which showed that membership grew by 149.4 percent, assets by 25.0 percent, and employees by 31.3 percent between the period 2017 – 2021.

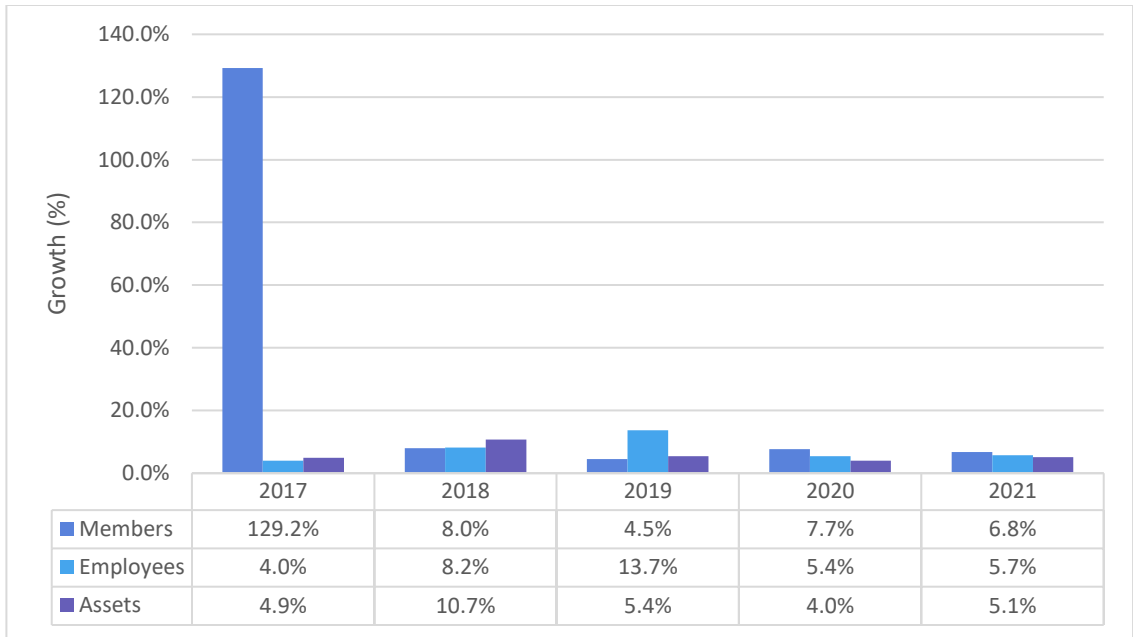


Figure 5-5: SACCO growth pattern between 2017 - 2021

b) Growth in employees by function

Figure 5-6 below shows the classification of SACCOs' employees, with majority at 56.5 percent in finance and credit, 27.1 percent in management, 7.3 percent in audit and risk, and 9.1 percent as other employees.

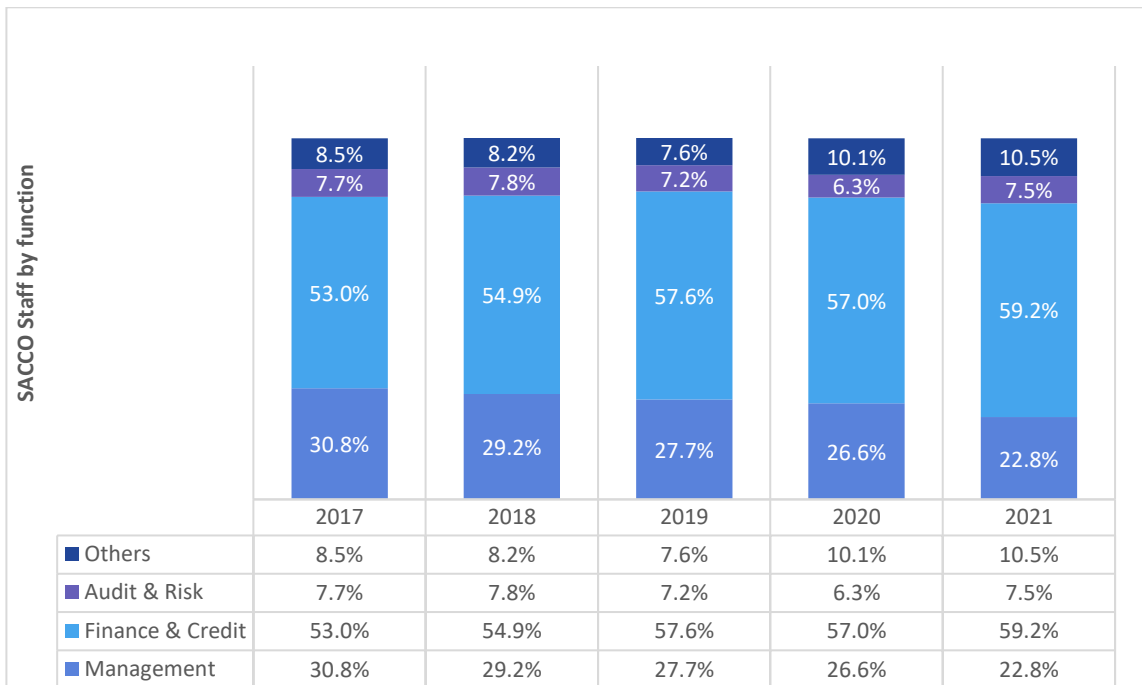


Figure 5-6: SACCOs employees by function for the period 2017 – 2021

c) Employees qualifications

Figure 5-7 shows the distribution of qualifications for employees from the 42 respondents. Majority (50.8 percent) were classified as diploma holders and 25.5 percent undergraduate degree holders, which shows that SACCOs were employing staff that were reasonably qualified for the various roles, considering the sizes of these SACCOs.

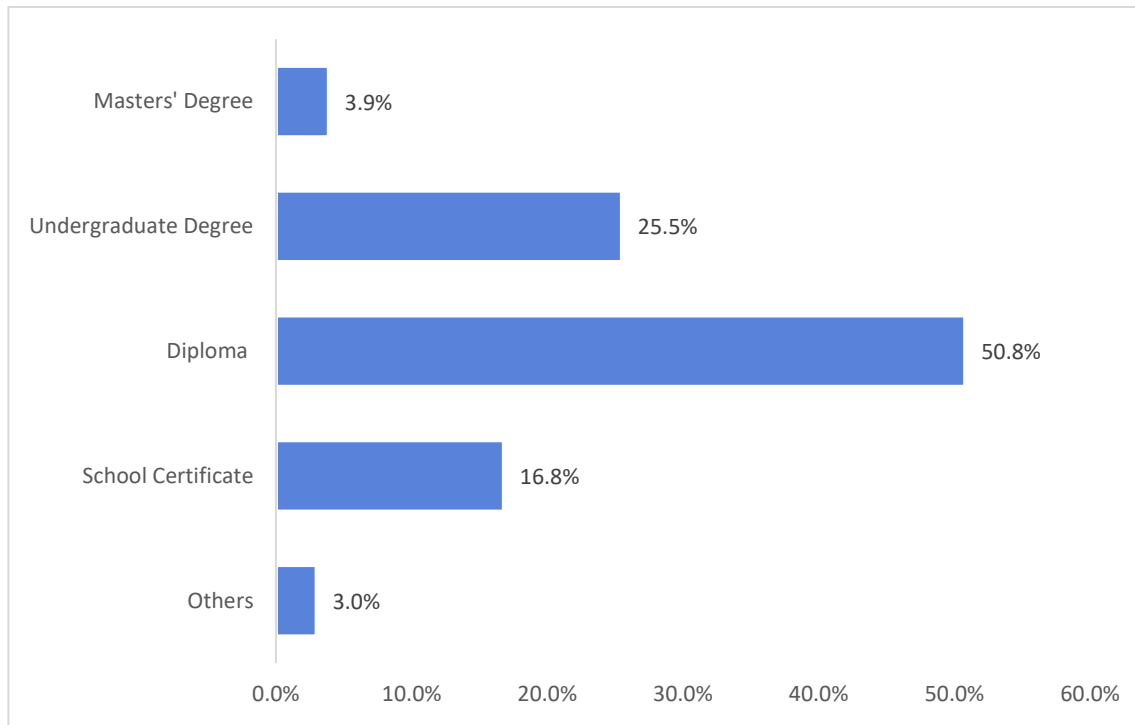


Figure 5-7: Highest Qualifications for SACCO employees

d) Employee competence

Moreover, out of the 42 respondents, 61.9 percent believed their employees had the ideal level of competence compared to 38.1 percent, who indicated that their staff competence levels were less than ideal. This finding aligns with the fact that the SACCO sector in Lusaka Province and Zambia in general was not developed enough, thus, the level of competence might not be ideal for all SACCOs. To enhance their employees' competences, majority (78.6 percent) of SACCOs carried out at least one targeted capacity-building or on-job training and majority (54.8 percent) of SACCOs indicated their employee retention period of 4 - 6 years.

Further, majority (57.1 percent) of SACCOs had retention policies in place, which provided strategies for staff retention.

5.2.6 Objective 2: Determinants of Capital Structure for SACCOs

The following were the findings on identifying determinants of capital structure for SACCOs in Lusaka Province.

a) Profitability

Figure 5-8 shows that respondents reported profits at 95.2 percent during the five years period of the study. The more profitable SACCOs are, the lower their need for external financing. There was no SACCO from the respondents that had debt financing as a capital structure. Therefore, profitability was a key determinants of capital structure.

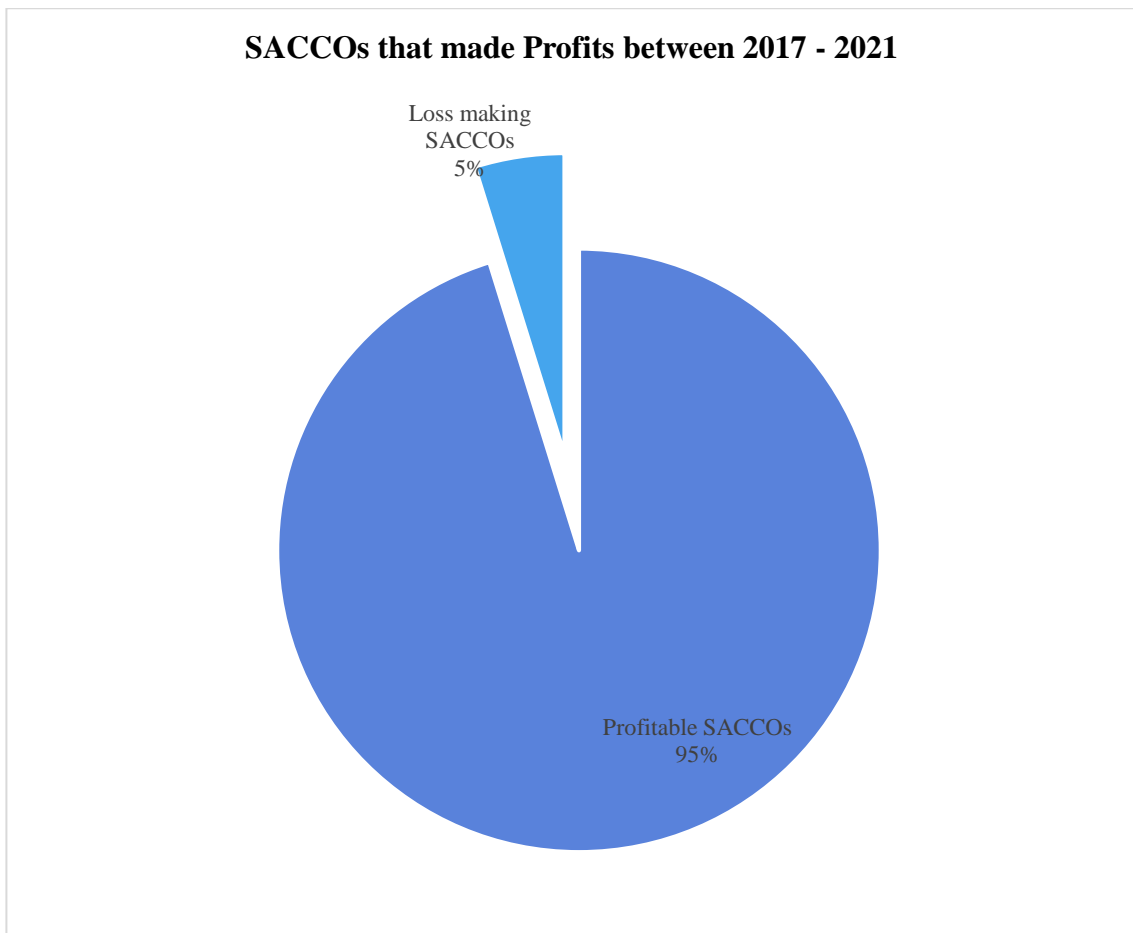


Figure 5-8: Profitability of SACCO between 2017 - 2021

b) Age of SACCOs

With 42.8 percent of the respondent SACCOs having been registered between 2011 – 2021, it was noted that the majority of the SACCOs were formed in the 2000s, which was the period where capital structure grew as shown in Figure 5-9.

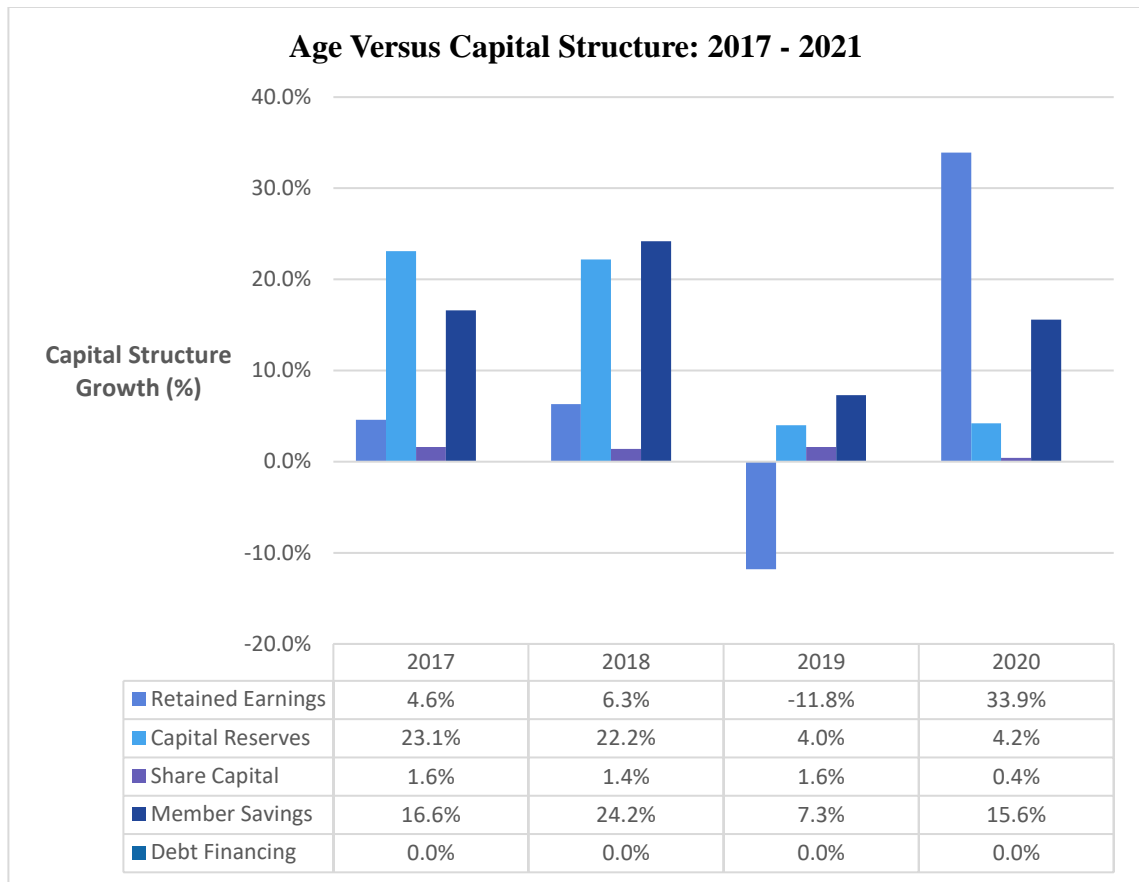


Figure 5-9: Capital Structure progression Versus Age of SACCO

c) Legal system and SACCO by-laws

Unlike other countries that have standalone legislation that govern SACCOs, it was established that SACCOs in Zambia were managed under a broad-based legislation, Co-operative Act number 20 of 1998, with other types of organizations such as producer or agriculture co-operatives. Whereas the Act defines the Registrar of Cooperatives as the regulator of co-operatives organizations such as SACCOs in Zambia, SACCOs do not have an apex statutory organization such as the defunct CUSA – which was a lender of last resort for SACCOs, from which they accessed capital funding. All the respondents indicated that they utilized the Cooperative Act alongside SACCOs’ by-laws as primary determinants in the mobilization and utilization of capital structure.

d) Financial market condition

Whereas SACCOs in other comparative countries have mechanisms to access capital funding from government, non-government or financial market sources, this was not the

case for SACCOs in Lusaka Province with only 2.4 percent of SACCOs accessing grant funding from the government.

e) Size of SACCOs

Majority of SACCOs were worker focused at 52.3 percent, with sizes dependent on the size of the organizations were SACCO members were drawn. The larger the organization, the more members were likely to be members of SACCOs. Therefore, size was one of the key determinants on the capital structure of SACCOs.

5.2.7 Objective 3: Effects of Capital Structure on growth of SACCOs

To establish the effects of capital structure on the growth of SACCOs in Lusaka Province, the following steps were undertaken:

a) Principal Component Analysis

Principal Component Analysis (PCA) was used to reduce the number of dependent variables and extract the most important information from the dataset to determine which variables had the most correlation with SACCO growth, as follows:

i) *Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy:* As a starting point, it was necessary to know if the sample of 59 SACCOs in Lusaka Province was suitable to be analyzed using Principal Component Analysis (PCA). The adequacy of the sample is measured by KMO in SPSS. The sampling is adequate or sufficient if the value of Kaiser Meyer Olkin (KMO) is larger than 0.5 according to Field (2000), Pallant (2013) recommends a value of KMO of 0.6 and above – while Kaiser (1974) proposed a bare minimum of 0.5. For this study, the KMO measure of sampling adequacy gave a result of 0.59, which is above the bare minimum of 0.5, indicating that the variances had some communalities. Kaiser–Meyer–Olkin (KMO) measure was used to determine sampling adequacy, which gave a reading of 0.59, indicating that the variances had some commonality. Therefore, the five (5) retained factors were used to generate a SACCO growth index.

ii) *Principal Factor Extraction:* In this study, the Kaiser’s criterion (Eigenvalue Criterion) was used to determine the number of initial unrotated factors to be extracted. The factors that were under consideration pertained to the independent

variables as shown in *Table 5-1* below. The eigenvalue is a ratio between the common variance and the specific variance explained by a specific factor extracted. The eigenvalue of a factor represents the amount of the total variance explained by that factor. In factor analysis, the remarkable factors having eigenvalue greater than one are retained. A positive eigenvalue is significant, and it indicates that more common variance than unique variance is explained by that factor (Pallant, 2013; Verma, 2013).

Table 5-1: Factor analysis/Correction

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	2.13702	1.80659	0.8717	0.8717
Factor 2	0.33043	0.34639	0.1348	1.0065
Factor 3	-0.01596		-0.0065	1.0000

LR test: independent vs. saturated: $\chi^2(3) = 170.66$ Prob> $\chi^2 = 0.0000$

A pattern matrix of the 3 was factor-loaded to compute the unique variances as shown in *Table 5-2*.

Table 5-2: Factor loadings (pattern matrix) and unique variances

Variable	Factor 1	Factor 2	Uniqueness
Savings	0.4439	0.5369	0.5146
Retained Earnings	0.9953	-0.0430	0.0075
Share Capital	0.9743	-0.2007	0.0104

iii) *Log10 transformation*: Log10 transformation was undertaken on the dependent variables, with the aim of making skewed original data more normally distributed to improve its linearity and boost validity of statistical analyses. Effectively, a log-transformed dependent variable implies simple linear model has been exponentiated. This further implies that the independent variable has a multiplicative relationship with the dependent variable instead of the usual additive relationship. Hence the need to express the effect of a one-unit change in x-axis on y-axis as a percent. *Figures 5-10 to 5-18* shows the transformed data.

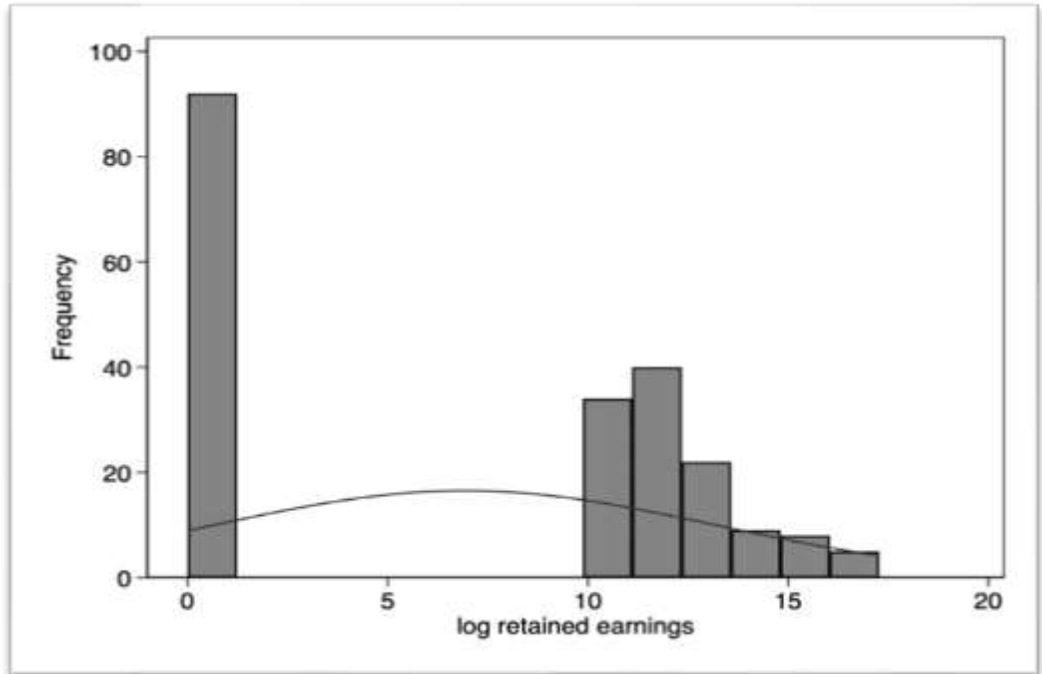


Figure 5-10: Log10 Transformation of Retained Earnings

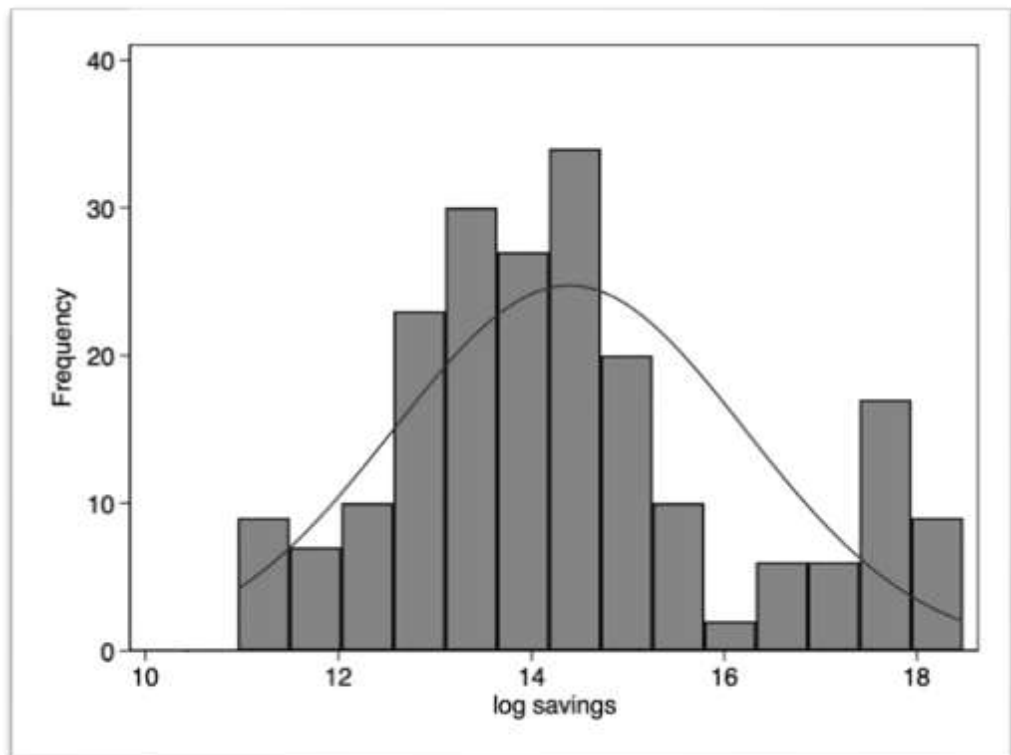


Figure 5-11: Log10 Transformation of Savings

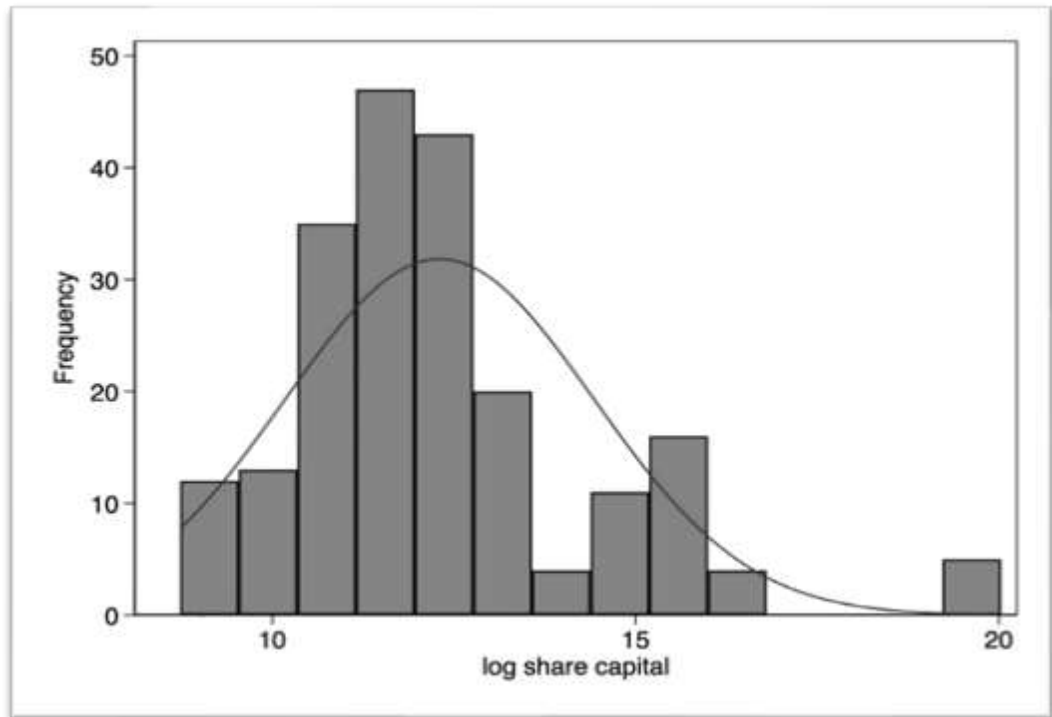


Figure 5-12: Log10 Transformation of Share Capital

b) Multivariable Analysis

Multivariable analysis is a statistical technique that can be used to simultaneously explore whether multiple independent variables are related to a certain outcome (referred to as dependent variable). A multivariable analysis was suitable for this study due to its ability to meet the following criteria:

- i) To evaluate the relationship between the variable of interest and the outcome after adjusting (or controlling) for other independent variables that may also be related to the outcome (confounding factors or covariates).
- ii) To explore which of the independent variables such as member savings, equity, debt, and retained earnings are independently associated with the outcome, specifically them keeping a significant p-value in the model despite the inclusion of other independent variables.
- iii) The dependent variable was the growth of SACCOs included parameters such as membership, profit, number of employees, dividends, employee competences, assets, and duration. On the other hand, the independent variable was capital structure and included savings, debt, retained earnings, and share capital.

Table 5-3: Mean, Standard Deviation, Minimum and Maximum

Year	Measure	Savings	Retained Earnings	Share Capital
2017	Mean	7,176,443.80	826,840.19	12,568,392.00
	Standard Deviation	14,628,839.00	4,085,365.1	77,060,476.00
	Minimum	57,310.00	0.00	6,200.00
	Maximum	52,476,145.00	26,442,138.00	500,000,000.00
2018	Mean	8,370,819.00	864,654.43	12,766,434.00
	Standard Deviation	16,527,537.00	3,578,264.4	77,041,825.00
	Minimum	62,800.00	0.00	7,099.00
	Maximum	57,505,471.00	22,789,457.00	500,000,000.00
2019	Mean	10,393,950.00	919,488.60	12,948,575.00
	Standard Deviation	20,595,347.00	3,600,937.10	77,032,781.00
	Minimum	73,100.00	0.00	7,923.00
	Maximum	72,097,839.00	22,540,287.00	500,000,000.00
2020	Mean	11,152,476.00	811,202.17	13,157,148.00
	Standard Deviation	22,680,916.00	3,662,638.70	77,009,798.00
	Minimum	83,536.00	0.00	8,910.00
	Maximum	88,395,310.00	23,707,564.00	500,000,000.00
2021	Mean	12,893,663.00	1,086,009.60	13,204,671.00
	Standard Deviation	26,260,688.00	4,944,043.80	77,004,865.00
	Minimum	86,814.00	0.00	9,470.00
	Maximum	106,300,000.00	31,772,215.00	500,000,000.00
Total	Mean	9,997,470.10	901,639.00	12,929,044.00
	Standard Deviation	20,471,805.00	3,970,690.10	76,289,637.00
	Minimum	57,310.00	0.00	6,200.00
	Maximum	106,300,000.00	31,772,215.00	500,000,000.00

Since Debt Financing had zero entries for all the 42 respondents, this factor was dropped from the analysis, leaving three factors.

5.2.8 Objective 4: Development of SACCO growth model

Applied random effect regression was used with maximum likelihood to determine the independent effect of Savings, Share Capital and Retained Earnings, as retained factors,

on a SACCO growth index that was developed on the Lusaka Province panel data and generalized as a SACCO growth model for Zambia. The regression model adopted was:

$$\text{Growth of SACCOs (Y)} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where Y – denotes the dependent variable (Growth of SACCOs); α - is the value of the intercept; β - is the coefficient of the explanatory X variable; e - is the error term assumed to have zero mean and independent across time period; X₁ - Equity Financing; X₂ - Retained Earnings; X₃ – Debt financing; and X₄ – Savings.

The steps carried out to develop the SACCO growth model included; using Principal Component Analysis to determine factors that had an impact on growth; then these factors were rotated to further determine the effect; after which a SACCO growth model or index was predicted; the index score were then used to predict the effect of capital structure on SACCO growth, and lastly, perform model diagnostic tests. *Table 5-4* shows a Principal Component Analysis of the 8 dependent variables were carried out, with factors 1 – 5 retained because they had positive eigenvalue, while factors 6 – 8 were dropped as their eigenvalues were negative.

Table 5-4: Factor analysis/correlation of Dependent Variables

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor 1	4.59659	2.76499	0.6795	0.6795
Factor 2	1.83160	1.56884	0.2708	0.9503
Factor 3	0.26275	0.14576	0.0388	0.9891
Factor 4	0.11699	0.11122	0.0173	1.0064
Factor 5	0.00577	0.00901	0.0009	1.0072
Factor 6	-0.00325	0.00419	-0.0005	1.0068
Factor 7	-0.00744	0.03085	-0.0011	1.0057
Factor 8	-0.03829	.	-0.0057	1.0000

LR test: independent vs. saturated: $\chi^2(28) = 3162.33$ Prob> $\chi^2 = 0.0000$

The dependent variables factors were loaded into a pattern matrix to compute the uniqueness variances as shown in *Table 5-5* below.

Table 5-5: Factor loadings (pattern matrix) and unique variances

Variable	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Uniqueness
Share Capital	0.8929	-0.4429	.	.	.	0.0002
Capital Reserves	.	0.8267	.	.	.	0.0853
Assets	0.9675	.	.	.	.	0.0027
Staff strength	.	.	.	.	.	0.9085
Dividends	0.6523	0.6799	.	.	.	0.0834
Membership	0.8998	.	.	.	.	0.0439
Profit	0.8279	0.4491	.	.	.	0.0593
Number of Shares	0.8676	-0.4525	.	.	.	0.0030

A measure of sampling adequacy was conducted on the dependent variables and the results showed an overall result of 0.6716 as shown in *Table 5-6*, confirming the variables would be subjected to further Principal Component Analysis. The sampling is adequate or sufficient if the value of Kaiser Meyer Olkin (KMO) is larger than 0.5 according to Field (2000), Pallant (2013) recommends a value of KMO of 0.6 and above – while Kaiser (1974) proposed a bare minimum of 0.5.

For these variables, the KMO measure of sampling adequacy gave a result of 0.6716, which is above the bare minimum of 0.5, indicating that the variances had some communalities.

Table 5-6: Kaiser-Meyer-Olkin measure of sampling adequacy

Variable	Kaiser-Meyer Olkin
Share Capital	0.6070
Capital Reserves	0.4928
Assets	0.7363
Staff strength	0.9448
Dividend	0.7713
Membership	0.6557
Profit	0.7216
Number of Shares	0.6516
Overall	0.6716

Table 5-7: Factor Analysis/Correlation

Factor	Variance	Difference	Proportion	Cumulative
Factor 1	3.79959	1.30492	0.5617	0.5617
Factor 2	2.49467	2.23498	0.3688	0.9305
Factor 3	0.25969	0.00605	0.0384	0.9688
Factor 4	0.25364	0.24754	0.0375	1.0063
Factor 5	0.00610	.	0.0009	1.0072

LR test: independent vs. saturated: $\chi^2(28) = 3162.33$ Prob> $\chi^2 = 0.0000$

The 3 factors of savings, retained earnings, and share capital were subjected to further analysis to determine if they had a positive relationship with the SACCO growth model. Results in Tables 5-8, 5-9, and 5-10 below show that each of these components have a positive relationship with SACCO growth, growth index p value <0.05.

Table 5-8: Relationship between Member Savings and the SACCO growth model

Growth Index	Coefficient	Std Err	Z	P>|z|	[95 percent conf. Interval]
Savings	-5.30e-09	2.13e-09	-2.48	0.013	-9.48e-09 -1.11e-09
_cons	.052949	.1588191	0.33	0.739	-.2583308 .3642288
/sigma_u	1.017195	.1123259			.8192348 1.26299
/sigma_e	.168181	.			.
rho	.9733907	.			.

LR test of $\sigma_u=0$: $\chi^2(01) = 640.62$ Prob $\geq \chi^2 = 0.000$

Interpretation: For every 1percent increase in savings, the growth index increases by 0.17/100 units and the relationship is statistically significant (p value <0.05).

Table 5-9: Relationship between Retained Earnings and the SACCO growth model

Growth Index	Coefficient	Std Err	z	P>|z|	[95percent conf. Interval]
Retained earnings	1.63e-07	1.29e-08	12.63	0.000	1.37e-07 1.88e-07
_cons	-.1465678	.0485079	-3.02	0.003	-.2416415 -.0514941
/sigma_u	.2943673	.			.
/sigma_e	.180521	.0126532			.1573492 .2071051
Rho	.7267038	.			.

Interpretation: For every 1percent increase in Retained Earnings, the growth index increases by 0.18/100 units and suffice to mention here that the relationship is statistically significant (p value <0.05).

Table 5-10: Relationship between Share Capital and the SACCO growth model

Growth Index	Coefficient	Std Err	z	P>|z|	[95percent conf. Interval]	
Share Capital	1.30e-08	1.08e-10	120.46	0.000	1.28e-08 1.32e-08	
_cons	-.1684623	.0083505	-20.17	0.000	-.184829 -.1520956	
/sigma_u	.0314263	.0103965	-	-	.0164323 .0601021	
/sigma_e	.0964094	.0052596	-	-	.0866328 .1072892	
Rho	.0960491	.0610546	-	-	.0223911 .2735543	
LR test of sigma_u=0: chibar2(01) = 3.31		Prob >= chibar2 = 0.034				

Interpretation: For every 1 percent increase in Share Capital, the growth index increases by 0.09/100 units and suffice to mention here that the relationship is statistically significant (p value <0.05).

5.3 Interview Results

Structured interviews were conducted between December 2022 – January 2023. A total of 15 Senior Managers drawn from the 59 SACCOs in Lusaka Province, based on the prominence of the SACCO as well as longevity as deduced from availability of audited financial statements and annual reports for a period of more than five years. One Senior Manager from each SACCO was targeted. The purpose of the interview was to obtain an in depth understanding of how the various stakeholders in SACCO sector in Zambia view capital structure and SACCO growth.

5.3.1 Profile of Interviewees

Eleven out of the targeted fifteen stakeholders participated in the interviews. Three had over eight years’ experience in the SACCO sector, while five had between four and seven years of experience, and three had between zero to three years of experience, as shown in *Figure 5-13*.

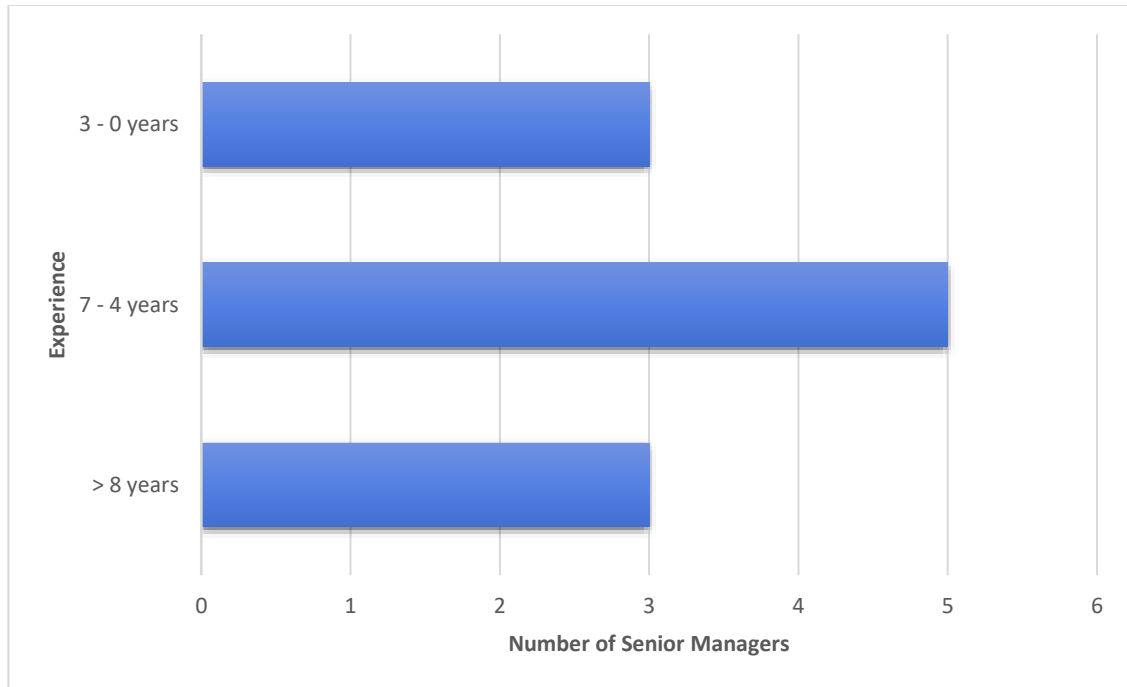


Figure 5-13: Experience of Interviewees in the SACCO Sector

5.3.2 Objective 1: SACCOs Growth Patterns

The interviewees provided the following answers to achieve objective one of this study:

a) Timely Payment of Dues

On meeting their obligation of disbursing loans to members and paying creditors on time, majority of interviewees answered that they were not paying on time, while others indicated that they pay on time.

For instance, Respondent 8 indicated that “*Our SACCO had challenges with liquidity to discharge their core business, due to scarce liquidity as a result of limited capital*”. On the other hand, Respondent 2 indicated that “*Our SACCO is able to discharge its financial responsibilities to various creditors timely.*”

b) Growth by Profits, Dividends Declared and Shares

Figure 5-14 shows majority (71.4 percent) of interviewees who responded to a closed-ended interview stated that surplus have been growing from 2017 to 2021, SACCOs have been declaring dividends (59.5 percent), and majority (50.0 percent) agreed that their SACCO’s dividends per share had been increasing.

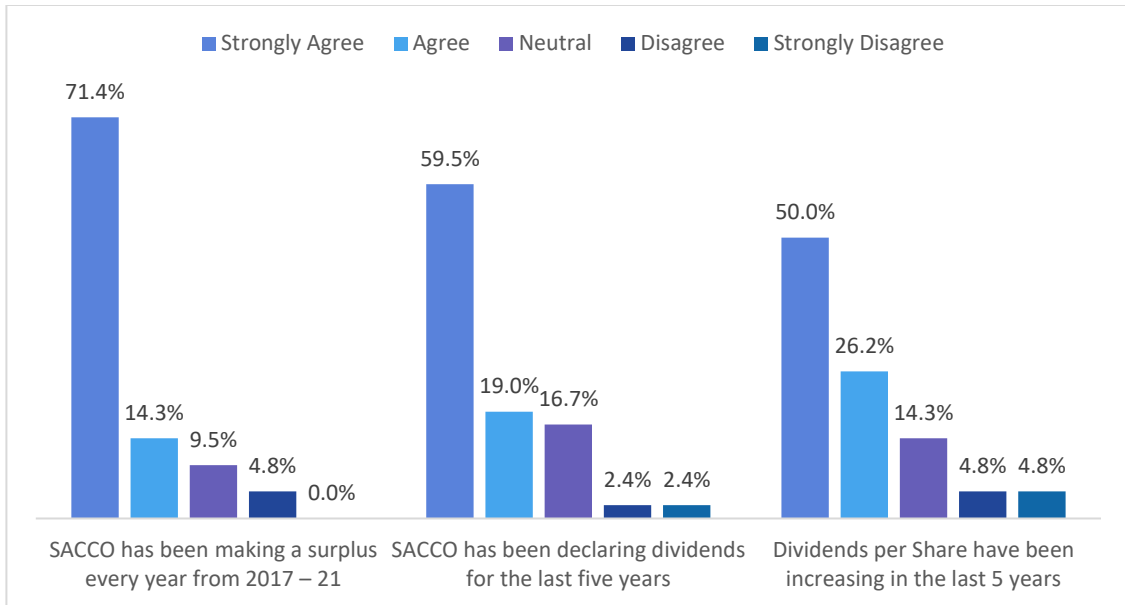


Figure 5-14: Profits, Dividends and Shares of SACCOs in Lusaka Province

c) Growth by Retained Earnings

Figure 5-15 shows that majority (42.9 percent) of interviewees that responded to closed ended questions strongly agree that SACCOs were contributing to retained earnings and (52.4 percent) of interviewees agree that SACCOs were growing for the same period.



Figure 5-15: Retained Earnings of SACCOs in Lusaka Province

5.3.3 Objective 2: Determinants of Capital Structure

Interviewees responded that majority (97.6 percent) raised their capital from member savings, shares and loan repayments, while 2.4 percent was through a grant from the government. This finding aligns with the cooperative principle on member ownership of the SACCOs. Some of the interviewees revealed the following:

Respondent 11 stated that “... *Member savings are the life blood of our SACCO, raising all the required working capital for our SACCO. We are yet to explore other avenues for raising capital to fund the expansion of our SACCO.*”

On the other hand, Respondent 9 indicated that “...*Major determinants for capital for our SACCO is member savings and share subscriptions by our members.*”

Respondent 6 revealed that “...*Aside from member savings, our SACCO has been privileged to have received substantial funding from the government treasury to increase the required working capital to meet the demands for loans by our members.*”

Figure 5-16 below shows that majority (47.6 percent) of the interviewees that responded to a closed ended interview questions strongly agreed that SACCOs use cost of capital when determining the source of funds, majority (54.8 percent) of SACCOs strongly agreed that they make careful evaluations when deciding sources of funds, majority (78.6 percent) agreed that profitability was a determinant of the source of funds, 47.6 percent of SACCOs strongly agreed that they mobilize funds after consulting, 38.1 percent strongly agreed that income from loans cover all operating costs, 42.9 percent strongly agreed that income from loans in their SACCO maintained retained earning, 40.5 percent strongly agreed that retained earnings have been growing annually from 2017 to 2021, and 38.1 percent agreed that SACCOs pay dividends after profits are declared.

Respondent 3 revealed that “... *Profitability for our SACCO is a major determinant for the capital requirements, with capital leveraged on the basis of our SACCO's profitability.*”

Respondent 4 on the other side stated that “...*Income from loans was a key determinant in raising capital for our SACCO, especially retained earnings.*”

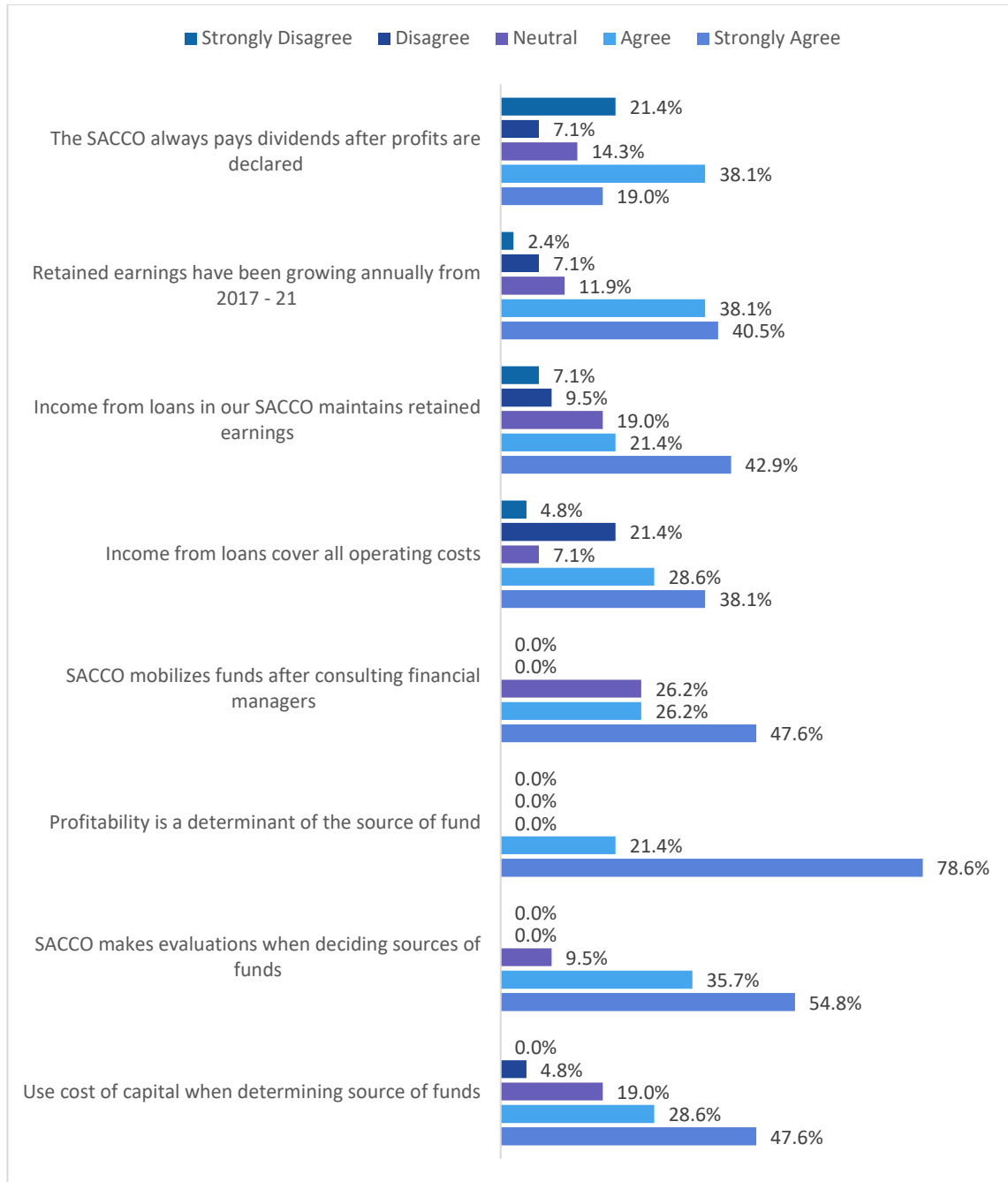


Figure 5-16: Summary of Responses on Capital Structure of SACCOs

It was important to find out how the surplus distributed as dividends, rebates and retained earnings was done and the findings were as depicted in *Figure 5.17* below. The majority (56 percent) of SACCOs used their by-laws to determine the distribution of surplus. SACCOs which can retain surpluses declare dividends and rebates that grow their equity capital and assets. Consequently, growth in retained earnings cushions SACCOs from

heavy reliance on external funding which is not readily available to the SACCO sector in Zambia.

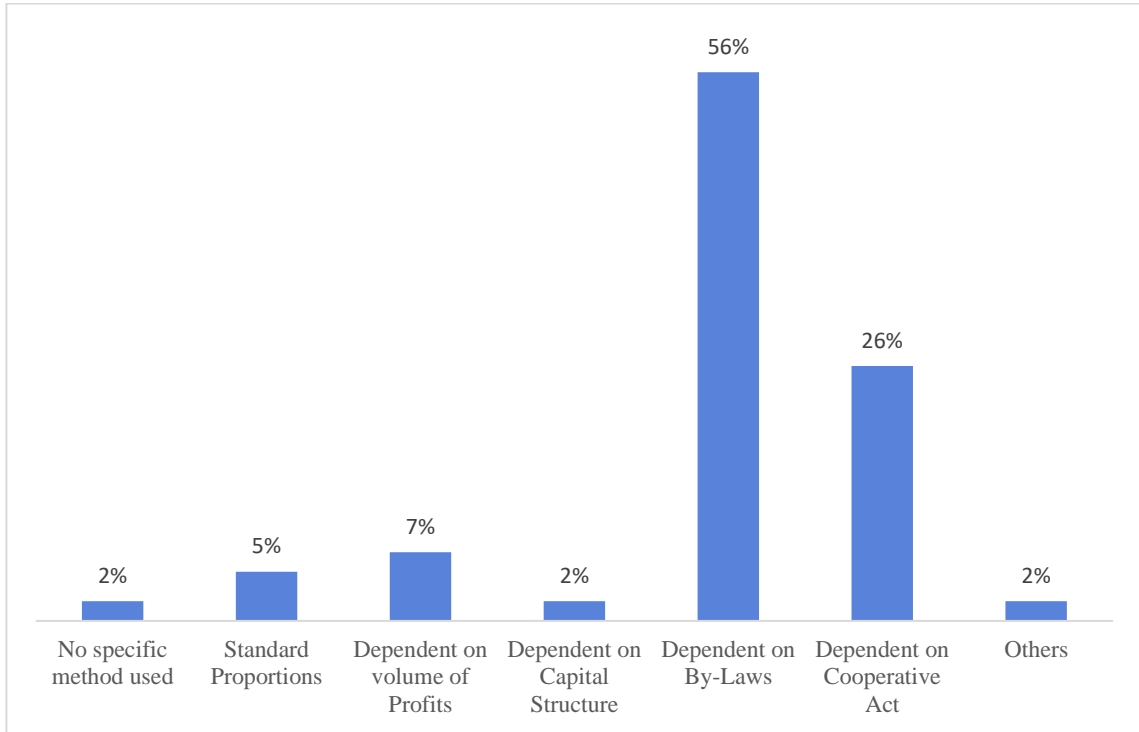


Figure 5-17: Determination of distributed Surplus

5.3.4 Objective 3: Effect of Capital Structure on SACCO Growth

The majority (57.1 percent) of respondent SACCOs indicated that they use some form of model to measure the growth of their SACCO every year. Of these 57.1 percent SACCOs, 81.8 percent use annual audited financial statements to measure growth, while the rest of the SACCOs (18.2 percent) use a growth model as defined from their strategic plans. Clearly, there existed no model to measure SACCO growth in Lusaka Province, resulting in respondents mostly using audited financial statements, which might miss salient parameters of growth, which are non-finance.

5.3.5 Objective 4: Development of a SACCO Growth Model

Based on the literature review, theoretical and conceptual frameworks, a SACCO growth model for Zambia was proposed whose seven key elements included profit, membership, number of employees, employee competence, assets, loans disbursed, and dividends declared. Interviewees that responded to closed ended interview questions strongly agreed

that the seven parameters would be important for any SACCO growth model as follows; number of employees (83.3 percent), profit (81.0 percent), membership (78.6 percent), assets (73.2 percent), dividends declared (64.3 percent), loans disbursed (61.9 percent), and employee competence (59.5 percent) – as shown in *Figure 5-18*.

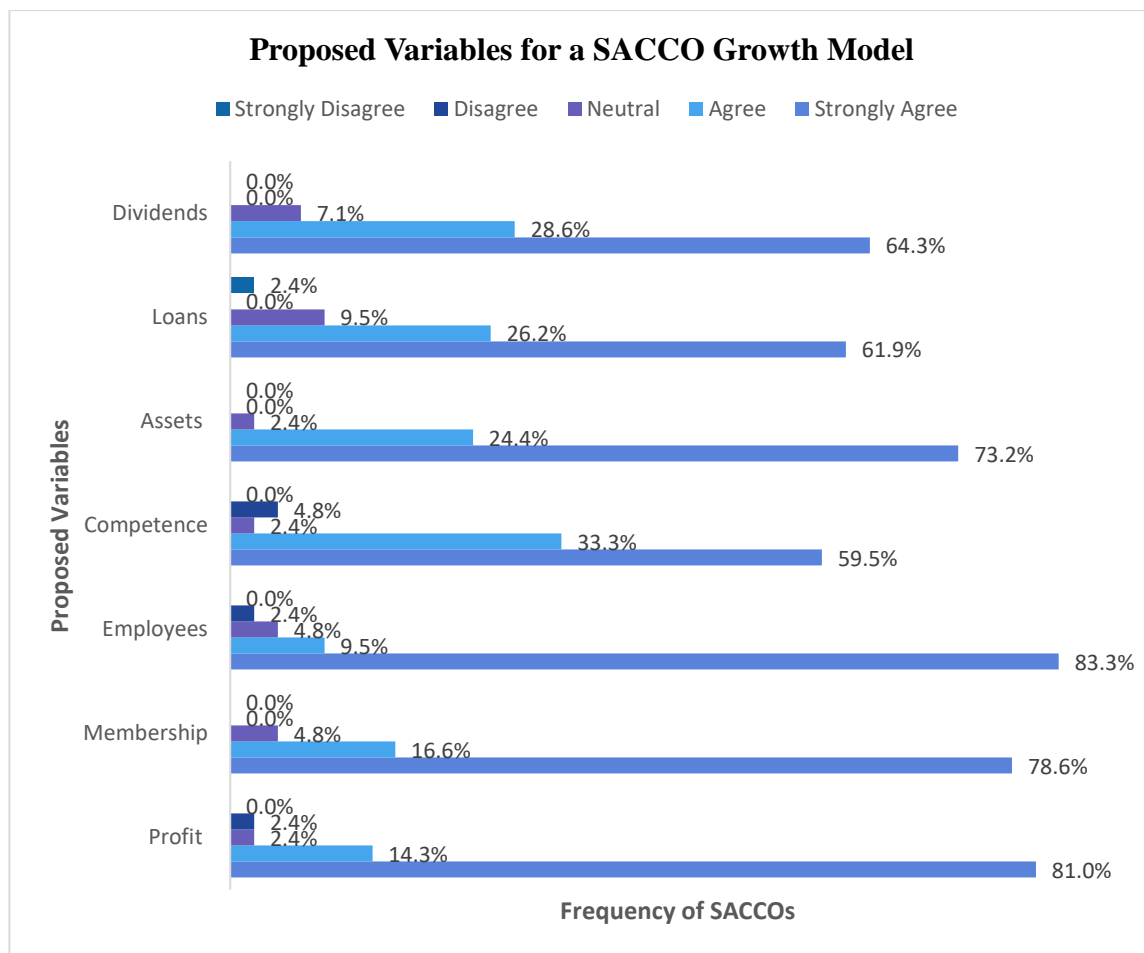


Figure 5-18: Proposed Key Variables in a SACCO Growth Model

5.3.6 Interpretations of the Findings

The data reported in the section above shows that SACCOS in Lusaka Province recorded growth as can be seen from the growth in dividend, retained earnings, and their ability to payment loans on time. It was also determined that SACCOS did not have clearly defined growth models to measure growth, but rather relied solely on financial statements. Interviewees felt that a proposed SACCO growth model should include variables such as profit, membership, number of employees, employees, assets, loans, and dividends. Though some interviewees argued that a framework measuring SACCO growth appeared not to be a priority, lack of formal framework disadvantages the Zambian SACCO sector,

as it is unable to benchmark itself in the face of growing international competition. Such a framework would improve the SACCO sector in Zambia within the country as it would be an impetus for awareness on a need to grow in comparison with other countries globally.

5.4 Chapter Summary

This Chapter analyzed data from the interviews as well as the questionnaire survey. Through the questionnaire survey, the key independent variables that influence SACCO growth were identified and included member savings, equity financing, and share capital. For every 1percent contributions to the growth index, the independent variables of member savings, equity financing, and share capital contributed 0.17, 0.18, and 0.09. The results were statistically significant.

The data from this Chapter were used as inputs into the model development, which is presented in Chapter 6.

CHAPTER 6

GROWTH MODEL DEVELOPMENT

6.1 Introduction

The data collected through interviews and questionnaires were analyzed in the previous Chapter. From the results presented in Chapter 6, it was essential to develop a model that could be used to measure the growth of SACCOs. This Chapter, therefore, focuses on model development and the theories behind it. The model is then presented and validated.

6.2 Theoretical Perspective

SACCO growth measures adopted by the respondents to this study were mostly derived from the financial statements and did not take into effect the impact of each variable, aside from not including vital non-financial information such as membership and employee-related variables. Therefore, an all embracing model is presented in *Figure 6-1* below.

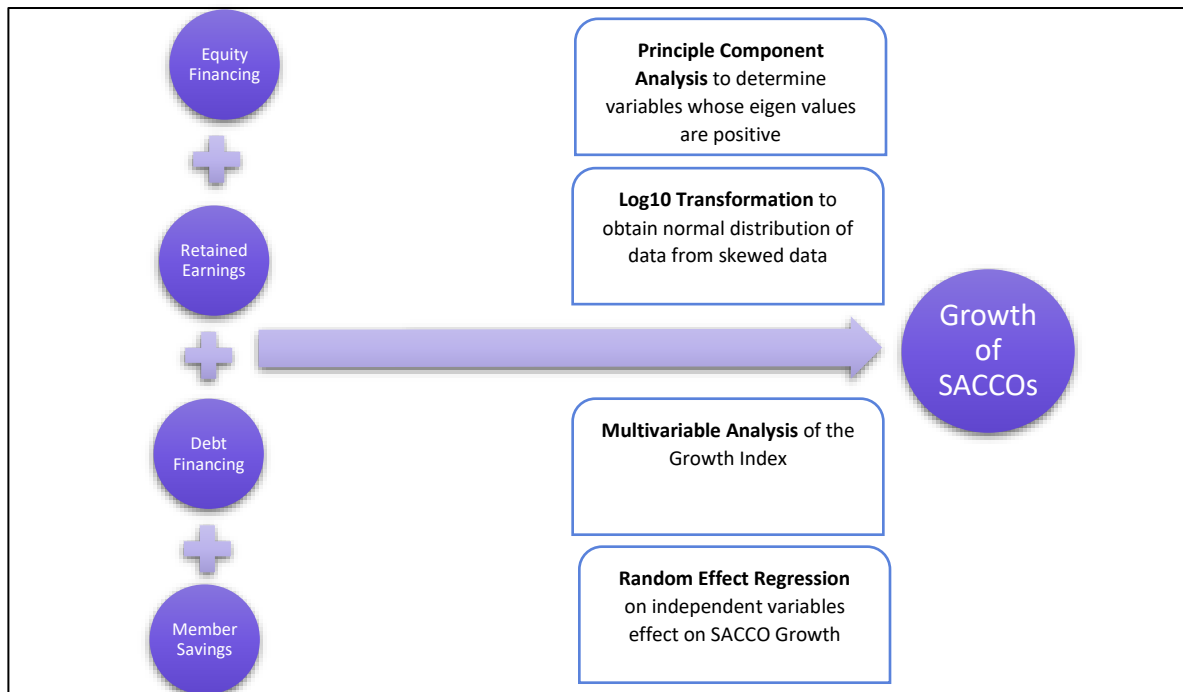


Figure 6-1: SACCO Growth Model Framework

The regression model adopted was:

$$\text{Growth of SACCOs } (Y) = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where Y – denotes the dependent variable (Growth of SACCOs); α - is the value of the intercept; β - is the coefficient of the explanatory X variable; e - is the error term

assumed to have zero mean and independent across time period; X_1 - Equity Financing; X_2 - Retained Earnings; X_3 – Debt financing; X_4 – Savings.

6.3 SACCO Growth Model

A computer-based model known as a SACCO Growth Model was developed based on the framework presented in *Figure 6-2* and the associated theoretical. The computer model was built using HTML, Postgres, JavaScript, and Java SpringBoot framework. The schematic architecture of the SACCO Growth Model is presented in *Figure 6-2*.

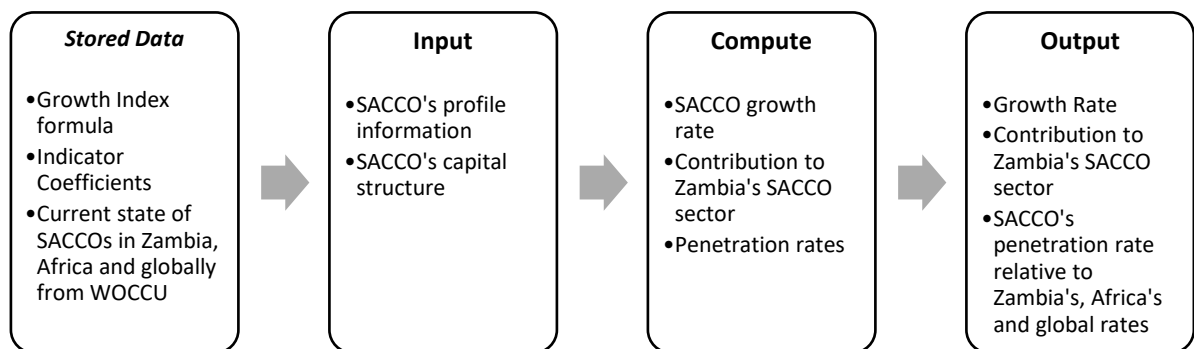


Figure 6-2: Schematic and architecture of the SACCO Growth Model

a) Backend Layer

The model has three main backend layers which are used for computing outputs. These include:

- i) Programming layer
- ii) Internal storage layer
- iii) Computation layer

b) Frontend Layer

The five main displays included the following:

- i) Click here to start
- ii) Profile
- iii) Capital structure
- iv) Preview
- v) Dashboard

The displays above are discussed below.

a) *Click here to start*

This is the landing page to the model, welcoming the Users and providing a link to the next display. A screenshot of this display is shown in *Figure 6-3*.



Figure 6-3: Snapshot of ‘Click here to start’ display of the SACCO Growth Model

b) *Profile*

The user is required to enter the organization’s profile data on this screen. The information required includes the firm’s:

- i) Name of SACCO (Mandatory);
- ii) Email address (optimal);
- iii) Membership (mandatory);
- iv) Assets (mandatory); and
- v) Year of registration (Optimal).

Fields that were marked mandatory were required for subsequent computations of the various indices and were SACCO specific since each SACCO had its own unique growth pattern. A screenshot of this display is shown in *Figure 6-4*.

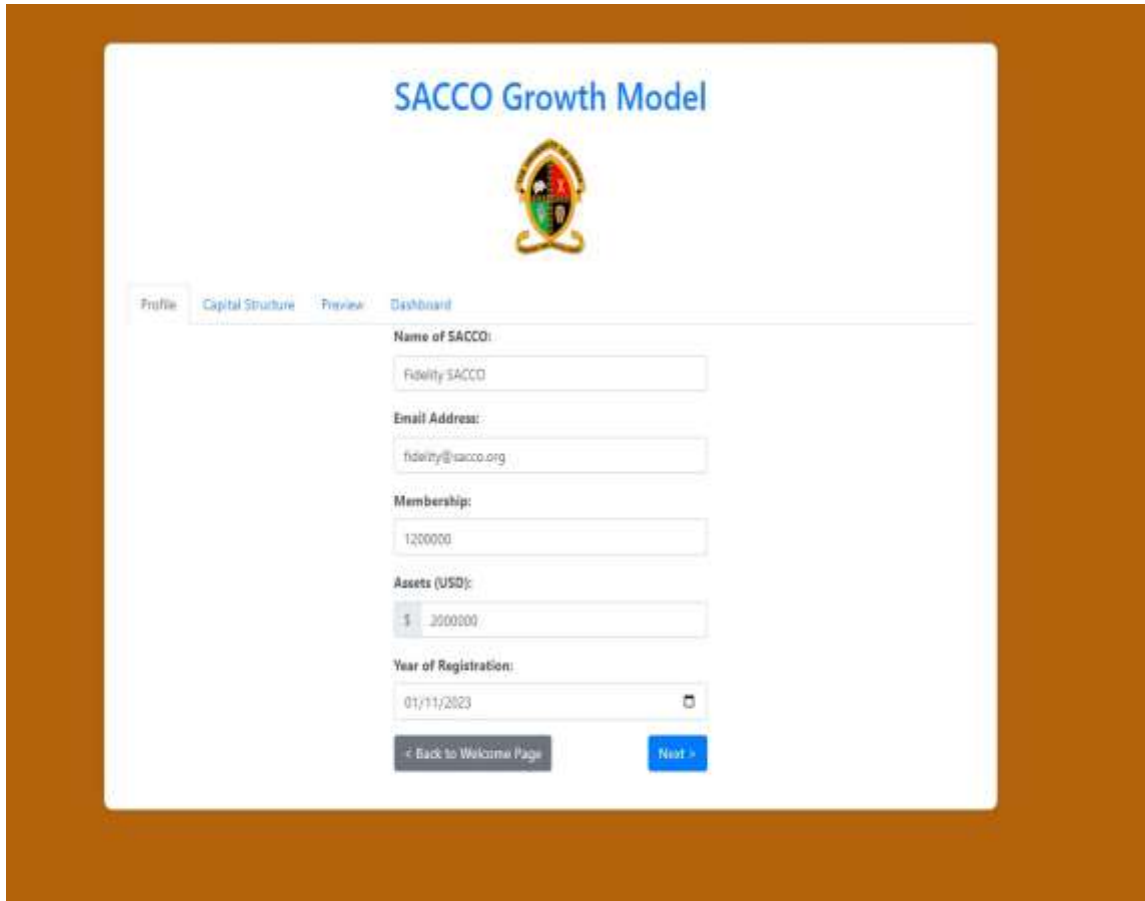


Figure 6-4: Snapshot of the "SACCO's Profile" display of the SACCO Growth Model

c) Capital structure

On the display, the user is required to enter four capital structure of their SACCO that include:

- i) Equity financing
- ii) Retained earnings
- iii) Debt financing
- iv) Members' savings

All the four capital structure are mandatory fields and information entered from a SACCO's audited financial statement. In the event that any or all of the fields do not have a value, the SACCO must enter zero. All entries are in American Dollars (USD). Each response goes into the growth formula with its associated coefficient and the overall results computed into that SACCO's growth rate. A snapshot of this page is shown in *Figure 6-5*.

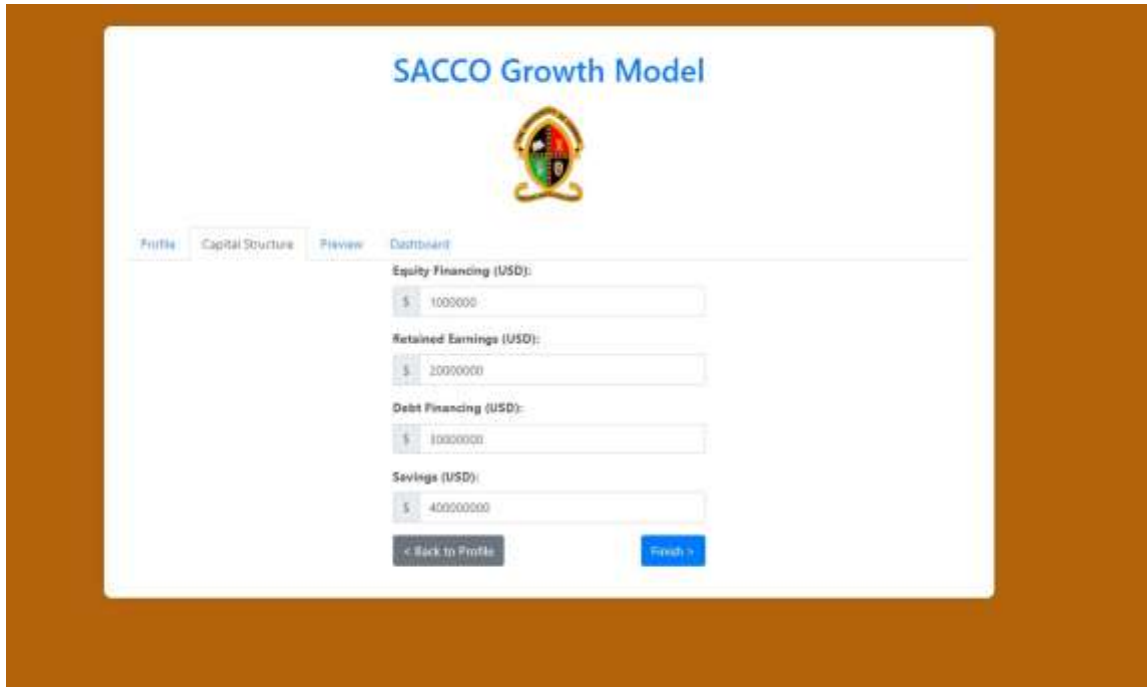


Figure 6-5: Snapshot of "Capital Structure" of the SACCO Growth Model

d) Preview

To allow the user an opportunity to review the information they entered from prior displays, the model has a preview page as shown in *Figure 6-6* below.

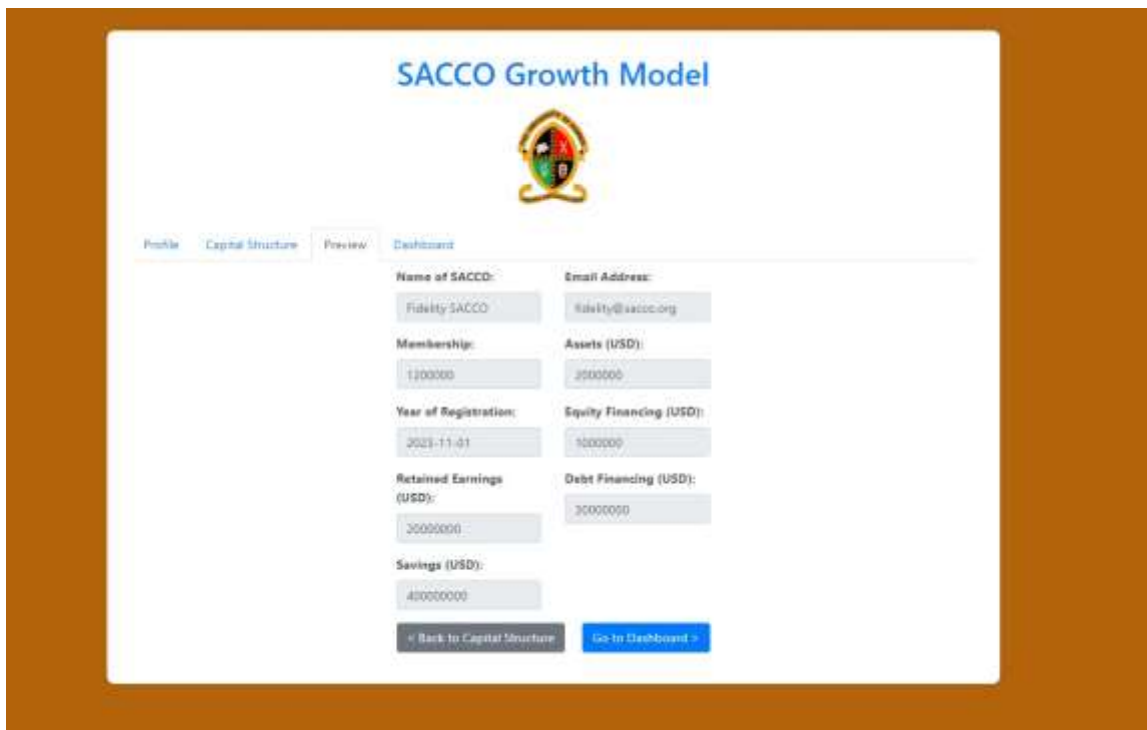


Figure 6-6: Snapshot "Preview" of the SACCO Growth Model

e) Dashboard

After the preview, the user can click the next button which will bring them to the dashboard, where the results are displayed as shown by *Figure 6-7*. The following are the five key results produced by the model:

- i) Growth Rate;
- ii) Contribution to Zambia's SACCO sector;
- iii) Penetration rate for SACCO, Zambia, Africa and global; and
- iv) SACCO assets in Zambia, Africa and globally.



Figure 6-7: Snapshot of "Dashboard" of the SACCO Growth Model

6.4 Validation of the Model

The SACCO Growth Model was validated using select SACCOs within Lusaka Province. The validation process focused on the model's validity, legitimacy and functionality. A total of eleven SACCO Managers were targeted in the validation exercise. Responses were received from only nine out of which seven represented SACCOs and two stakeholders in the SACCO sub-sector. The respondents were availed with the model to conduct their assessment. Prior to commencement of the assessment, a brief overview of the model was presented to them. The validation results are presented in the sections below.

6.4.1 Profile of Respondent SACCOs

An assessment of SACCOs was undertaken with special focus on the age, audited financial statements, total assets, and capital structures of the SACCOs, to ensure that the model was validated using credible and acceptable information.

a) Respondents SACCO Age

The respondent SACCOs were predominantly registered between 1991 – 2000, with an even spread of respondents for the rest of the periods from 1961 to 2021. The distribution of SACCOs by year of registration is presented in *Figure 6-8*.

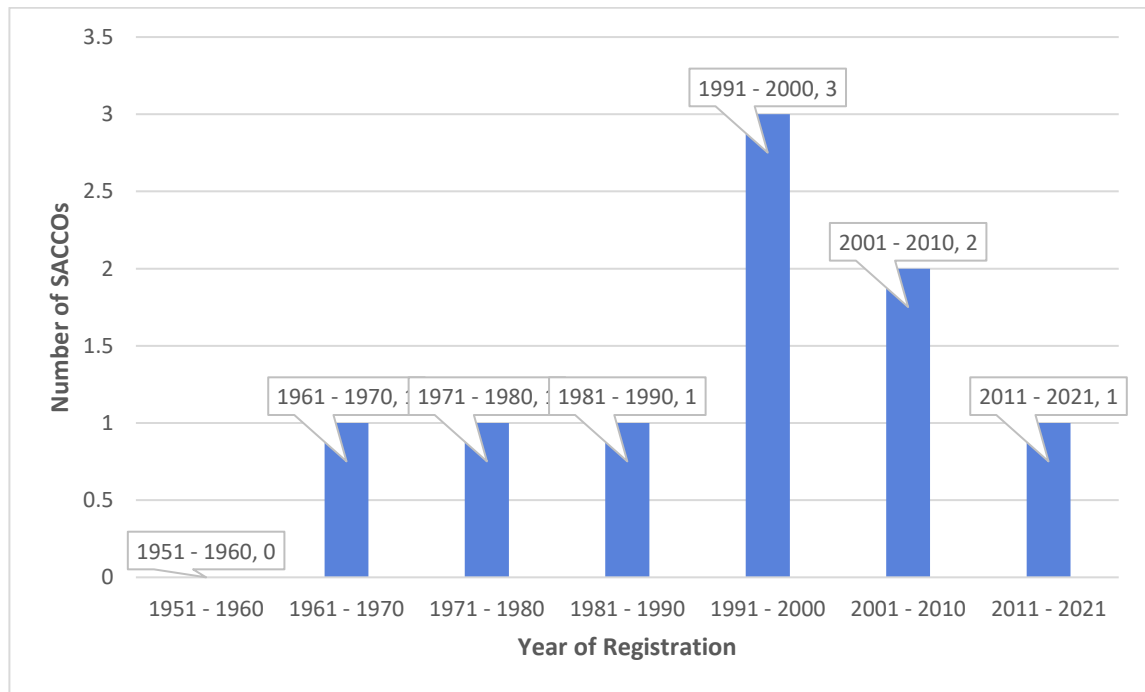


Figure 6-8: Respondent SACCOs by year of registration

b) Audited financial statements

All the 9 SACCOs that were respondents had audited financial statements and annual reports for the period 2017 – 2021, making it easy to validate the model using their audited information.

c) Respondents SACCO's Size by Assets

The total asset of the respondent SACCOs for the last year of the study being 2021 are depicted in *Figure 6-9* below.

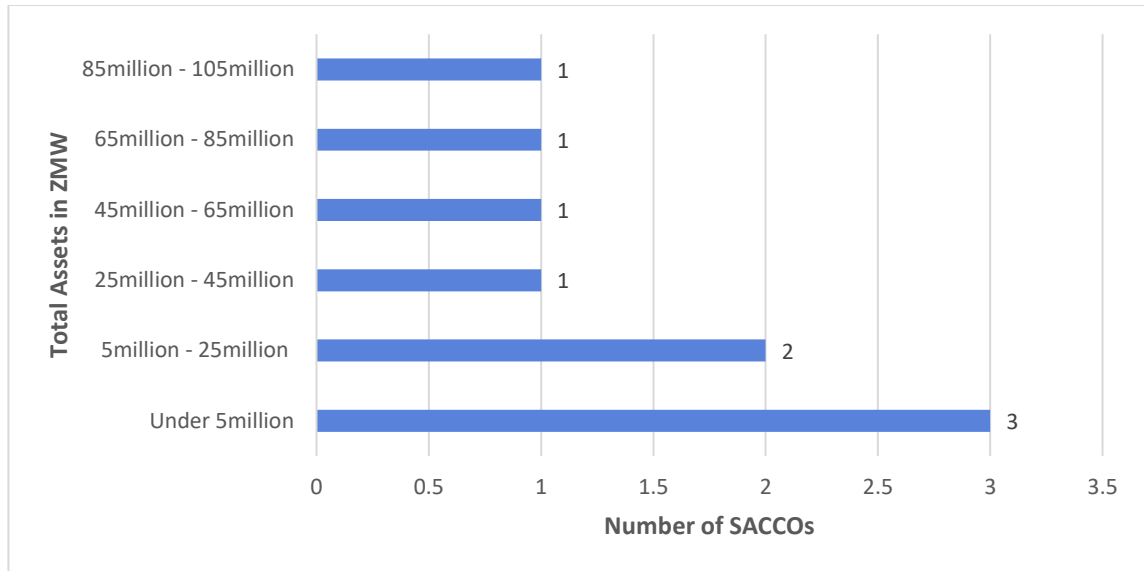


Figure 6-9: Respondent SACCOs' Total Assets

6.4.2 Sufficiency of the Model

The respondents were asked to provide feedback on the functionality of the model. The functional attributes measured as well as the statistical results are presented in *Table 6-1*. The functional score of the SACCO growth index taken as an arithmetic mean of the attribute score was 4.38. The standard deviation of responses was 0.73. The results were tested for significance using the standard t-test. It was established that all the responses were significant at $p > 0.05$. Therefore, the results demonstrate a high level of functionality.

Table 6-1: Functionality Assessment of the SACCO Growth Model

Functional Attribute	Mean	Std. Dv.	N	Std Err	t-value	df	P
Model Variables were relevant	4.198	0.762	9	0.2268	3.0120	8	0.01307
It is easy to navigate through the model	4.294	0.910	9	0.2738	2.8333	8	0.01775
It was easy to enter the required inputs	4.563	0.689	9	0.2076	5.0431	8	0.00050
The results of the model were clear	4.476	0.524	9	0.1674	6.0621	8	0.00012
Clear recommendations	4.476	0.840	9	0.2468	3.8598	8	0.00316

6.4.3 Validity of the Model

The SACCO growth index was assessed for validity. The validity attributes measured as well as the statistical results are presented in *Table 6-2*. It was established that the validity

mean score of the SACCO growth index was 4.55. The standard deviation of responses was 0.59. The results were tested for significance using the standard t-test. It was established that all the responses were significant at $p > 0.05$. The results reflect a high standard of validity.

Table 6-2: Validity Assessment of the SACCO Growth Model

Functional Attribute	Mean	Std. Dv.	N	Std Err	t-value	df	P
Model results were a true reflection of our SACCO's status	4.6363	0.5045	9	0.1521	7.4701	8	0.0002
Recommendations were in line with our expectations	4.4545	0.6875	9	0.2073	4.6045	8	0.0009

6.4.4 Usefulness of the Model

The SACCO growth model was assessed for its usefulness. The usefulness attributes measured as well as the statistical results are presented in *Table 6-3*. It was established that the usefulness score of the SACCO growth model was 4.78. The standard deviation of responses was 0.73. The results were tested for significance using the standard t-test. It was established that all the responses were significant at $p > 0.05$. The calculated results reflect a high standard of the model's acceptability and usefulness.

Table 6-3: Usefulness Assessment of the SACCO Growth Model

Functional Attribute	Mean	Std. Dv.	N	Std Err	t-value	df	P
Model is useful	4.2727	0.7862	9	0.2370	3.2596	8	0.0085
Proper use of model could help measure growth better in our SACCO	4.7272	0.6466	9	0.1949	6.2944	8	0.0000
I could recommend the use of this model with other SACCOs	4.5454	0.6875	9	0.2073	5.0430	8	0.0005

6.5 Chapter Summary

This Chapter presented the development and validation of the SACCO growth model. The model was validated by the practitioners within the SACCO sub-sector. The model was established to be functional, valid and legitimate. The next Chapter presents a discussion of the research findings.

CHAPTER 7

DISCUSSION OF RESULTS

7.1 Introduction

The previous Chapter presented a SACCO growth model development and validation. This Chapter discusses the findings of the research relative to what other researchers and scholars established. This Chapter sets out by identifying key theoretical perspectives which have been highlighted within the study.

7.2 Objective 1: Growth Patterns of SACCOs in Lusaka Province

The findings of the interview in section 6.2 showed that SACCOs in Lusaka Province reported general growth patterns during the period of the study from 2017 to 2021, including; growth in profits by 71.4 percent, capital reserves by 53.5 percent, assets increased by 25 percent, membership increased by 149.5 percent, number of employees increased by 31.3 percent, member savings increased by 63.7 percent, retained earnings increased by 52.4 percent, equity financing increased by 5 percent, employee competency was reported to be 61.9 percent with at least 50.8 percent employee being diploma holders, 25.5 percent possessing a minimum of a bachelor's degree, 50 percent of SACCOs reported that dividends per share have been increasing and 59.5 percent reported that they have been paying dividends consistently in the last five years.

These findings tend to agree with the notion that there is no scarcity of SACCO capital, if SACCOs focus on the Principle of “Co-operation among Co-operatives” as being more than common branding or governmental lobbying, but rather that SACCOs should be leveraging their immense collective strength to assist other SACCOs globally to survive in a world dominated by investor-owned capital. Many mechanisms already exist to achieve phenomenal SACCO growth, requiring countries to take the best of each of them and replicate them in jurisdictions where they do not yet exist (Chieh and Weber, 2012).

7.3 Objective 2: Determinants of Capital Structure for SACCOs

The findings showed that most of the SACCOs at 47.6 percent use cost of capital when determining sources of funds and careful evaluations are made when determining sources of funds. On the other hand, 78.6 percent of the interviewees agreed that profitability was a key determinant in the type of capital structure they used, while 42.9 percent strongly

agreed that loan income was a key determinant for retained earnings, and 56 percent strongly agreed that a SACCO's by-laws was a critical determinant in its capital structure. The finding tends to agree with a study in Portugal whose results suggest that liquidity, asset structure and profitability are the most important determinants explaining the capital structure in Portugal. (Proença, Laureano and Laureano, 2014). On the other hand, the papers of Modigliani and Miller (1958) showed that capital structure or method of financing is irrelevant to the value of firm under the perfect market assumptions while Modigliani and Miller (1963) argued that capital structure is relevant with firm value under taxation condition. Subsequent researchers have relaxed assumptions such as bankruptcy cost, non-debt tax shield, agency cost, asymmetric information, and have introduced capital market frictions into the model. Seemingly, the main factors affecting capital structure decisions are related to these frictions (Thippayana, 2014).

7.4 Objective 3: Effects of Capital Structure on growth of SACCOs

The findings under the different elements of capital structure are discussed below.

a) Share Capital

Share capital showed a significant positive relationship with Growth of SACCOs wealth with every 1percent increase in Equity Financing resulting into a 0.09/100 in growth for the SACCOs. The significant relationship between capital structure and growth of SACCOs could be attributable to appropriate mix of internal funds in financing the SACCOs' assets. WOCCU (2007) indicated that SACCOs should be funded by pre-determined financing mix. This mode of financing would discourage flexibility in the choice of financing options. This study emphasizes on the accumulation of internal financing for long-term sustainability. This finding is in line with the stakeholder theory whose central theme is that of focusing on stakeholders, specifically treating them well and managing for their interests, thereby create value for the SACCO. Share capital is that conduit through which stakeholders in the form of members can take up control and ownership of the SACCO.

b) Retained Earnings

Retained Earnings did not show any relationship with the Growth of SACCOs, with a 1percent increase in retained earnings reporting a zero effect on the growth of SACCOs. This could be attributable to the fact that SACCOs have no leveraged on internal fund

which is cost free to grow. Adequate Retained Earnings should be accumulated so as to cushion the SACCOs against losses. Agrawal et al., (2002) found that members' funds had a central role in co-operative growth. This agrees with this study to some extent as it also emphasizes on the use of Equity Financing and accumulation of Retained Earnings. Fiorillo (2006) found that external funds did not help a weak SACCO become strong. It was recommended that external funding should be discouraged and instead encourage and promote a strong saving culture.

This finding aligns with the market timing theory, which is premised on favourable market conditions such that firms issue equity when the cost of issuance is advantageous to the firm. The underlying assumption with this theory is that firms examine the current conditions of the market when financing is required and make use of the one that is most favourable.

c) Member Savings

It was observed that the relationship between savings and growth of SACCOs was the strongest, with every 1percent increase in Member Savings resulting in a 0.17/100 growth of SACCOs. This was an interesting finding given that members' savings are withdrawable on demand. This agrees with a study that was undertaken in Kenya that showed that SACCOs obtained their capital from their members' savings – including borrowing loans and had a mixture of sources of their funds. Having a mix of sources of capital for investment was also found to grow more wealth for the SACCO. The study concluded that capital structure positively influences the growth in wealth of investment for SACCOs in Kenya (Nderitu, Njeru and Waiganjo, 2022).

d) Debt financing

There was no relationship between Debt Financing and the growth of SACCOs because no SACCO obtained the latter to fund its operations, Debt capital is external fund hence it tends to be costly to SACCOs. SACCOs should continue to aim at minimizing the use of debt capital in their financing. This finding agrees with a study conducted in Sri Lanka which found that total debt to total assets ratio was significantly negatively related to Return on Equity. Results of the study suggest that financial managers should try to finance from internal sources rather than relying heavily on debt capital in their capital structure (Sivalingam and Kengatharan, 2018).

However, these findings are contrary to the finding by (Bazzana and Catturani, 2021), who argue that the traditional view according to which SACCOs rely on internal sources of financing is reductive for larger SACCOs. They posit that contrary to most of the theoretical assumptions, the analysis highlights the ability of SACCOs to marshal the necessary financial instruments – both internal and external, irrespective of different traditions, legal frameworks and policies. In another study undertaken in Taiwan, it was found that long-term debt use and size have positive impacts on cooperative growth, in violation of Gibrat’s law, which posits that firm size and firm growth are independent. In particular, cash flow, unallocated equity and long-term debt financing are critical contributors to asset growth for small and medium-sized SACCOs (Yen, Miranda and Katchova, 2020). These findings align with the pecking order theory which says that the firm will borrow, rather than issuing equity, when internal cash flow is not sufficient to fund capital expenditures. Thus, the amount of debt will reflect the firm’s cumulative need for external funds. Moreover, the tradeoff theory states that firms seek debt levels that balance the tax advantages of additional debt against the costs of possible financial distress. The tradeoff theory predicts moderate borrowing by tax-paying firms.

SACCOs in Lusaka Province need to pursue debt financing as one of the capital structures if they are to achieve growth. However, the free cash flow theory posits that dangerously high debt levels will increase value, despite the threat of financial distress, when a firm’s operating cash flow significantly exceeds its profitable investment opportunities. The free cash flow theory is designed for mature firms that are prone to over invest. Therefore, as SACCOs consider debt financing as a capital structure option, it is critical that they are aware of its pitfalls.

7.5 Objective 4: SACCO growth model development and validation

A SACCO growth model was developed that included the following processes:

- i) Determine factors that were most relevant to the growth model using Principal Component Analysis. Factors with eigen values that were positives were retained.
- ii) Factor data were Log10 transformed to obtain normal distribution of the skewed data to allow for linearity and ease of interpretation.
- iii) Multivariable Analysis was utilized to develop a SACCO growth index.

- iv) Random Effect Regression on independent variables was used to determine the correlation between independent variables and the SACCO growth index that was developed.

The approach for model development was in align with one used by (Magali, 2014), which applied econometrics to construct a model which explained the relationship between the independent and dependent variables. This study used the literature review to examine the variables used to establish relationship between the independent and dependent variables in Savings and Credits Cooperative Societies (SACCOS) in Tanzania. The findings reveal that currently few studies have been conducted to model SACCOS in Tanzania and scholars mostly applied the regression models.

7.6 Chapter Summary

This Chapter presented a discussion of the key findings of the research. The findings were discussed in relation to what other researchers and scholars have established on the subject capital structure and the growth of SACCOS. Chapter 9 presents the conclusion and recommendations of the study.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

Capital structure has been recognized as a key ingredient in the growth and development of SACCOs worldwide. Globally, countries are paying particular attention to the potential of SACCOs as one form of enterprise with a meaningful impact on the economic empowerment of their citizens. This study aimed at developing and validating a SACCO growth model, which could be used to establish SACCOs' growth patterns relative to the SACCOs' capital structure. The model outputs would serve as a basis for encouraging SACCOs to appropriately mobilize and apply their capital structure if they are to achieve growth. The study was set out to:

- i) establishing the growth patterns of SACCOs in Lusaka Province;
- ii) identifying determinants of capital structure for SACCOs in Lusaka Province;
- iii) assessing effects of Capital Structures on the growth of SACCOs in Lusaka; and
- iv) developing, validating and using a SACCO growth model.

8.2 Conclusions

The objectives of the study as articulated above were successfully achieved. From this study, the growth patterns of SACCOs in Lusaka Province were established. It was established that there was some level of noticeable growth of SACCOs within Lusaka Province. However, the growth patterns of the SACCOs were predominantly employee-based, with limited innovation or diversification to other sectors of the economy as is observed in other Sub-Saharan Africa countries. It was established that capital structure, specifically, member savings, retained earnings, and share capital had a strong relationship with the growth of SACCOs. It was also established that SACCOs in Lusaka Province did not have a model for measuring growth – but rather relied upon financial statements to determine some form of growth, which methods are devoid of non-financial considerations such as number of employees or competences.

The key factors that should determine the measurement of the growth of SACCOs were established and included the following:

- i) Membership

- ii) Profitability
- iii) Employee competence
- iv) Dividends
- v) Assets
- vi) Number of employees

A SACCO growth model was constructed based on the interview and survey results, with the aim and operations prescribed. Thereafter, the model was validated by 7 SACCOs within Lusaka Province and 2 stakeholders. The respondent SACCOs and stakeholders confirmed the functionality, validity and usefulness of the model. Therefore, it was established from the validation that the model would enhance the potential for growth of Zambian SACCOs.

8.3 Contribution of the research

This study established the key capital structure of retained earnings, member savings, and equity financing as vital for a SACCO to achieve growth, as well as parameters for measuring growth that included assets, profits, membership, number of employees, dividends, employee competency, and capital reserves. A growth model that evaluates the growth of a SACCO relative to the Zambian SACCO sub-sector was developed through this study. Three SACCO growth indices were developed that included:

- i) SACCO Growth rate;
- ii) SACCO's contribution to the Zambian SACCO sub-sector; and
- iii) SACCO's penetration rate relative to Zambia's, Africa's and the global one.

The model also incorporated subsidiary indices to help SACCOs benchmark their growth and these included:

- i) Total assets for Zambia's SACCOs;
- ii) Total assets for Africa's SACCOs; and
- iii) Total assets for the global SACCO sector.

The study established that SACCOs can establish their growth patterns relative to the whole SACCO sector in Zambia, with a glimpse of the sector in Africa and globally. This new approach provides new frontiers for heightened growth for SACCOs.

8.4 Limitations of the study

In line with the scope and objective, the research was limited to the study of capital structure and the growth of SACCOs. Therefore, the findings of the study may not be applied to other sectors as their business activities vary, except after calibration and modification. The SACCOs surveyed were a combination of small to large enterprises by international definition, meaning that the findings may be generalized across the SACCO sector.

8.5 Recommendations

The study identified key aspects that are important for both academic research and practical applications to enhance the growth of SACCOs, as follows:

8.5.1 Policy and practical implications

From the study the following directions for growth of SACCOs are recommended:

- i) SACCO should continuously update capital requirement policies. This would enhance the evaluation of required capital required to achieve growth and sustain operations of SACCOs. The requirement might need to be embedded in the by-laws for SACCO.
- ii) SACCOs should develop staff competency procedures to ensure the correctly qualified staff are recruited, retained and adequately trained to meet the demands of a growing SACCO sector. Deliberate efforts must be made to expose SACCO staff to other SACCOs such as Kenya for employees to appreciate the level at which SACCOs should operate. Academic, professional and short courses should be implemented to enhance the skill set of SACCO employee if meaning growth is to be achieved.
- iii) The Government should review legal framework to ensure that capital structures are used to grow SACCOs. This will require deliberate focus on SACCOs raising their own capital, away from government subsidies that have proven not to be sustainable in the long-run.

8.5.2 Recommendation for further Research

The following directions for future research in growth of SACCOs are recommended:

- i) Study to be undertaken on effects of the Cooperative Act number 20 of 1998 on the growth of SACCOs in Zambia.
- ii) A comparative study of the regulatory environment in Zambia and Kenya to establish best practices for SACCO development.
- iii) Study to investigate methods of funds allocation strategy and the growth of SACCOs.

8.6 Contribution to Knowledge

The study contributes to the knowledge in the following:

- i) Sustainability of SACCOs using their internal fund sources, leading to enhanced financial inclusion both in urban and rural areas.
- ii) This study proposes a SACCO growth model, which identifies the most relevant factors or drivers of growth among the various capital sources SACCOs have at their disposal. This is a first study in Zambia to propose a SACCO growth model.
- iii) An extensive study of the SACCO sector in Lusaka Province, including the current growth patterns.

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APPENDIX I – QUESTIONNAIRE

Dear Respondent,

I am Fidelity Milambo, a Doctor of Philosophy (PhD) Student of University of Zambia carrying out a research on “*Capital Structures, and Savings and Credit Cooperative Organizations (SACCOs): Developing a Growth Model for Zambia*”

You have been selected together with others to participate in this research. Please be assured that whatever information that will be collected using this questionnaire will be treated with utmost confidentiality and will only be used for the purpose of this research. Please do not indicate your name anywhere on this questionnaire. This questionnaire is structured in four sections, including A, B, C, and D.

Yours sincerely,

Mr. Fidelity Milambo

SECTION A: BACKGROUND INFORMATION

1. **What is the name of your SACCO?** _____
2. **When was your SACCO registered?** _____
3. **What is your position in this SACCO?** _____
4. **How long have you served in your current position?**
 - 1 - 3 years
 - 3 – 6 years
 - 6 – 9 years
 - 9 – 12 years
 - Above 12 years
5. **Please indicate the current size of your SACCO by annual income:**
 - Under ZMW 5million
 - ZMW 5million – 25million
 - ZMW 25million – 45million
 - ZMW 45million – 65million
 - ZMW 65million – 85million
 - ZMW 85million – 105million
 - Above ZMW 105million
6. **What is the affiliation/classification of your SACCO?**
 - Government
 - NGO
 - Private Sector
 - Combined Government, NGO and/or Private Sector
7. **Does your SACCO have audited financial statements for the period 2017 – 2021?**
 - Yes. If yes, provide copies or indicate website link where these can be accessed: _____
 - No
8. **What is the location of your SACCO within Lusaka Province?**
 - Urban

Peri-urban

Rural

SECTION B: GROWTH OF SACCO – DEPENDENT VARIABLE

1. Please complete the membership of your SACCO for the period 2017 – 2021 below:

Item	2017	2018	2019	2020	2021
Active Members					
Dormant Members					
Leavers					

2. Please provide the following information for the period 2017 – 2021 below:

Item	2017	2018	2019	2020	2021
Profits					
Dividend declared					
Number of Shares					

3. Tick applicable answer to the questions below regarding the Profitability/Distribution of Income: [Note: 1 – Strongly Disagree; 2 – Disagree; 3 – Neutral; 4 – Agree; Strongly Agree – 5].

No.	Question	1	2	3	4	5
1	Our SACCO has been making a surplus every year from 2017 - 21					
2	Our SACCO has been declaring dividends for the last 5 years					
3	Dividends per share have been increased in the last 5 years					
4	The SACCO has also been contributing to Retained Earnings					
5	The Retained Earnings have been growing annually from 2017 - 21					

4. How do you determine the Surplus distributed as Dividends, Rebates or Retained Earnings? Please tick the box corresponding to the correct answer to the question (Tick all applicable).

No.	Question	Response (Tick)	Explain
1	No specific method is used		
2	Using a standard proportion		
3	Depending on volume of Profits		
4	Depending on the Capital Structure		
5	Depending on By-Laws		
6	Depending on Cooperative Act		

5. Staff Characteristics:

5.1 What is the total staff strength for your SACCO at full capacity? _____

5.2 Please indicate the number of employees your SACCO had in the years stated in the table below:

No.	Category of Employees	2017	2018	2019	2020	2021
1	Management Staff					
2	Finance/Accounting/Credit Management					
3	Audit/Risk and Compliance					
4	Others					

5.3 Please indicate the highest academic qualifications and number of your staff:

No.	Academic Qualification	Response	No. of Employees with qualification
-----	------------------------	----------	-------------------------------------

1	Secondary School Certificate		
2	Diploma		
3	Undergraduate Degree		
4	Master's Degree		
5	Others		

5.4 *Target Training*: Have your SACCO employees undergone any capacity-building or on the job training at least once every year between 2017 - 2021?

- Yes
 No

5.5 *Competence*: Is the competence of our employees as a whole equal to the most ideal level?

- Yes
 No

5.6 *Staff Retention*: What is the average retention period for the staff? _____ Years

5.7 Does your SACCO have a staff retention policy in place which it implements?

- Yes
 No

6. SACCO Growth Model

6.1 Does your SACCO measure its growth from year to year using an established growth model?

- Yes. If Yes, what Growth Model does your SACCO use? _____
 No

6.2 If your response to 6.1 above was Yes, provide elements of the model:

No.	Question	Yes	No
1	Loans disbursed		
2	Number of employees		
3	Profits		
4	Assets		
5	Dividends declared		
6	Membership		
7	Capital		

6.3 What aspect do you regard as important in the measurement of the growth of your SACCO?

No.	Growth Measurement Parameter	1	2	3	4	5
1	Profit					
2	Membership					
3	Debt/Investment Ratio					
4	Staff Strength and Capacity					
5	Assets					
6	Loans disbursed					
7	Others					

SECTION C: INFORMATION ON CAPITAL STRUCTURE - INDEPENDENT VARIABLE

1. Please provide the information below for the calendar years 2017 – 2021:

Item	2017	2018	2019	2020	2021
------	------	------	------	------	------

Total Savings					
Total Share Capital					
Total Capital Reserves					
Total Retained Earnings					
Investment in other Equities					
Total Debt Capital					
Total Assets					

2. Please provide information on the returns for the following for the calendar years 2017 – 21:

Item	2017	2018	2019	2020	2021
Return on Shares					
Return on Savings/Deposits					
Return on Retained Earnings					
Return on Debt Capital					
Income from Loans					

3. Please provide information on the costs for the following for the calendar years 2015 – 2018:

Item	2017	2018	2019	2020	2021
Cost related to Shares					
Cost related to Savings					
Cost related to Returned Earnings					
Cost related to Debt Capital					

4. Was your SACCO indebted to any other Institutions during the period 2017 – 2021:

- Yes
 No

5. Is your SACCO able to pay all Loanees and Creditors on time?

- Yes
 No

6. Please Circle the number corresponding the correct answer in each statement below:

No.	Question	1	2	3	4	5
1	SACCO uses cost of capital when determining the source of funds					
2	SACCO makes careful evaluations when deciding sources of funds					
3	Profitability is a determinant of fund in this SACCO					
4	SACCO mobilizes funds after consulting the Financial Managers					

7. Please circle the number corresponding the correct answer in each statement below:

No.	Question	1	2	3	4	5
1	Income from loans cover all operating costs					
2	Income from loans in our SACCO maintains retained earnings					
3	The SACCO always pays dividends after profits are declared					

Thank you for your cooperation

APPENDIX II – LIST OF SACCOs IN LUSAKA PROVINCE

INTERVIEW GUIDE

1. Name of Interviewee:
.....
2. SACCO:
.....
3. How many years of experience do you have (general):
.....
4. Years of experience in the SACCO sector:
.....
5. When was this SACCO registered?
.....
6. How long have you been working for the firm?
.....
7. Are you familiar with Capital Structure?
.....
8. If so, what are some of the Capital Structures are you familiar with?
.....
.....
.....
.....
.....
9. Are you familiar with any SACCO growth model?
.....
10. If so, what are some of the SACCO growth models are you familiar with?
.....
.....
.....
.....
.....
.....
11. Does your SACCO employ any of these models?
.....
12. Which SACCO growth model in particular does your SACCO use?
.....
.....
.....

.....
.....
.....

13. Do you think a growth model is important to the development of your SACCO?.....

14. What are some of the benefits/advantages of a growth model to a SACCO such as yours?

.....
.....
.....
.....
.....
.....
.....

15. Is a growth model an important ingredient for the growth and development within the SACCO sub-sector?

.....

16. Would such a growth model be of any benefits to the SACCO sub-sector in general?

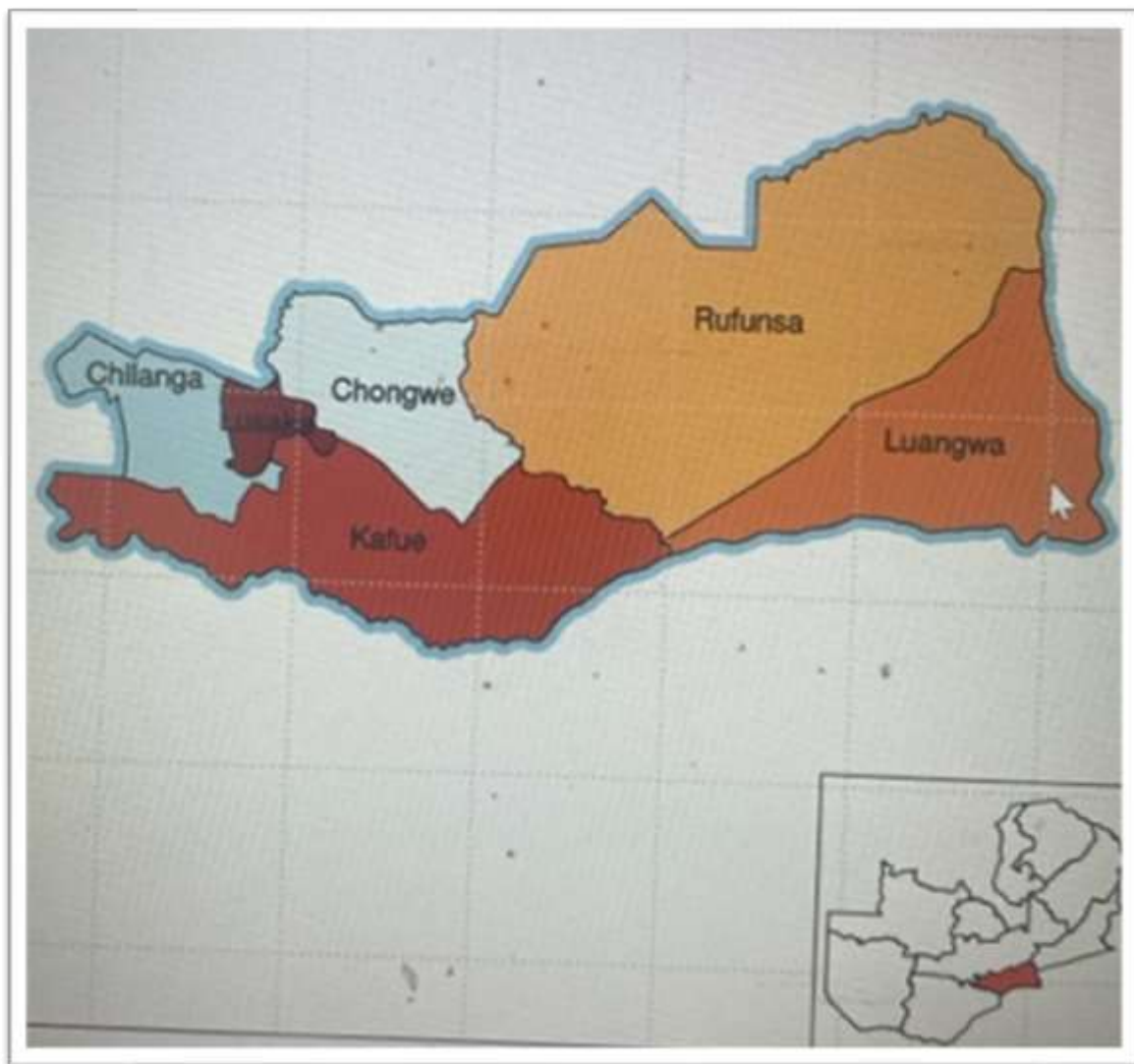
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.....

Thank you very much for your contribution.

APPENDIX III – LIST OF SACCOs IN LUSAKA PROVINCE

S/N	PROVINCE	DISTRICT	NAME OF CREDIT UNION	REGISTRATION NO.
1	LUSAKA	CHILANGA	CHIPAPA SAVINGS AND CREDIT	1507
2	LUSAKA	CHILANGA	MOUNT MAKULU SAVINGS AND CREDIT	1503
3	LUSAKA	CHONGWE	CHONGWE SAVINGS AND CREDIT	2123
4	LUSAKA	KAFUE	CHILANGA CEMENT SAVINGS AND CREDIT	1656
5	LUSAKA	KAFUE	NITROGEN CHEMICALS OF ZAMBIA CREDIT UNION	1326
6	LUSAKA	LUSAKA	BABA DRIVERS SAVINGS	12006
7	LUSAKA	LUSAKA	BATA SAVINGS AND CREDIT	2082
8	LUSAKA	LUSAKA	BUS DRIVERS SAVINGS AND CREDIT COOPERATIVE SOCIETY	14844
9	LUSAKA	LUSAKA	BWAFWANO SAVINGS AND CREDIT	13160
10	LUSAKA	LUSAKA	CARE CO-OPERATIVE SAVINGS AND CREDIT SOCIETY LTD	3626
11	LUSAKA	LUSAKA	CHAZANGA SAVINGS AND CREDIT	11440
12	LUSAKA	LUSAKA	CHILIMBA CREDIT UNION COOPERATIVE SOCIETY	15720
13	LUSAKA	LUSAKA	CREDIT UNION SAVINGS ASSOCIATION	1294
14	LUSAKA	LUSAKA	ELASAH SAVINGS & CREDIT UNION	
15	LUSAKA	LUSAKA	GOVERNMENT PRINTERS SAVINGS AND CREDIT	2609
16	LUSAKA	LUSAKA	HARAMBE SAVINGS AND CREDIT UNION	12218
17	LUSAKA	LUSAKA	HELPLINE SAINGS AND CREDIT SOCIETY LTD	12396
18	LUSAKA	LUSAKA	HIGH RISING WOMEN SAVINGS AND CREDIT	14431
19	LUSAKA	LUSAKA	JUDICIAL SAVINGS AND CREDIT	1968
20	LUSAKA	LUSAKA	KANYAMA FINANCIAL SERVICE COOPERATIVE SOCIETY	9500
21	LUSAKA	LUSAKA	LEAPARDS HILLS SCHOOL SAVINGS AND CREDIT SOCIETY	3456
22	LUSAKA	LUSAKA	LUSAKA AIRPORT SAVINGS AND CREDIT	1868
23	LUSAKA	LUSAKA	LUSAKA CITY SAVINGS AND CREDIT	1594
24	LUSAKA	LUSAKA	LUSAKA TEACHERS SAVINGS AND CREDIT	2106
25	LUSAKA	LUSAKA	LUSUMPUKO SAVINGS AND CREDIT	7801
26	LUSAKA	LUSAKA	MACO SAVINGS AND CREDIT UNION	15934
27	LUSAKA	LUSAKA	MICRO CREDIT FINACING ZAMBIA LIMITED	8255
28	LUSAKA	LUSAKA	MUWANJUNI SAVINGS AND CREDIT	3315
29	LUSAKA	LUSAKA	NAIFWE WOMENS SAVINGS AND CREDIT	7896
30	LUSAKA	LUSAKA	NAMPUNDWE M/W. SAVINGS AND CREDIT	4878
31	LUSAKA	LUSAKA	PAMODZI SAVINGS AND CREDIT	1667
32	LUSAKA	LUSAKA	PENTECOSTAL CHURCH SAVINGS AND CREDIT	3590
33	LUSAKA	LUSAKA	PRIVILEGE SAVINGS AND CREDIT SOCIETY LTD	14289
34	LUSAKA	LUSAKA	SMALLHOLDERS (SAMS)	3566
35	LUSAKA	LUSAKA	SOS SAVINGS AND CREDIT	11495
36	LUSAKA	LUSAKA	TWAFWANE SAVINGS AND CREDIT CO-OP UNION	2079
37	LUSAKA	LUSAKA	WORLD VISION - ZAMBIA SAVINGS AND CRE	3010
38	LUSAKA	LUSAKA	Z.I.H.P. SAVINGS AND CREDIT COOPERATIVE SOCIETY	9612
39	LUSAKA	LUSAKA	ZAMBIA AIR FORCE SAVINGS AND CREDIT SOCIETY LTD	3498
40	LUSAKA	LUSAKA	ZAMBIA ARMY SAVINGS AND CREDIT	2313
41	LUSAKA	LUSAKA	ZAMBIA BREWERIES SAVINGS AND CREDIT	1663
42	LUSAKA	LUSAKA	ZAMBIA IMMIGRATION SAVINGS AND CREDIT	1512
43	LUSAKA	LUSAKA	ZAMBIA NATIONAL SERVICE SAVINGS AND CREDIT UNION	18670
44	LUSAKA	LUSAKA	ZAMBIA POLICE LUSAKA DIVISION	2730
45	LUSAKA	LUSAKA	ZAMBIA POLICE THRIFT AND LOAN COOPERATIVE	134
46	LUSAKA	LUSAKA	ZAMSURE SAVINGS AND CREDIT	2001
47	LUSAKA	LUSAKA	ZNPF STAFF SAVINGS AND CREDIT	3582
48	LUSAKA	MUMBWA	CHABOTA SAVINGS AND CREDIT	3211
49	LUSAKA	MUMBWA	CHISALU SAVINGS AND CREDIT	3538
50	LUSAKA	MUMBWA	KACHINDU SAVINGS AND CREDIT	3555
51	LUSAKA	MUMBWA	KASAPATO SAVINGS AND CREDIT	3549
52	LUSAKA	MUMBWA	MUMBWA DISTRICT SAVINGS AND CREDIT	3360
53	LUSAKA	MUMBWA	MUNYATI SAVINGS AND CREDIT	3210
54	LUSAKA	MUMBWA	MWEZYACHIMBOLE SAVINGS AND CREDIT	3548
55	LUSAKA	MUMBWA	NAKANDYOLI SAVINGS AND CREDIT	3535
56	LUSAKA	MUMBWA	NANGOMA SAVINGS AND CREDIT	3207
57	LUSAKA	MUMBWA	NANSENGA AGRICULTURAL CO-OPERATIVE SOCIETY LTD	15933
58	LUSAKA	MUMBWA	SHIMBIZHI SAVINGS AND CREDIT	3209
59	LUSAKA	MUMBWA	SITUMBEKO SAVINGS AND CREDIT	3208

APPENDIX IV – MAP OF STUDY LOCATION



APPENDIX V – LITERATURE REVIEWED

S/N	Authors/Reference	Objectives	Methodology	Conclusions	Comments/Critique
1	(Ngatia et al., 2018)	Assess the relationship between competitive strategies and the performance of Mwalimu National SACCO.	Questionnaire Survey	The study established that there was a moderate positive and significant relationship between marketing strategy and performance in Mwalimu National SACCO ($r = 0.462$). Marketing strategy contributed a 20.9 percent to the performance, thus the study concludes that marketing strategy positively affect the performance of Mwalimu SACCO.	The paper provides some key determinants on the growth of SACCOs. It can be used for further studies.
2	(Henock, 2019)	The main objective of this study is to examine the sustainability and outreach performance of SACCOs in Eastern Ethiopia.	Questionnaire Survey and Interviews	The study determined factors affecting sustainability and outreach performance of SACCOs in Eastern Ethiopia. This study also found that no evidence of trade-off between outreach and financial sustainability rather compatibility between them. Therefore, this study found that the cooperative financing model can be both financially sustainable and accessible while serving the poor.	This study provides foundational understanding on the financing of SACCOs. It provides further future research on sustainability of SACCOs.
3	(Bwana and Mwakujonga, 2013)	This paper uses secondary data to study the historical	Literature Review	Governments in the two countries should continue to	This paper provides comparative information on

		development, contribution of SACCOS and constraints that they encounter through-out their journey in both Kenya and Tanzania.		prepare transparent policies and strategy for rebuilding the co-operative (including SACCOS) movement involving other interested parties like NGOs and other sympathizers of co-operative enterprises. Specifically, the Kenya and Tanzanian governments should focus on: building strong member-controlled co-operatives, promoting good leadership, promoting strong and effective co-operative development support and improving co-operative education and training.	Kenya and Tanzania on the SACCO sector. However, the study does not provide a perspective on SACCO growth or capital structure.
4	(Dao and Ta, 2020)	The paper aimed at providing insights on the relationship between capital structure and performance of the firm by employing meta-analytical approach to obtain a synthesized result out of controversial studies as well as the sources for such inconsistency	Literature Review	Conducted to confirm that corporate performance is negatively related to capital decisions, which inclines toward trade-off model with agency costs and pecking order theory. The estimation induces rather small effect size that implies sufficiently large sample size to be effectively investigated. In terms of moderator analysis, random-effects meta-regression models of three different techniques are used to increase the robustness	The study provides a relationship between capital structure and performance of firms, that were not SACCOs. Further, performance of a firm is not equivalent to growth.

				in research findings, showing statistically significant elements as publication status, factor of industry and proxy of firm performance.	
5	(Gupta and Khanna, 2022)	Our main objective of the study was to determine the future trends of the Capital Structure and its determinants based on the Systematic Literature review of the previous researches done to analyze the Capital Structure, Capital structure theories and its determinants.	Literature Review	The financial manager should take into consideration and include a number of additional factors that result from the generalization of empirical capital structure research when deciding on the optimization of the capital structure. These additional factors include theoretical approaches, models, and their practical modifications.	The systematic review provided foundational information on capital structure and its determinants. However, it does not demonstrate any relationship between capital structure and firm growth. It deals with capital structure in isolation of SACCO growth.
6	(Weshah, 2022)	This study aims to investigate the impact of capital structure and firm growth on firm performance. The research is quantitative in nature, based on a cross-sectional time-series analysis of 35 industrial companies listed on the Amman Stock Exchange for 15 years from 2001 to 2015 and comprises 525 observations.	Case Study	The findings deduced from the empirical results demonstrate that the debt to equity, equity to assets and asset turnover rate positively affects firm operational and financial performance, however, debt to equity negatively affects market performance. However, with a small sample size, caution must be applied as the findings might not be able to be generalized.	Capital structure, firm growth, and performance are discussed. However, the study does not discuss SACCO growth or a model for SACCO growth.
7	(Hamam, Layyinaturrobaniyah and Herwany, 2020)	This study aims to see whether there is any effect of capital structure and the level of firm	Literature Review	It was concluded that on the regression equation analysis, Capital Structure has a negative	The study focuses on capital structure, level of firm growth and firm value. However, the

		growth on firm value. The sample used in this study was six oil and gas companies listed on the Indonesia stock exchange in the 2013-2017 period.		relation to Firm Value. It is supported by the T-test analysis, which shows that DER has no significant positive influence. However, the T-test result indicates the influence is not significant. For the Firm Growth relation to the Firm Value, the regression equation analysis shows that there is a positive relationship between the two variables.	focus of the study is on the energy sector, and not the SACCO sector.
8	(Muli, 2019)	The study sought to perform an analytical and critical review of the various studies that have been undertaken on this subject in order to establish the research gaps that might be responsible for the diversity of results.	Literature Review	An overwhelming majority of the studies lacked in the area of modeling the relationship between the study variables. While majority of the studies made use of regression analysis, unfortunately OLS mandatory diagnostic tests, stationarity test, co integration test, and reverse causality tests which are very crucial in financial time series modeling were glaringly missing	The findings of this study provide a foundational perspective to model development. The information provided could be used for further future research.
9	(Badheka and Pandya, 2022)	The study aims to understand the behavioural aspects of the capital structure decision.	Interviews and Questionnaire Surveys	Though classical theories on capital structure provided a comprehensive understanding on one of the most important corporate finance decisions, they still suffer from serious limitations and criticism due	The findings of this study provide a foundational information on capital structure decisions. The information provided could be used for further future research.

				to the assumptions based on which the theories were developed. A pioneer study on the subject by Modigliani and Miller opened the door for more rigorous discussion and debate, resulting in the introduction of a few path-breaking works. However, these theories totally ignored the element of human behaviour, which is essentially present in every human action and decision	
10	(Proença, Laureano and Laureano, 2014)	This study aimed to investigate the determinants of Portuguese SMEs capital structure and to examine the effects of the 2008 financial crisis on Portuguese SMEs capital structure.	Literature Review	Based on a sample of 12,857 for the period 2007-2010, the results indicate that liquidity, asset structure and profitability are the most important determinants affecting companies' capital structure. The negative relationship between the debt ratios and profitability, suggests that Portuguese SMEs have a preference to finance their investments internally rather than externally due to the higher risk faced by external financing cost which is in line with the pecking order theory. We observe different signs for the	The study provided foundational information on capital structure and its effect on financial crisis. This information will provide further future research.

				relation between asset structure and short-term debt (negative) and long-term debt (positive).	
11	(Serghiescu and Văidean, 2014)	This paperwork investigates the relative importance of five factors upon the capital structure decisions of Romanian firms listed at the Bucharest Stock Exchange and operating in the construction sector of the industry. The analysis is based on panel data estimations on a sample of 20 companies, observed during three years (2009-2011).	Literature Review	Based on the obtained model, we assume that a firm's capital structure is negatively influenced by its profitability and assets' liquidity. Moreover, we confirm the results of previous empirical studies which have shown that, for developing countries, the tangibility of a company's assets is negatively correlated with its debt ratio, given that a high level of tangible fixed assets does not represent a guarantee for creditors in case of default of the borrower company. On the other hand, the size of the company and its asset turnover are explanatory variables positively correlated with the level of debt. The empirical results of the study support the pecking order theory, according to which a profitable enterprise with a high level of liquidity will have a reduced level of debt.	The findings of this study provide vital information on capital structure, including model development. The information shall be used in this study.

12	(Simamba, 2018)	The purpose of the study was to explore on barriers to the enterprising of cooperatives in Sesheke District.	Questionnaire Survey and Interviews	The non-enterprising of cooperatives was attributed to six (6) internal and three (3) external barriers. Internally, the enterprising of cooperatives is impeded by lack of; a vision, business plans, internal resource mobilization, cohesion amongst members, good leadership and profitable investment decisions. While externally, a weak legal framework, lack of access to external aid and a conducive market environment are factors affecting the enterprising of cooperatives.	The study focused on barriers to enterprising of cooperatives. It did not consider capital structure or SACCO growth. However, the information provides a useful context on the development of cooperatives in Zambia.
13	(Hull, 2010)	The study aimed at developing the capital structure model that shows how the costs of borrowing affect leverage.	Literature Review	The models developed not only show that managers of growth firms face different debt-equity choices than managers of non-growth firms, but also demonstrate how the plowback-payout and debt-equity choices together maximize firm value.	The findings of this study provide vital information on capital structure, including model development. The information shall be used in this study.
14	(Shilimi, 2021)	The purpose of this study is to investigate the factors that have impeded the high penetration of SACCOs in Zambia, with a view to consolidating practical recommendations to accelerate the presence of SACCOs for economic empowerment and	Literature Review	Research findings reveal strong, positive relationship between the use of SACCOs and awareness education, financial literacy, societal influence, governance, and government regulation, while the use of SACCOs and income had a	The study provided foundational information on SACCO penetration. This information will provide further future research.

		poverty alleviation of the populace.		significantly negative correlation. The correlation between age and gender and use of SACCOs was not significant.	
15	(Ater, 2017)	This study examines the joint relationship among capital structure, firm growth, macroeconomic factors, and firm value using hypotheses formulated from existing literature and based on the gaps identified and tested using a population sample of 36 non-financial firms listed on the Nairobi Securities Exchange (NSE) in Kenya.	Literature Review	The conclusion of the study has spelled out clearly that the theoretical and the findings of this study support researchers in the area of corporate finance and financial economic to avoid the failure and delisting of the firms from the Nairobi Securities Exchange as it has happened over the past few years in the context of Kenya.	The findings of this study provide vital information on capital structure and growth. The information shall be used in this study.
16	(Barus et al., 2017a)	The purpose of this study to establish the effect of capital adequacy on the financial performance of savings and credit societies in Kenya.	Literature Review	Based on the findings the study concluded that capital adequacy influenced the financial performance of savings and credit societies in Kenya. This can be explained by the regression results which showed that the influence was positive and also showed the magnitude by which capital adequacy influenced the financial performance of savings and credit societies.	The study focused on capital adequacy and performance. This information will provide further future research.
17	(Ssekakubo, Ndiwalana and Lwanga, 2014)	This study aimed at examining the relationship between managerial competency and	Literature Review	Results further reveal that corporate governance and managerial competence only	The study looked at competency, which was a key dependent in this study. Some

		financial performance of Savings, Credit and Cooperative Societies in Uganda.		explain 39percent (R square = .392) of the variance in the financial performance of the Savings, Credit and Cooperative Societies in Uganda. This implies that 61percent of the variance in financial performance is explained by other factors outside the model used. The results further indicate that the regression model was also well specified.	of the information shall be used in this study.
18	(Siame, 2018)	In order to understand the specific challenges that Zambia's co-operatives visa-a-vie agribusinesses in agricultural value chain are facing, this study examined the effectiveness of the business models used by selected co-operatives.	Literature Review	The findings have revealed that the co-operative business model were ineffective in creating, delivering and capturing economic and social impact, prone to property rights constraints, undercapitalized, non-profitable, hardly employ, mostly production-oriented, and poor management and technical skills. The legal, policy environment were outdated.	The study focused on business model used by co-operatives. Some of the information will be used in this study.
19	(Mundia et al., 2021)	The thrust of this study explored the history and experiences of cooperative movement in Zambia and how the economic and political changes affected the cooperative movement in Zambia.	Literature Review	Emergent from this study is the continued political and economic influence on cooperatives. Cooperatives were noted to be struggling to cope with the stiff competition, which was due to the liberalization of the economy in	The study provided a historical perspective to Co-operatives in Zambia. Some of the information will be used as part of the literature review.

				the country. The current poor performance by cooperatives was attributed to the failure to swiftly change from the 1964 to 1991 era, where cooperatives were operating as channels for distrusting government resources in a closed economy	
20	(Fitzsimmons, Steffens and Douglas, 2005)	This study investigated the longitudinal behaviour of growth rates and profitability for a large sample of Australian firms.	Literature Review	Consistent with previous research, we found that higher growth firms were on average younger. Similarly, high and low profit firms were found to be younger on average. Our results found that a higher proportion of firms pursuing the profitability pathway were much more likely to achieve high growth and profitability in following years.	The study provided foundational information on growth rates and profitability. This information will provide further future research.
21	(Ugur, 2016)	The study reviews the theoretical origins of the empirical growth models. It begun with the Solow and AK models informed by neoclassical theory, demonstrating that both models do not make an explicit distinction between capital accumulation and technological progress. They just lump together the physical and human capital. It then discusses the	Literature Review	The study concludes by arguing for innovations in growth modeling – particularly for innovations that involve explicit incorporation of product-market competition and non-linearities in the relationship between innovation and growth.	The study focused on the origins of growth model. Some of the information will be used in this study.

		Schumpeterian growth models with creative destruction and institutions (particularly democracy as a meta-institution). It demonstrates that the Schumpeterian models can address a wider range of questions – particularly those that cannot be addressed satisfactorily by neoclassical models.			
22	(Kahuthu and Kenyatta, 2016)	To determine the impact of prudential regulations on financial performance of deposit taking SACCOs' in Kenya.	Literature Review	The findings also indicated that core capital, credit management, liquidity and membership growth are significant contributors towards growth of financial income of deposit taking SACCOs. This is in line with Mayer (1990), Boyd (2008) and Berger <i>et al</i> (1995) who found that core capital is essential in protection of deposits and stability of financial systems. The findings indicated that prudential management is important for increasing financial incomes, protection of deposits and maintenance of professionalism within the financial markets.	The study's focus was on prudential regulations and financial performance. The information was foundational and some of it will be used in this study.
23	(Stalder, 2018)	The broad research aim was to explore the conceptualisation	Literature Review	The research findings revealed a high level of diversity in the	The study focused on the origins of growth model. Some

		and application of the business model concept within three Swiss communities of academics, training and consultancy professionals and small business owner-managers.		interpretation and application of the business model concept and in evaluations of its usefulness, both within and across the three samples. There were some interesting general differences between the samples. The academics reflected ideas from the literature while support professionals also offered new application perspectives, but only rarely applied the concept in their work with firms. Only a few SME owner-managers applied the concept in any way and some were unaware of it.	of the information will be used in this study.
24	(Ministry of Finance, 2020)	The main objective of the study was to contribute to the development of FCs in Zambia by generating information on their performance. This policy brief presents the summary findings of a study on Promoting Financial Cooperatives (FCs) in Zambia that was conducted between 2017 and 2018.	Literature Review	This policy brief has highlighted some of the key findings from the Census conducted in eight provinces and the situational analysis. The brief has highlighted that FCs in Zambia have evolved overtime from vibrant ones before 1992 to what they are now. The collapse of CUSA and shifts in the Cooperatives department from a stand-alone Ministry to a department under MoA contributed to the dwindling participation of FCs in Zambia. This is because the focus of	The study provided foundational information on growth rates and profitability. This information will provide further future research.

				Cooperatives shifted from all the other forms of Cooperatives to Agricultural Cooperatives. However recent developments such as the movement of the Cooperatives department from the MoA to MCTI has necessitated the promotion of a wider range of Cooperatives including FCs. This has led to the revision of the Cooperatives Act which will have a dedicated and more enhanced section on FCs. However, information on FCs and in particular, data on the size, financial performance and employment has been limited until now. This information is required in the promotion of FCs as a viable and feasible mechanism to increase financial inclusion especially in the rural areas.	
25		The first study focuses on analysing the adjustment process of capital structure towards the target level. The second study concerns the determinants of capital structure. Specifically, six factors are specified to evaluate their impact on financial leverage.	Literature Review	The first study strongly confirms that the average adjustment speed towards the target capital structure of Vietnamese listed firms is approximately 30percent per year. This result is considered slower than the expected rate of 60percent based on the related	The study provided foundational information on growth rates and profitability. This information will provide further future research.

		<p>The third study focuses on the impact of capital structure on firm growth (measured by the growth rate of financial indicators: sales revenue, total assets, and operating profit). Short-term debt and long-term debt were employed as proxies for capital structure.</p>		<p>literature for other emerging economies.</p> <p>For the second study, the results show that there is evidence to conclude certain effects of independent factors (firm size, liquidity, profitability, tangibility, growth opportunities, and non-debt tax shield) on financial leverage. Of these, positive correlations are reported for firm size, liquidity, and tangibility; meanwhile profitability, growth opportunities, and non-debt tax shield have negative impact on financial leverage.</p> <p>For the third study, the empirical findings reveal that long-term financial leverage strongly affects the growth of Vietnamese listed firms in all aspects of business. Meanwhile, the short-term debt model shows moderate support for the sales and operating profit model, and only weak support for the total asset growth model.</p>	
26	(Arasteh, Nourbakhsh and Pourali, 2013)	Establish if there is a significant relationship between the ownership structure, corporate growth and financial strength,	Literature Review	There was a negative relationship between the profit growth and the administrative financial	The study provided foundational information on growth rates and profitability.

		with corporate financial leverage.		leverage, it is suggested that companies with a high profit growth reduce the utilization of the financial leverage in their financing, and investors invest in companies with a higher profit growth because there is a lower financial leverage and also lower risks and bankruptcy.	This information will provide further future research.
27	(Wu and Au Yeung, 2012)	This paper shows that firm growth type, which is able to parsimoniously predict the persistence of cross-sections of many corporate variables, can explain an economically significant part of persistently distinct leverage ratios.	Literature Review	This paper shows that three distinct growth types, which are easily identified according to a two-way sort on initial firm MB ratio and asset tangibility, can span significantly dispersed and persistently distinct leverage ratios: firms of low growth type (G1) have significantly high leverage, firms of high growth type (G3) have low leverage, and firms of mixed growth type (G2) are significantly in the middle over at least 20 year	The study provided foundational information on growth rates and profitability. This information will provide further future research.
28	(Anderson, 2002)	This paper is an exploration of the relationships among the firm's financial structure, its choice of liquid asset holdings, and growth. We present a theoretical model of the firm where external finance is costly and where retaining earnings as	Literature Review	The results revealed positive associations between leverage and liquid asset holding, thus running counter to previous studies based on US data which documented a negative relationship between total leverage and corporate liquidity. While reconciling these	The study provided foundational information on growth rates and profitability. This information will provide further future research.

		liquid assets serves a precautionary motive		differences will require further study, our results clearly raise the prospect that the link between financial structure and corporate liquidity exists.	
29	(Nwankwo, 2014)	The aim of this paper is to examine the effect of capital structure of firms on economic growth in Nigeria.	Literature Review	The empirical result from this study revealed that effective capital structure of Nigerian firm will help to increase the level of economic growth in the country and the cost of debt which is measured in either before or after-tax cost is seen to have positive and significant effect on economic growth in Nigeria, while cost of equity which is the rate of return a firm pay to its shareholders as a compensate for the risk they undertake by investing their capital appears to have negative and significant effect on the growth of Nigerian economy. The overall result indicates the support of the exogenous growth theory, capital structure theory of irrelevance and trade-off theory of capital structure and we therefore conclude that there is a long run effect of capital structure of Nigeria	The study provided foundational information on growth rates and profitability. This information will provide further future research.

				firms on economic growth in Nigeria.	
30	(Muthui, Baimwera and Mutegi, 2017)	The objective of this study was to determine the effects of capital structure on the growth of interest-bearing assets by commercial Banks in Kenya, between the years 2010 to 2014.	Literature Review	This study found out that for tier I and II banks, there is a weak correlation between the capital structure and the growth of interest-bearing assets. Thus, the capital structure components cannot significantly predict the growth in interest bearing assets since this growth is largely determined by other variables such as customer deposits and other borrowings. For tier III banks, the study found a strong correlation between the capital structure components and thus concluded that the growth of interest-bearing assets can be significantly predicted by the capital structure components. Unlike tier I and II banks, tier III banks have low levels customer thus rely largely on capital for investments.	The study provided foundational information on growth rates and profitability. This information will provide further future research.
31	(Lolojih, 2009)	The purpose of this paper is to provide an overview of the status of the cooperative movement in Zambia, as of 2008. This overview is facilitated by an analysis of the organization, vibrancy, and	Literature Review	The findings of the study indicate that the cooperative movement is generally weak in regard to its income base and organizational structures. Most cooperatives are either defunct or nonperforming. There are	The study provided foundational information on co-operatives. This information will provide further future research.

		significance of the cooperative movement, as well as its reaction with the Government's liberalization policies that were adopted in the early 1990s.		only approximately 100,000 members across 2,000 active cooperatives. The cooperative movement lacks sufficient visibility and is not capable of providing effective representation for its members	
32	(Olando, Jagongo and Mbewa, 2013)	The main objective of the study was to investigate the contribution of the financial stewardship on the growth of SACCOs' wealth with a view to improving their operations for the benefit of the members and the country	Literature Review	the study found that the use of institutional capital as a mode of financing SACCO's activities would ensure their sustainability in the competitive co-operative sector. The study also shows that; growth of SACCOs wealth depends on loan management, growth of SACCOs wealth depends on institutional strengths, and growth of SACCOs wealth depends on Innovativeness of SACCO Products	The study provided foundational information on growth rates and profitability. This information will provide further future research.
33	(Njenga and Jagongo, 2019)	This paper creates the need to empirically investigate how the financial management decisions collectively affect the financial performance of SACCOs. This would immensely benefit SACCOs' management efficiency since these decisions collectively and not singularly affect financial performance of saccos leading to optimal	Literature Review	This paper concludes that various studies have researched on the three financial management decisions singularly and not collectively on their effect on financial performance on saccos. However, the much-provided descriptive statistical data and empirical evidence on selected SACCOs' financial	The study provided foundational information on growth rates and profitability. This information will provide further future research.

		investors (shareholders) compensation.		management decisions indicates more gaps in the literature which need to be fixed.	
34	(Ndiege and Kazungu, 2020a)	The study examined how the sources of capital and how the allocation of SACCOS capital influences the performance of the SACCOS.	Literature Review	Firstly, it shows the relevance of the use of members' contribution to the capital structure. This is in line with the philosophy of the SACCOS model on promoting thrift among its members by enabling them an opportunity to accumulate their savings. Secondly, the allocation of large parts of the SACCOS assets in non-loan investments is not healthy for the SACCOS performance. that means directing capital into other investment rather than loans appears to bring adverse effects on future cooperation and performance in SACCOS.	The study provided foundational information on growth rates and profitability. This information will provide further future research.
35	(Sekabira, 2013)	Micro Finance Institutions (MFIs) rejuvenate economic prowess in developing countries, after severe shocks like wars, droughts and floods. MFIs are a promising tool to tackle poverty and improve food security. Sustainability of MFIs based on their capital structure ensures sustainability in poverty	Literature Review	Without grants, the dependent variable responded better to various independent variables. The negative impact of grants to MFIs' performances was also better reflected when grants were used amongst regressors. In all models grants had a negative significant impact on MFIs performance	The study provided foundational information on capital structure. This information will provide further future research.

		reduction and improved food security. The limited literature on the impacts of capital structures on MFI performance necessitated the study		(sustainability). Therefore, composition of Capital Structure is important for MFIs' sustainability operationally and financially whereby grants and debts erode it whereas share capital and assets improve it.	
36	Mwingi (2014)	This study therefore sought to establish how members' income and conduct of SACCOs affects the relationship between characteristics and efficiency of SACCOs in Kenya.	Literature Review	The overall conclusion is that SACCO characteristics are good indicators of the efficiency of SACCOs. Stratifying SACCOs by income of members improves the power of characteristics to predict efficiency. Conduct of SACCO does not predict efficiency of SACCOs.	
37	(Mwakajumilo, 2011)	The general Objective of the study is to investigate the extent to which savings and credit cooperatives societies (SACCOs) have succeeded in savings mobilization and poverty reduction to their members and non-members, to access the inherent weaknesses in the development of the financial institutions.	Literature Review	The performance of micro financial institutions in Tanzania raises many questions than answers. However, micro financial institutions have done their best to serve the poor and small enterprises. It is important to understand that the Rural Financial Markets comprises lenders, borrowers, savers and intermediaries. Policy makers and other stakeholders in microfinance sector must focus on the development of overall rural financial markets. Creating	The study provided foundational information on one type of capital structure, savings. This information will provide further future research.

				<p>viable lenders, borrowers and savers is a prerequisite for micro financial institutions better performance and the development of sustainable rural financial markets.</p>	
38	(Marwa, 2015)	<p>Investigate the performance (efficiency and sustainability) of the SACCOs.</p>	Literature Review	<p>In conclusion, it was found that there is a significant potential for performance improvement in both efficiency and sustainability. While SACCOs are on average sustainable, the fact that about 49percent of them are not financially sustainable is a matter of concern. The effort in resolving capital constraints, effective regulation, governance and members' education could improve the performance of the industry.</p>	<p>The study provided foundational information on sustainability. This information will provide further future research.</p>
39	(Lew, 2012)	<p>This thesis examines capital structure theories and debt level determinants to develop a better understanding, and to establish the most appropriate theory to explain the behaviour of firms'' debt and equity choices.</p>	Literature Review	<p>There are three main conclusions. First, the behaviour of firms appears generally aligned with the trade-off theory, although the pecking order and market timing theories also partially explain the equity issuance condition. Second, the equity and debt choice modes can likewise be explained by the use of a</p>	<p>The study provided foundational information on growth rates and profitability. This information will provide further future research.</p>

				<p>theoretically combined approach, using the three major capital structure theories. In this approach, firms increase their value by both increasing debt for tax benefits and low adverse selection costs, and by issuing equity when the stock price is high. Third, this second conclusion implies that the trade-off, pecking order and market timing theories can be combined on the assumption that firms maximise their values under conditions of the existence of asymmetric information, tax shields and bankruptcy probability</p>	
40	(Pilvere-Javorska, Pilvere and Rivža, 2020)	The aim of this research: to establish existing main theories impacting and analysing company's capital structure and to examine the theoretical shift of the theories based on the needs in the 21st century.	Literature Review	The study determined that during the years 1989–2020, number of research publications has grown significantly, thus validating the need to reassess theoretical background of capital structure theories in the 20th century, as well as to help to determine the trends still relative and emerging from the theoretical and practical aspects to company's capital structure in the 21st century.	The study provided foundational information on capital structure theories. This information will provide further future research.

41	(Mwila and Kasongo, 2020)	The aim of this study was to identify the challenges of savings on Zambia Army Savings and Credit Unions in creating wealth and recommend possible solutions.	Literature Review	The results showed the following challenges: 26percent of participants cited delay in disbursing of money, 14percent respondents identified inadequate online system and 19percent was for lack of skilled personnel. Members had another concerned of limitation in loan facility as 21percent of the respondents cited it and 20percent had a concern for underutilization of funds at ZASCU. ZASCU needs to be as strategic in the market as it faces stiff competition from other lending institutions providing similar services.	The study provided foundational information on SACCO wealth creation. This information will provide further future research.
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APPENDIX VI – JOURNAL ARTICLE (PUBLISHED)

CAPITAL STRUCTURE AND SACCO GROWTH: A SYSTEMATIC LITERATURE REVIEW AND META-ANALYSIS

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ABSTRACT

Globally, countries are paying particular attention to the potential of Savings and Credit Cooperative Organizations (SACCOs) as one form of enterprise with a meaningful impact on the economic empowerment of their citizens. Despite the growth of SACCOs being sparsely distributed across various countries, the growth of SACCOs driven by Capital Structure remains largely under-researched. Therefore, this paper seeks to address this problem and develop new insights into future research around SACCO growth and Capital Structure, through a systematic literature review and meta-analysis of 17 articles, thereby problematizing the literature reviewed. The analysis utilizes secondary data from 17 peer-reviewed journals selected using renowned research databases including Google Scholar, Semantic Scholar, and Base, for the period 2011 to 2021. Findings show that 70.6% of articles were published in the last 4 between 2021 - 2018, while 29.4% were published between 2017 – 2011. Kenya accounted for the majority of articles at 58.8%, while the rest of Africa had 17.6% of articles, Europe accounted for 17.6% and Asia 5.9%. Financial performance was prominent at 48.4% as a major parameter in the measurement of SACCO growth, with capital structure at 35.5%, capital adequacy at 9.7%, and growth at 6.5%. The review found that all 17 articles that were analyzed lacked in the area of modeling the relationship between the study variables of capital structure and SACCO growth. A review and analysis of all 17 articles showed that none of the studies directly focused on capital structure and its impact on SACCO growth.

Keywords - Capital Structure, SACCOs, Meta-analysis, Growth.

1. Introduction

Globally, there were 82,758 SACCOs, with over 404 million members a combined asset base of US\$3.6 trillion, and a penetration rate of 13.9% by the end of 2022 (World Council of Credit Union, 2022). The global SACCO movement is the largest organization in the world, bigger in terms of membership than the trade union movement, economically more powerful than several Group 20 (G20) nations, and employing many more people than all multinational companies taken

together (Schwettmann, 2014). In theory, such a potent movement should be central to the international development agenda. The Sustainable Development Goals (SDGs) recognize this potential as can be noted in the adoption of cooperative principles of self-help in its targets 1.1 and 1.2 aimed at poverty reduction, while target 8.3 refers to the role of cooperatives in formalizing the informal sector, including promoting financial inclusion and creating jobs (Schwettmann, 2014).

Yet SACCO growth was not even across all countries or among all SACCOs. SACCOs that grew were those that leveraged their capital structure (World Council of Credit Unions, 2018). The choice of financing mix employed by enterprises is called capital structure, composing financing from debt, equity, and hybrid securities that a firm uses to generate its assets, operations, and future growth (Thippayana, 2014). Countries that lagged often failed to recognize the potential of SACCOs, often portraying them as models from a previous area that had served their time. However, the extraordinary potential of SACCOs – member-owned and democratically controlled enterprises, serving their members’ needs, and rooted in their communities – is again proving popular as 21st-century businesses (Smith, 2003). The cornerstone of the SACCO sector is its ability for members to contribute equitably to the capital of their SACCO (USAID, 2006). Researchers from various academic and business backgrounds have contributed to the development of a significant body of knowledge around capital structure and the growth of SACCOs. Consequently, carrying out an updated literature review related to capital structure and the growth of SACCOs is necessary to provide a systematic analysis and enhance the currently fragmented and quite diverse research in this research area. We present a method to conduct a systematic literature review (SLR) and meta-analysis studies on SACCO growth driven by capital structure. The paper is divided into three (3) parts. The next section outlines our research methodology for detecting literature on capital structure and SACCO growth, providing information about the selected articles, and insight into existing knowledge through problematizing the literature. We then utilize SLR and meta-analysis to answer the research questions. Finally, there is a conclusion – that summarizes the study, particularly its findings.

2. Research Methodology

According to (Mengist, Soromessa and Legese, 2020), SLR is defined as a systematic, explicit, and reproducible method for identifying, evaluating, and synthesizing the existing body of completed and recorded work made by researchers, scholars, and practitioners. SLR allows for the collection of the most relevant literature on a given topic, which fits the pre-specified eligibility criteria and assists in answering formulated research questions (Mengist, Soromessa and Legese,

2020). Further, (Page et al., 2021) argues that SLR consolidates contributions from articles to advance the knowledge of a specific subject. Such articles are often referred to as state-of-the-art and require great objectivity because their findings can be generalized and replicated. It uses unambiguous and systematic procedures to minimize the occurrence of bias during searching, identification, appraisal, synthesis, analysis, and summary of studies. When the procedure is done properly and has minimal error, the study can provide reliable findings and reliable conclusions that could help decision-makers and scientific practitioners act accordingly.

On the other hand, meta-analysis requires the utilization of either descriptive or inferential statistical methods to summarize data from several studies on the study area of interest. Meta-analysis refers to the statistically synthesized results from a series of studies collected through a methodological procedure (Dao and Ta, 2020). Originally used in medical studies, meta-analysis has become more widespread in the field of finance and economics. A combination of SLR and meta-analysis aids in the generation of knowledge from multiple studies in qualitative and quantitative ways (Mengist, Soromessa and Legese, 2020). Therefore, a well-executed SLR is important in ensuring that the review is well-planned before the actual review is undertaken. On the other hand, meta-analysis assists in the generation of more precise estimates. To carry out an SLR and meta-analyses on capital structure and SACCO growth, we were guided by a Protocol, Search, Appraisal, Synthesis, Analysis, and Report (PSALSAR) process adopted by (Mengist, Soromessa and Legese, 2020).

2.1 Defining Research Questions

The core research questions of this paper were the following:

- 1) What is the state-of-the-art in capital structure and SACCO growth?
- 2) What SACCO growth models based on capital structure are common?
- 3) What are the current challenges that impair capital structure and SACCO growth studies?
- 4) What is the way forward from the capital structure and SACCO growth studies reviewed?

2.2 Selecting databases and other research sources

To have a comprehensive, reputable, and unbiased search, the following search databases were utilized; Google Scholar, Semantic Scholar, and Base. These three (3) online databases were selected because they are frequently used by researchers from various disciplines, to access a comprehensive and unbiased search. Due to the evolution of technology that changes methods for information archiving and retrieving, the publication dates were limited to 2011 up to 2021 (articles published in the past ten years), as a way of building our review of the recent literature.

Table 1: Search terms used and the total number of articles from each Database

Database	Searching String	N of Articles	Date of Search
Google Scholar	Main terms in the title Secondary search terms	“Capital Structure” AND “SACCO growth” “Capital Structure, SACC growth”	6-Oct-2023
Semantic Scholar	Main searching terms Secondary search terms	“Capital Structure” AND “SACCO growth” “Capital Structure, SACC growth”	8-Oct-2023
Base	Main terms from title, abstract, and keyword, Secondary search terms.	“Capital Structure” AND “SACCO growth” “Capital Structure, SACC growth”	8-Oct-2023

2.3 Defining search terms

The appraisal stage entails selected articles being evaluated in line with the objective of the review. The study selection implied screening of the selected literature to identify relevant papers for the review work. This process has two steps: selecting articles using the inclusion criteria as depicted in Table 2 and a quality assessment using the following criteria:

1. Appropriately describing the review’s inclusion and exclusion criteria.
2. Ensuring that the literature search covers all relevant articles and studies on the topic.
3. Capital structure and SACCO growth were adequately described in the publications.

Table 2: Selection of literature using Inclusion and Exclusion Criteria

Criteria	Decision
When pre-defined keywords as a whole or at least in the title	Inclusion
Paper published in a scientific peer-reviewed journal	Inclusion
Paper in English	Inclusion
Papers published before 2021	Exclusion
Papers that are not primary or original work	Exclusion
Duplications, gray literature, conference papers, book chapters, and editorial papers	Exclusion
Meta-data, fee articles, and review articles	Exclusion
Exclude articles that do not cover capital structure and SACCO growth	Exclusion

Using the above inclusion and exclusion criteria, a search from Semantic Scholar, Google Scholar, and Base reviewed a total of 107 peer-reviewed journal articles as depicted in Figure 1. The 107 journal articles were subjected to an appraisal process, which led to 26 articles being excluded due to them being duplications, theses, gray literature, book chapters, conference papers, or editorials. The remaining 81 articles were subjected to further appraisal, with 33 being excluded due to them being meta-data, fee articles, and review articles.

A further appraisal of the abstract was conducted, which resulted in 21 articles being excluded based on exclusion criteria that those articles did not cover capital structure and/or SACCO growth as the main themes. Finally, the main body of the articles was appraised to determine the

prominence of capital structure and/or SACCO growth as the purpose of the articles, resulting in 10 articles being excluded, leaving 17 articles for the synthesis stage.

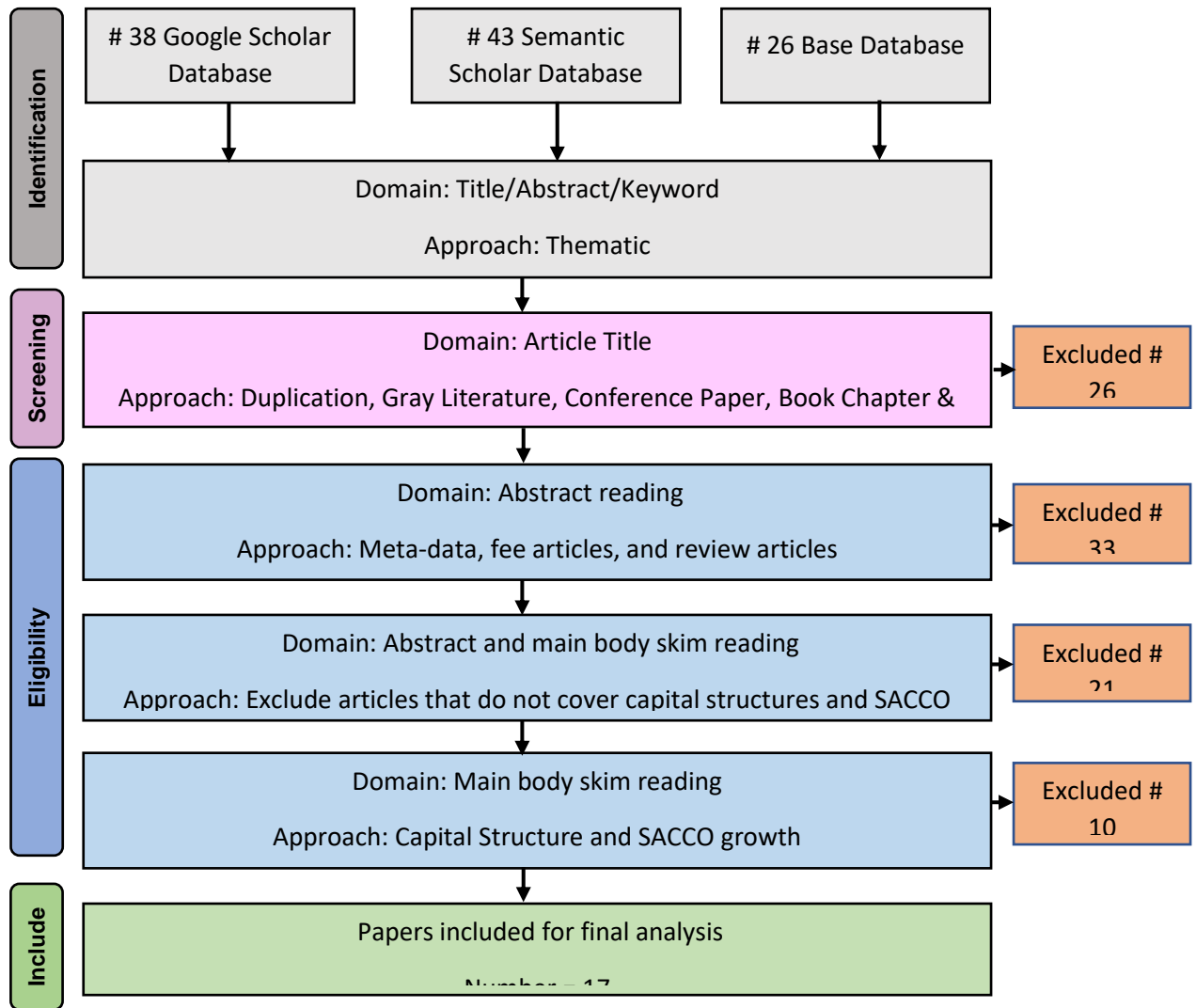


Figure 1: Process flow diagram for the search methodology

2.4 Merging hits from different databases

The synthesis stage involved the extraction and classification of relevant data from selected articles to derive information, knowledge, and conclusions. The variables under analysis were organized on capital structure and SACCO growth. The coding information of the articles includes the article title, author, article publications between the period 2011 and 2021, country of publication, data sources, method of analysis, mode of assessment, and findings, as depicted in Table 3.

Table 3: Extraction of information from the selected articles using established criteria.

S/N	Article Title	Author(s)	Year	Country	Data Sources	Method	Mode of Assessment	Findings
1	Capital Structure and Performance of Savings and Credit Co-operative Societies in Tanzania.	Ndiege, O. B. & Kazungu, I.	2020	Tanzania	Quantitative Secondary Data (financial statements)	Random effect regression model in the analysis	Survey	Findings reveal that higher net loan, liquid investment, members' savings and institutional capital are both crucial determinants of performance. Moreover, the findings indicated that allocating more resources into nonfinancial investments lower the performance.
2	Analysis of Equity Capital Structure Financing Levels on Financial Performance: A Cross Sectional Survey of SACCOs in Kiambu County, Kenya	Mburu, Z. M.; Gongera, G. E.; Mwangeka, R. M.	2018	Kenya	Quantitative and Qualitative for the period 2013 - 2016.	Content analysis, regression and analysis of variance (ANOVA)	Cross sectional survey research design	The SACCOs' financial performance increased whenever there was a decrease in equity and increase in debt capital levels up to optimal level. The study further revealed that majority of the SACCOs did not employ debt financing in the previous years' compared to the current period. They significantly relied on members' deposits and retained earnings as prime sources of capital financing.
3	Effect of Capital Adequacy on the Financial Performance of SACCOs in Kenya	Barus, J. J.; Muturi, D. W.; Kibati, D. P., and Koima, D. J.	2017	Kenya	Both primary and secondary sources of data were employed	Explanatory research design	Multiple linear regression models were used to analyze the data using SPSS and STATA.	Based on the findings the study concluded that capital adequacy influenced the financial performance of savings and credit societies in Kenya. This can be explained by the regression results which showed that the influence was positive and also showed the magnitude by which capital adequacy influenced the financial performance of savings and credit societies.
4	The Impact of Core Capital and membership growth on financial performance of Deposit Taking	Kahuthu, D. G.; Muturi, W., and Kiweu, M.	2015	Kenya	Qualitative and Quantitative Data	Descriptive Survey	Census Survey design/linear regression model	The study conclusions on the basis of findings revealed that core capital and membership growth have positive impact on SACCO's financial performance.
5	Relationship Between Mode of Financing and Financial Performance of Deposit Taking SACCOs in the Lake Region Counties of Kenya	Cheruiyot, D. K. & Njogo, M. N.	2021	Kenya	Secondary data from the annual reports and financial statements	Explanatory research design	Descriptive statistics, correlation analysis and panel data regression analysis.	The study revealed that share capital has an insignificant positive relationship with performance of SACCOs in the lake region while retained earnings has a significant effect on financial performance of SACCOs in the lake region. The study also showed that debt financing has a significant negative effect on financial performance of SACCOs in the lake region.
6	An Analysis of the Financial Performance of Selected Savings and Credit Co-Operative Societies in Botswana	Sathyamoorthi, C.; Mbekomize, C.; Radikoko, I.; & Wally-Dima, L.	2016	Botswana	Audited financial statements of a five-year period from 2008 to 2012.	Descriptive Survey	Descriptive statistics of financial aggregates and ratios, correlation, regression and common size analyses.	The findings underscored that the selected SACCOs achieved good financial results and were in strong financial position. The results also indicated a significant relationship between Net Profit ratio and Capital Employed Ratio to inform that the Net Profit Ratio was the most important explainer of Return on Capital Employed. The 5 year common size analysis also revealed a growth in income and in the financial status of the selected societies.
7	Financial Practice as a Determinant of Growth of Savings and Credit Co - Operative Societies' Wealth	Olando, C.O.; Mbewa, M.O., & Jagongo, A. O.	2012	Kenya	Secondary and primary	Descriptive Survey	Census/descriptive and inferential statistics.	The study findings indicated that Growth of SACCOs wealth depended on Financial stewardship, Capital structure and Funds allocation strategy. The study further found that SACCOs inadequately complied with their by-laws; incomes from investments did not adequately cover their costs.
8	Effects of Capital Structure on the Financial Performance of Savings and Credit Cooperative Societies in Kenya	Kimemia, L.; Namusonge, G., & Sakwa, M.	2021	Kenya	Questionnaire & Collection Forms	Descriptive and exploratory	Survey	The results of the correlation for the both primary and the secondary data showed that capital structure influenced financial performance in a way that was positive and significant. This implies that capital structure is important and SACCOs ought to handle their capital mix carefully.
9	Influence of Working Capital Management Techniques on financial performance of deposit taking Institutions: A Survey of SACCOs in Kisii County, Kenya	Abira, D. O. & Muturi, W.	2020	Kenya	Questionnaire and audited financial statements	Descriptive	Census Survey	study established that management of accounts receivables reduces the amount of cash that is tied up in the hands of customers which then leads to increased profitability of firms. Accounts payables of firms continue to shoot up every day to a point that delivering of services is threatened and for organizations to remain profitable, inventory should be kept at the right quantities since if kept idle would involve holding cost which reduces profitability.

10	Effect of financial structure on the financial performance of deposit taking SACCOs in Kenya	Mwaniki, S. M.	2018	Kenya	Annual reports and audited financial statements	Descriptive, correlation and regression analysis models.	Survey	The findings of the study showed that a positive and significant relationship existed between equity financing, long term debt financing, short term debt financing, member deposits and financial performance of DT-SACCOs in Kenya.
11	Effect of financial resource on the performance of deposit taking SACCOs in Kenya	Kiswili, M. M.; Amuhaya, M.; Noor, I., & Anaya, S.	2019	Kenya	Semi structured questionnaire for primary data & secondary data was collected using data extraction tools	Descriptive explanatory research design and pragmatic research paradigm.	Survey/Pearson correlation coefficient and univariate regression analysis were employed for analysis of inferential data	his study found that financial resource has positive and significant effect on the performance of deposit taking SACCOs in Kenya. In addition, the indicators of financial resource such as source of funds, adequacy of funds and timely release of funds affect deposit taking SACCOs' performance in Kenya.
12	Effect of Capital Adequacy on the financial performance of SACCOs in Samburu County	Lekaaso, G.	2020	Kenya	Questionnaires	Descriptive research survey design	Survey	The study established that capital adequacy did not have a significant influence on the financial performance of SACCOs in Samburu County.
13	Capital Structure of Coop Group in the Czech Republic	Pevná, J.	2021	Czech	Quantitative data from the financial statements	Descriptive research survey design	Survey	This paper reveals that the leverage of the entire group is low, as more than two thirds of the assets are financed by equity. Internal financing from retained profits is prevalent.
14	The Capital Structure of Co-operative Firms: An International Comparative Study	Bazzana, F. & Catturani, I.	2021	Netherlands	Questionnaire	Descriptive research survey design	Survey	The role of external financing becomes pivotal for initial success and further development of the co-operative. However, these firms may be able to count on internal sources, including capital from the social base and from management. Unlike other firms, the use of internal sources is not related to the redistribution of profits to owners.
15	Capital Structure and Financial Performance: A Study on Commercial Banks in Sri Lanka	Sivalingam, L. & Kengatharan, L.	2018	Sri Lanka	Quantitative data	Panel data were used to conduct the empirical study	Survey	Total debt to total assets ratio was significantly negatively related to ROA, however growth in banks deposit was significantly and positively related to ROA. Size, short term debt to total assets ratio and long term debt to total assets ratio did not show any relationship with ROA.
16	Does the Ownership Structure of Cooperative Firms Drive their Financial Success? A Multi-criteria Decision-Aid Approach	Kalogeras, N.; Pennings, J. M. E., & Doumpos, M.	2011	Netherlands	Quantitative data	The financial ratios were selected using principal component analysis.	Survey	Results show that there is no clear-cut evidence that co-op models used to attract outside equity perform better than the more traditional models. This suggests that ownership structure of co-ops is not a decisive factor for their financial success
17	Analysis of Factors Influencing Financial Performance of SACCOs in Lesotho: Evidence From Maseru District	Mmari, G. A., & Thinyane, L. C.	2019	Lesotho	Quantitative and Qualitative	Cross-sectional research design	Survey	It was found that socio economic characteristics of members were supportive to financial performance of the SACCOS. Furthermore, SACCOS in the study area achieved high performance in terms of ratios of members' capital; loan delinquency; volumes of savings in the SACCOS; and growth of total assets. On the other hand, the SACCOS realised poor financial performance in terms of ratio of fixed assets to total assets; and share capital owned by members.

2.5 Analysis and Reporting

The analysis phase involves the evaluation of synthesized data and the extraction of meaningful information, including answering the research questions that would have been formulated. It covers both the qualitative and quantitative explanation and narration of the results, making discussion, indicating the way forward about future research works, and inferring a conclusion. The final list of data from selected articles shall be summarized in descriptive and/or inferential statistical techniques.

2.5.1 Data Acquisition

Figure 2 shows the number of published articles each year between the years 2011 to 2021, with the highest number of articles published in 2021, 2020, and 2018 with published articles of 4, 3, and 3, respectively. A total of 70.6% of articles were published in the last four (4) between 2021 - 2018, while 29.4% were published between 2017 – 2011.

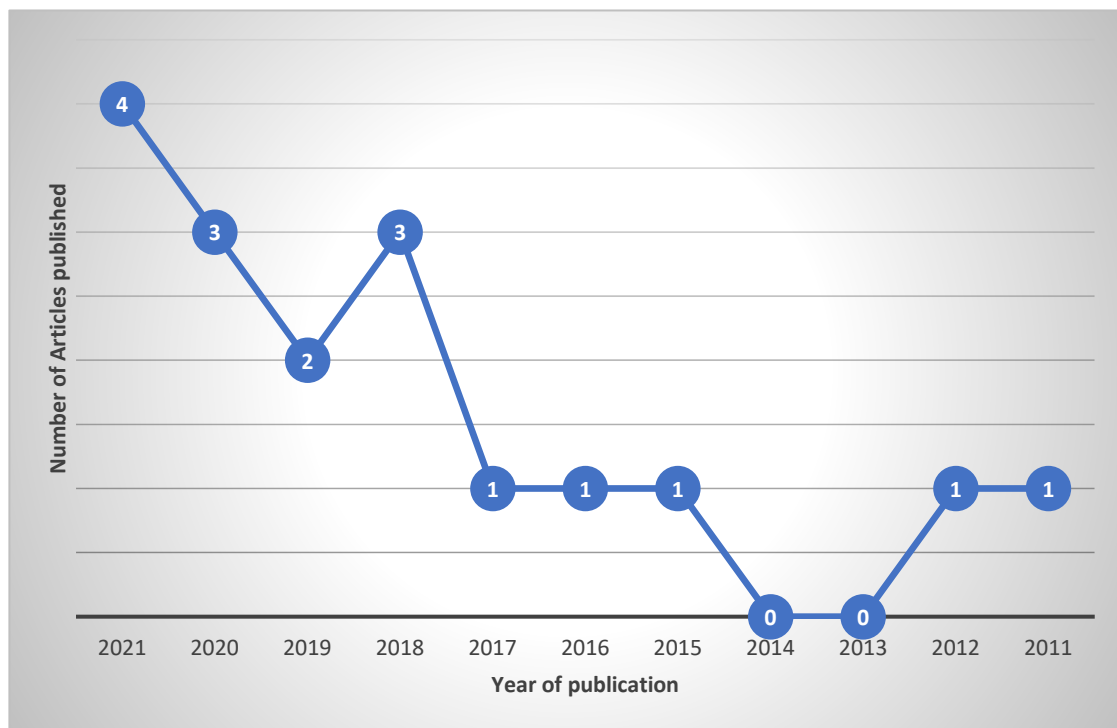


Figure 2: Articles by year of publication

Figure 3 shows the countries from which the articles were published, indicative of the spread of the study area. Kenya accounted for the majority of articles at 58.8%, confirming its solid position as a SACCO powerhouse in Sub-Saharan Africa, accounting for 88.8% and 24.9% of Africa's SACCO assets and membership, respectively (World Council of Credit Union, 2022). The rest of Africa had 17.6% of articles, Europe accounted for 17.6% and Asia 5.9%.

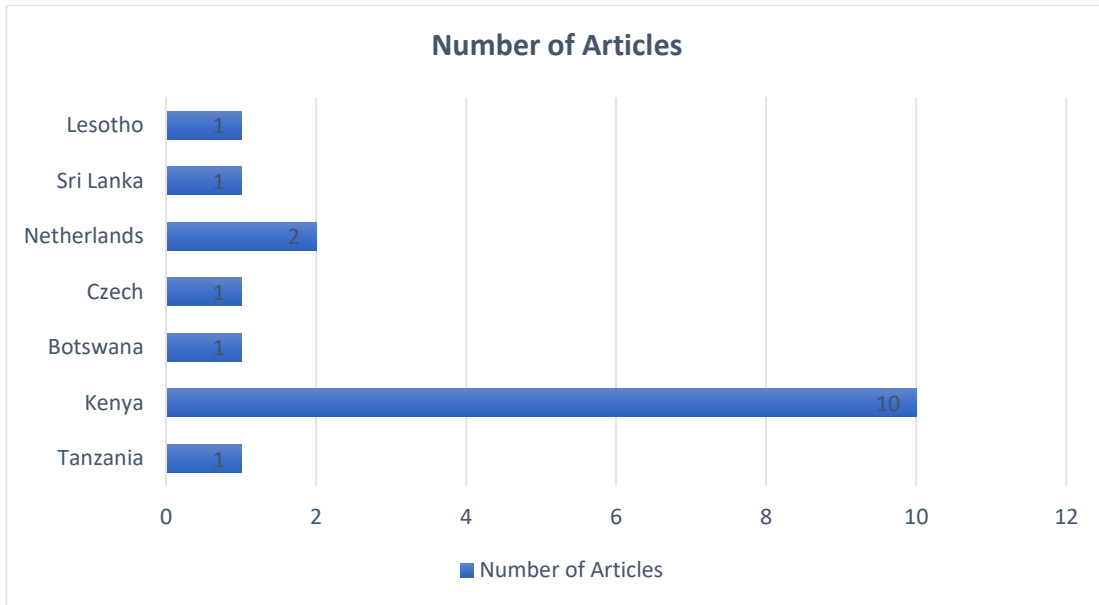


Figure 3: Articles by Country of publication

2.5.2 State-of-the-art in Capital Structure and SACCO growth

Further 4 shows that financial performance was prominent at 48.4% as a major parameter in the measurement of SACCO growth, capital structure at 35.5%, and capital adequacy at 9.7%.

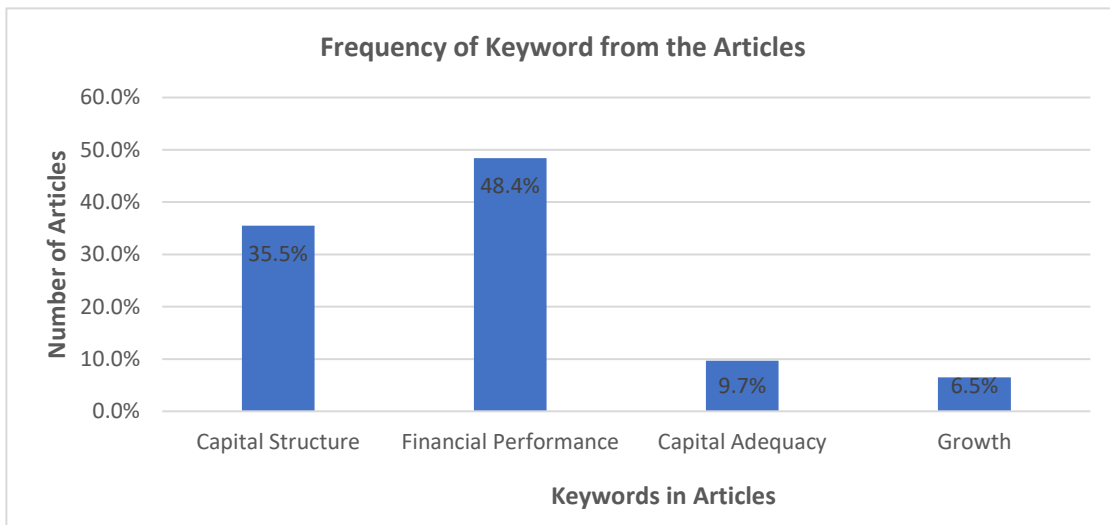


Figure 3: Keywords in Articles on Capital Structure and SACCO growth

The state-of-art studies have been carried out in different contexts to establish the relationship between SACCOs' capital structure and growth. In Ethiopia, (Henock, 2019), determined factors affecting sustainability and growth of SACCOs in Eastern Ethiopia and found a relationship between capital structures and growth and sustainability. (Hamam, Layyinaturrobaniyah and Herwany, 2020) concluded that capital structure has a negative relation to firm value and growth. (Proença, Laureano and Laureano, 2014) sampled 12,857 Small and Medium Enterprise (SME)

including SACCOs for the period 2007-2010, with the results indicating that liquidity, asset structure, and profitability are the most important determinants affecting SMEs' capital structure. The negative relationship between the debt ratios and profitability suggests that Portuguese SMEs have a preference to finance their investments internally rather than externally due to the higher risk faced by external financing cost which is in line with the pecking order theory. (Barus et al., 2017a) concluded that capital adequacy influenced the financial performance and growth of SACCOs in Kenya. The regression results showed that the influence was positive and also showed the magnitude by which capital adequacy influenced financial performance and SACCOs' growth. (Fitzsimmons, Steffens and Douglas, 2005) found that higher-growth firms were on average younger. (Kahuthu and Kenyatta, 2016) indicated that core capital, credit management, liquidity, and membership growth are significant contributors to the growth of SACCOs. According to (Nwankwo, 2014), the study of Nigerian SMEs found that the overall result indicates the support of the exogenous growth theory, capital structure theory of irrelevance, and trade-off theory of capital structure and we therefore conclude that there is a long-run effect of capital structure of Nigeria firms on economic growth in Nigeria. (Stalder, 2018) found that firms of low growth type have significantly high leverage, firms of high growth type have low leverage, and firms of mixed growth type are significantly in the middle over at least 20 years. (Muthui, Baimwera and Mutegi, 2017) found out that there was a weak correlation between the capital structure and the growth of interest-bearing assets such as SACCOs.

2.5.3 Common SACCO growth models based on capital structure

The systematic literature review found that all seventeen (17) articles that were analyzed lacked in the area of modeling the relationship between the study variables of capital structure and SACCO growth. While the majority at 76.5% of the articles made use of regression analysis, unfortunately, Ordinary Least Square (OLS) mandatory diagnostic tests, stationarity tests, co-integration tests, and reverse causality tests which are very crucial in financial time series modeling were glaringly missing.

2.5.4 Current challenges that impair Capital Structure and SACCO growth studies

Most studies on capital structure were conducted in Europe (Pevná, 2021); Asia (Kengatharan, 2018) and (Bei and Wijewardana, 2012); Kenya (Mwaniki and Ndambiri, 2018), (Barus et al., 2017b), (Lekaaso, Cheron Lecturer and Rintari Lecturer, 2020), (Cheruiyot and Njogo, 2021), (Kimemia, Namusonge and Sakwa, 2021), (Mburu, Gongera and Mwangeka, 2018), (Olando et al., 2012), (Kahuthu, Muturi and Kiweu, 2015); Lesotho (Mmari and Thinyane, 2019), Botswana (Sathyamoorthi et al., 2016) and Tanzania (Ndiege and Kazungu, 2020b). Largely missing from these studies and literature is the focus on capital structure on the growth of SACCOs in other

countries. In the case of Sub-Saharan Africa, these studies are concentrated on Kenya at 88.8% driven by its prominence in the SACCO sector going by the asset and membership bases. This provides a challenge in the study of capital structure and SACCO growth since the rest of the other such as Zambia have not reported any such studies, depriving this discourse of enriched context from various countries and cultures.

2.5.5 Way forward from Capital Structure and SACCO growth studies reviewed

A review and analysis of all seventeen (17) articles showed that none of the studies directly studied capital structure and its impact on SACCO growth. Most articles focused on capital structure and its effects on financial performance, embedding growth purely from a financial perspective. However, financial performance is one of the most influencing factors in determining firm growth (Bei and Wijewardana, 2012). Consequently, financial performance should be a component of growth – and not the other way around. Irrespective of the countless studies on capital structure and firm growth, there has been limited research that particularly sought to explore the nexus between capital structure and the growth of SACCOs. To this end, studies must be undertaken that focus on capital structure and the growth of SACCOs to fill this gap.

3. Conclusion

The object of this study was to conduct a systematic literature review (SLR) and meta-analysis studies on SACCO growth driven by capital structures, thereby problematizing the results to answer four (4) research questions. A total of 70.6% of articles were published in the last four (4) between 2021 - 2018, while 29.4% were published between 2017 – 2011. Kenya accounted for the majority of articles at 58.8%, while the rest of Africa had 17.6% of articles, Europe accounted for 17.6% and Asia 5.9%. Results from the first research question, financial performance was prominent at 48.4% as a major parameter in the measurement of SACCO growth, with capital structure at 35.5%, capital adequacy at 9.7%, and growth at 6.5%. To the second question, the review found that all seventeen (17) articles that were analyzed lacked in the area of modeling the relationship between the study variables of capital structure and SACCO growth. To the third question, the majority of studies on capital structure were conducted in Africa, Europe, and Asia. In the case of Sub-Saharan Africa, these studies are concentrated on Kenya at 88.8%. This sparse distribution of studies deprived the study of discourse that would be enriched by contexts from various countries and cultures. To the fourth question, a review and analysis of all seventeen (17) articles showed that none of the studies directly focused on capital structure and its impact on SACCO growth. Most articles focused on capital structure and its effects on financial performance, embedding growth purely from a financial perspective.

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APPENDIX VI – JOURNAL ARTICLE (PUBLISHED)

A PRINCIPAL COMPONENT ANALYSIS OF CAPITAL STRUCTURE AND THE GROWTH OF SACCOs IN LUSAKA PROVINCE

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ABSTRACT

This study attempts to standardize Savings and Credit Cooperative Organization (SACCO) endogenous growth measures that include profit, membership, share capital, dividends, savings, employee competence, and the number of employees - by performing principal component analysis on 42 SACCOs drawn from Lusaka Province of Zambia. Using Statistical Package for the Social Sciences (SPSS) version 26.0, panel data were collected and analysed. Qualitative textual data was analysed manually using hierarchical coding frames. Quantitative data was used to estimate through multivariate analysis the impact of capital structure on SACCO growth, while random effect regression was utilized to estimate the actual effect of the variables on the growth. The research used structured interviews, literature reviews, and questionnaire surveys. Data was generated by pooling a panel dataset of 42 SACCOs over a five-year timespan from 2017 to 2021. The results of the study established that for every 1 percent increase in savings, SACCOs grew by 0.17/100 units, while a 1 percent increase in share capital led to a growth of 0.09/100 units – while every 1 percent increase in retained earnings, SACCOs reduced by 0.00/100 units. Suffice it to mention that the relationship was statistically significant (p-value <0.05).

Key Words: Capital Structure, SACCO Growth, Principal Component Analysis.

1. Introduction

In this era of the fourth industrial revolution, countries of the world aim to among other things achieve growth of population's living standards (Larina et al., 2021). Consequently, the overarching goal of the Zambian government is to generate higher, better quality, and more inclusive and sustainable growth. A specific objective is to reach middle-income status by 2030 (International Monetary Fund, 2023). To achieve these goals, the Zambian

government is seeking to create a greater role for the private sector in driving the economy and financing growth. One of the key private sector channels through which economic growth can be achieved is Savings and Credit Co-operative Organizations (SACCOs). The extraordinary power of SACCOs – democratically owned and controlled enterprises, serving their members’ needs, rooted in their communities is again proving popular, as this form of firms demonstrate themselves to be 21st century businesses (Smith, 2003). In the 21st century, countries are required to learn from other countries in the period of the digital economy if they have to achieve growth and development in this post-industrial economy era (Bogoviz et al., 2021). Since 2013, the outcry of SACCOs globally as posited by the World Organization Credit Cooperative Unions (WOCCU) was for assistance to achieve growth. Consequently, WOCCU launched Vision 2020, whose objectives were among others, to reach 260 million members globally (World Council of Credit Unions, 2019). Country SACCOs took up the challenge of growth and applied their resources and talent to achieve this goal. At the close of 2021 (World Council of Credit Unions, 2021), a total of 87,914 SACCOs globally had achieved a combined membership of 394 million spread across 118 countries, with total assets over USD3.5 trillion and a penetration of 12.7 percent compared to 89,026 SACCOs, with 260 million members drawn from 117 countries, a total assets base of USD 2.1 trillion and a penetration rate of 9.1 percent in 2017 (World Council of Credit Unions, 2017). Notwithstanding this feat, WOCCU argues that growth was not even across all the SACCOs or countries. The SACCOs that grew were those that leveraged on their capital structures – among other key factors.

According to the Ministry of Finance (2020), Zambia had six SACCOs at independence in 1964 – rapidly increasing to 500 by 1976, which resulted in the creation of the Credit Union Savings Association (CUSA) in 1977 as an engine for developing the SACCO sector in Zambia. CUSA grew into a formidable entity, with SACCOs increasing to over 1,000. Regrettably, CUSA collapsed in 1992 after involving itself in agricultural credit which failed due to severe droughts and the Zambian government’s subsequent declaration of amnesties to the borrowers, leading to CUSA and its members’ fund being lost. Following this, most SACCOs in Zambia collapsed (Lolojih, 2009). Moreover, the collapse of CUSA in 1992 left a dent in this subsector in Zambia. However, the 1990s saw the re-emergence of the SACCO sector. The Ministry of Finance (2020) states that the country’s SACCOs register had 4,770 registered SACCOs out of which 1,197 were

active SACCOs as of 2017. The total membership stood at 1.5 million distributed across Zambia, owning assets worth USD 25.2 million (World Council of Credit Unions, 2019). Moreover, SACCOs represent 0.3% of Zambia's Gross Development Product (GDP). This is on the lower end compared to countries such as Kenya, the country with the strongest SACCO movement in Africa, where SACCOs account for as much as 45 percent of the country's GDP (Bwana and Mwakujonga, 2013). A study of SACCOs in Zambia cited lack of access to finance or capital as one of the top three problems impeding the growth of SACCOs (Ministry of Finance, 2020). The purpose of this study was to analyze the effect of capital structures on the growth of SACCOs in Lusaka Province, using panel data for the period 2017 to 2021, and determine the magnitude of the variables with the most influence on the growth of SACCOs.

1.1 Problem Statement

Zambia had one of the lowest growth rates of SACCOs in Africa with total assets of US\$25.3 million in 2017 compared to Kenya at US\$7.0 billion, Ethiopia at US\$577.3 million, Tanzania at US\$599.5 million, Rwanda at US\$137.2 million, Ghana at US\$187.3 million – among other comparable countries (World Council of Credit Unions, 2017). Whereas the Zambia National Financial Inclusion Strategy 2017 – 2022 recognizes SACCOs as a key financial delivery channel and instituted strategies to grow this sector, not much success has been achieved as evidenced by the dismal contribution of SACCOs to the national GDP at only 0.3% ((Ministry of Finance, 2017a)). Prior studies by (Henock, 2019), (Dao and Ta, 2020), (Weshah, 2022), (Hamam, Layyinaturrobaniyah and Herwany, 2020), and (Shilimi, 2021) have shown that the lack of growth of SACCOs has threatened their sustainability such that they have not been able to absorb their operational costs. This has led to the losses being absorbed by members' savings and share capital, resulting in impairment. Most studies on capital structure and its impact on SACCO growth or performance, such as (Bazzana and Catturani, 2021) and (Pevná, 2021) were conducted in Europe; (Ndiege and Kazungu, 2020b) in Tanzania; (Mmari and Thinyane, 2019) in Lesotho; (Sathyamoorthi et al., 2016) in Botswana; while some studies, (Barus et al., 2017b), (Kahuthu and Kenyatta, 2016), (Olando, Jagongo and Mbewa, 2013), (Cheruiyot and Njogo, 2021), (Kimemia, Namusonge and Sakwa, 2021), (Mwaniki and Ndambiri, 2018), and (Lekaaso, Cheron Lecturer and Rintari Lecturer, 2020), have been

done in Kenya. Largely missing from these studies and literature is the focus on capital structure on the growth of Zambian SACCOs in general and Lusaka Province in particular.

1.2 Capital Structure and Growth of SACCOs

1.2.1 Capital Structure

Capital structure has its origin in the celebrated paper by Modigliani and Miller (1958), who proved that the choice between debt and equity financing has no material effects on the value of the firm or the cost or availability of capital. They assumed perfect and frictionless capital markets, in which financial innovation would quickly extinguish any deviation from their predicted equilibrium (Harris and Raviv, 1991). According to (Mursalim, Mallisa and Kusuma, 2017), one of the most important decisions that a firm can make is the financing decision. (Modugu, 2013) defines capital structure as the different options used by a firm in financing its assets. (Myers, 2001) concurs that capital structure attempts to explain the mix of securities and financing sources used by corporations to finance real investment. Moreover, (Modugu, 2013) posits that capital structure decisions pose a lot of challenges to firms. Determining an appropriate mix of capital structure is one of the most strategic decisions public interest entities are confronted with. A wrong financing decision tends to stall the fortunes of any business. Financing choices can be determined by a combination of many factors that may be related to the characteristics of the firm as well as to their institutional environments. Financing decisions by firms are called capital structure.

1.2.2 Determinants of Capital Structure

(De Jong, Kabir and Nguyen, 2007) argue that a firm's capital structure is not only influenced by firm-specific factors but also by country-specific factors. (De Jong, Kabir and Nguyen, 2007) compare the capital structure of firms from 19 developed countries and 11 developing countries. They find that institutional differences between developed and developing countries explain a large portion of the variation in the use of long-term debt. They also observe that some institutional factors in developing countries influence the leverage of large and small firms differently. Other determinants of capital structure include macroeconomic factors of countries, firm size, industry or sector, and age of the firm (Serghiescu and Văidean, 2014).

1.2.3 Savings and Credit Co-operative Organizations (SACCOs)

SACCOs were invented in South Germany in 1846 at the time of agricultural crisis and continued heavy drought in Europe, by two community business leaders: Freidrich W. Reifeisen and Herman Schultze-Delitsche, who are considered the founding fathers of the SACCO movement (Shilimi, 2021). In Africa, the idea of SACCOs was first described and discussed in 1955 in Jipara, a small town in the upper west town of Ghana, the idea was brought by the Roman Catholic priest, Father John McNulty from Ireland (Olando, Jagongo and Mbewa, 2013). One of the major cornerstones of SACCOs is that they are user-owned, user-controlled, and user-benefitted organizations (Mungania and Karanja, 2015). Zambia had six SACCOs at independence in 1964, rapidly increasing to 500 by 1976, which resulted in the creation of the Credit Union Savings Association (CUSA) in 1977 as an apex statutory body for developing the SACCO sector in Zambia. CUSA grew into a formidable entity and mobilized resources that SACCOs accessed to supplement their resource pool, leading to SACCOs increasing to over 1,000 by 1992 (Billima-Mulenga, Mwenge and Masumbu, 2019). Regrettably, CUSA collapsed in 1992 after involving itself in agricultural credit which failed due to severe droughts and the Government's subsequent declaration of amnesty to the borrowers, leading to CUSA and its members' fund being lost. Following this, most SACCOs in Zambia collapsed. SACCOs became invisible in Zambia and were often dismissed as relics from the past.

The Zambia government repealed the Cooperative Societies Act of 1970 and replaced it with the Cooperative Societies Act number 20 of 1998. The new Act provided for the cooperative movement to take care of its activities under the full responsibility of the cooperators themselves, running cooperatives as business entities. Moreover, the Zambia government formulated a National Cooperative Development Policy aimed at regulating and promoting cooperative development in the context of a socio-economic environment, with an emphasis on cooperatives being operated on sustainable and viable commercial business principles. Due to the revamping of the legal and business environment, CUSA rebranded to the National Association of Savings and Credit Unions (NASCU) in 2012, leading to the emergence of self-sustaining SACCOs (Ministry of Finance, 2020).

1.2.4 Growth of SACCOs

In Sub-Saharan Africa, the SACCO movement has been growing in popularity and now comprises between 30 to 50 percent of all cooperative enterprises and provides financial

services to 8.81 percent of the population, with combined assets of US\$24 billion (World Council of Credit Union, 2022). For countries such as Kenya, SACCOs contribute about 47 percent of the GDP and 34 percent of the national savings (Gicheru, 2020); empirical evidence indicates further that some 78 percent of the Kenyan people derive their livelihood either directly or indirectly from cooperatives. In the case of Zambia, the Ministry of Commerce, Trade, and Industry (MCTI) register has 4,770 registered SACCOs out of which 1,197 are active. The 1,197 SACCOs tie in with the WOCCU statistics, which show a total membership of 1.5million, and owning assets worth USD25.3million (World Council of Credit Unions, 2021). SACCOs represent a 0.3 percent of Zambia's GDP (Ministry of Finance, 2017b). Zambia' Seventh National Development Plan (7NDP) for the period 2017 to 2021 defined cooperative development as one of the important strategies to achieve enhanced job creation in the economy (Ministry of National Development Planning, 2017). The plan did not specifically articulate how cooperatives such as SACCOs would be strong contributors to the economic development of the country. Further, even though the 2017 National Financial Sector Development Policy proposed the enacting of relevant legislation to provide for the formalization and supervision of SACCOs – these remained a pipe dream (Ministry of Finance, 2017). The 7NDP was succeeded by the Eighth National Development Plan (8NDP) for the period 2021 to 2026, focusing on among others, enterprise development.

Unlike the 7NDP which did not explain how the cooperative sector would be supported, the 8NDP clearly states that it will support the cooperative sector by providing access to finance (Ministry of Finance and National Planning, 2022). However, it is evident from both national development plans that the government has not adequately explained in clear terms how the SACCO sub-sector would be catalyzed to achieve growth. Focus appears to be more on agricultural and production-focused cooperatives, with no mention of the SACCO sub-sector as a potential strong contributor to economic development in the two (2) plans. Further, even though the National Financial Inclusion Strategy for 2017 – 2022 articulated action items for strengthening the reach and sustainability of SACCOs, through expanding linkages between SACCOs and formal financial institutions, reviewing feasibility of incorporating SACCOs into financial sector legal and regulatory framework, and promoting sustainable SACCOs through technical assistance and expanded product

offerings (Ministry of Finance, 2017) - largely missing in these intentions were concrete implementation of these plans.

1.3 Conceptual Framework

The variables of the study constituted of independent variables, which included equity financing, retained earnings, debt financing, and member savings. The dependent variable included assets, membership, number of employees, employee competence, profits, dividends, and capital reserves. The conceptual framework is illustrated in *Figure 1-1* below.

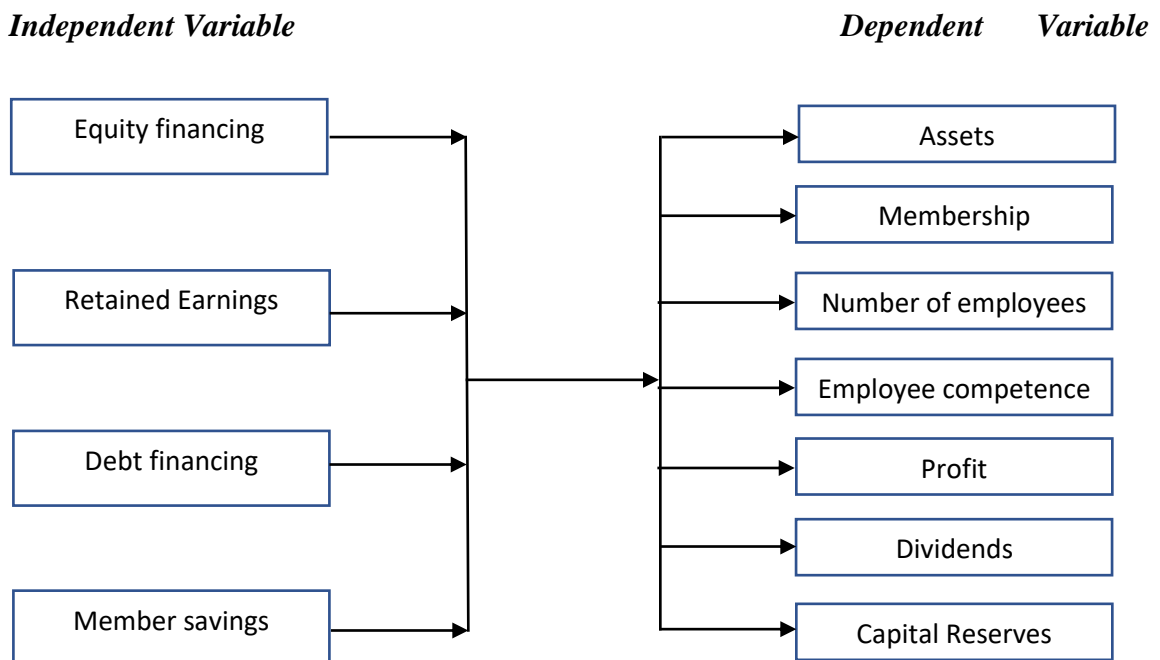


Figure 1-1: Conceptual Framework for the study

2. Methodology

This study used a descriptive survey in soliciting information on the effects of capital structure on the growth of SACCOs in Lusaka Province since it provides insights into the research problem by describing the variables of interest.

2.1 Study Population

The target population of the study comprised 59 registered SACCOs in Lusaka Province between 2017 - 2021. The population size was determined by the number of registered SACCOs in line with the register held at the Registrar of Cooperatives according to the Cooperative Society's Act number 20 of 1998.

2.2 Sampling Technique

Regarding SACCOs as the unit of analysis, no sampling technique was necessary as the study collected data from all elements in the sampling frame which was equivalent to the target population. However, regarding primary data collection, the purposive sampling method was used. The importance of using the non-probabilistic method of sampling emanated from the technical nature of the research study whose questions could only be answered adequately by a few people in the SACCOs establishment.

2.3 Sample Size

The studied population of 59 SACCOs represented the whole population of the registered and active SACCOs as of 31 December 2021. Thus, the sampling frame was the whole population of the 59 SACCOs.

2.4 Data Collection Procedure

The research questionnaires were sent to all individual SACCOs comprising the 59 registered SACCOs as of 31st December 2021. Data was also collected from secondary sources and specifically from audited accounts from individual SACCOs. The data was vetted, analyzed, and manipulated to make a generalised conclusion about the whole population.

2.5 Data Analysis

The data was collected and analyzed using the computer software known as SPSS version 26.0. Collected data were checked for errors of omission or commission before being keyed into the computer system. Multivariate analysis was conducted to establish the correlation between capital structure and growth of SACCOs, Principal Component Analysis was used to reduce the number of variables and extract the most important information from our dataset but retaining as much variance as possible.

3. Results

3.1 Response Rate

A total of 59 questionnaires were sent out to Senior Managers drawn from 59 SACCOs that were in operation during the period 2017 – 2021 in Lusaka Province, out of which 42 were returned, giving a response rate of 71.2 percent. (Mugenda and Mugenda, n.d.) argue that a 50 percent response rate is adequate, 60 percent good and above 70 percent was very good. Based on this assertion the response rate for this study can be said to be very good at 71.2 percent.

3.2 Assessment of data for Principal Component Analysis suitability

Before commencing our data analysis, it is crucial to perform two testing procedures to ascertain whether the data are appropriate for analysis using Principal Component Analysis (PCA). To accomplish this, we utilize the following two tests.

3.2.1 Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy

KMO index or measure of sampling adequacy is a numerical value that falls between 0 and 1. If this index is equal to or >0.50 , it indicates that the sample is appropriate for performing PCA (Taherdoost, Sahibuddin and Jalaliyoon, 2020). A measure of sampling adequacy was conducted on the variables and the results showed an overall result of 0.6716 as shown in *Table 3-1*, confirming the variables would be subjected to PCA.

Table 3-1: KMO Measure of Sampling Adequacy for Dependent Variables

Dependent Variable	Kaiser-Meyer Olkin
Share Capital	0.6070
Capital Reserves	0.4928
Assets	0.7363
Staff strength	0.9448
Dividend	0.7713
Membership	0.6557
Profit	0.7216
Number of Shares	0.6516
Overall	0.6716

3.2.2 Bartlett's Test of Sphericity

Bartlett's test of Sphericity (Bartlett 1950) provides a chi-square output that must be significant. It indicates the matrix is not an identity matrix and accordingly it should be significant ($p < 0.05$) for factor analysis to be suitable (Taherdoost, Sahibuddin and Jalaliyoon, 2020). The result of the Bartlett test of Sphericity at 0.000, which is less than 5%, indicates that there is a highly significant relationship among the variables in measuring the variables under study.

3.3 Principal Factor Extraction

In this study, the Eigenvalue criterion was used to determine the number of initial unrotated factors to be extracted. The factors that were under consideration pertained to the independent variables as shown in *Table 3-2* below. The eigenvalue is a ratio between

the common variance and the specific variance explained by a specific factor extracted. The eigenvalue of a factor represents the amount of the total variance explained by that factor. A positive eigenvalue is significant, and it indicates that more common variance than unique variance is explained by that factor (Taherdoost, Sahibuddin and Jalaliyoon, 2020).

Table 3-2: Principal Factor Extraction of the Independent Variables

Factor/Description	Eigenvalue	Difference	Proportion	Cumulative
Factor 1/Retained Earning	2.13702	1.80659	0.8717	0.8717
Factor 2/ Equity Financing	0.33043	0.34639	0.1348	1.0065
Factor 3/Member Savings	-0.01596		-0.0065	1.0000

LR test: independent vs. saturated: $\chi^2(3) = 170.66$ Prob> $\chi^2 = 0.0000$

Since no SACCO utilized Debt Financing in their capital structure, this factor was expunged. Additionally, member savings were also expunged since it gave a negative score.

3.4 Log10 transformation of Independent Variables

Log10 transformation was undertaken on the independent variables, to make skewed original data more normally distributed to improve its linearity and boost the validity of statistical analyses. This implies that the independent variable has a multiplicative relationship with the dependent variable instead of the usual additive relationship. Hence the need to express the effect of a one-unit change in the x-axis on the y-axis as a percent.

Figures 3-1 to 3-3 show the transformed data.

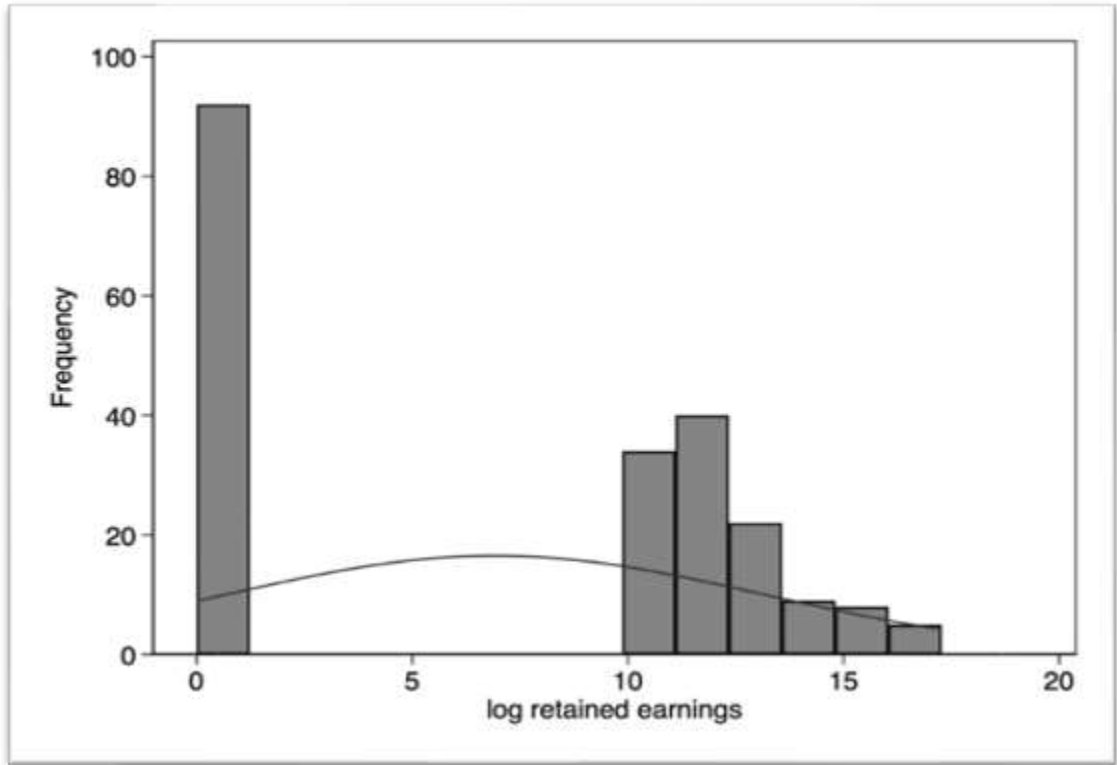


Figure 3-1: Log10 Transformation of Retained Earnings

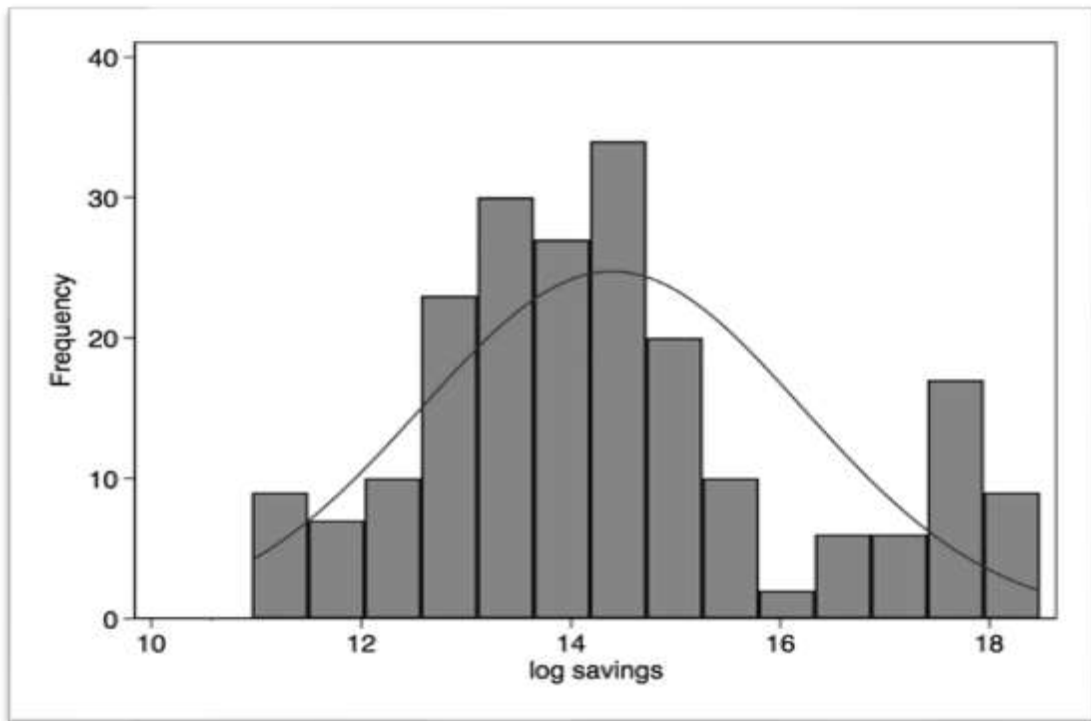


Figure 3-2: Log10 Transformation of Savings

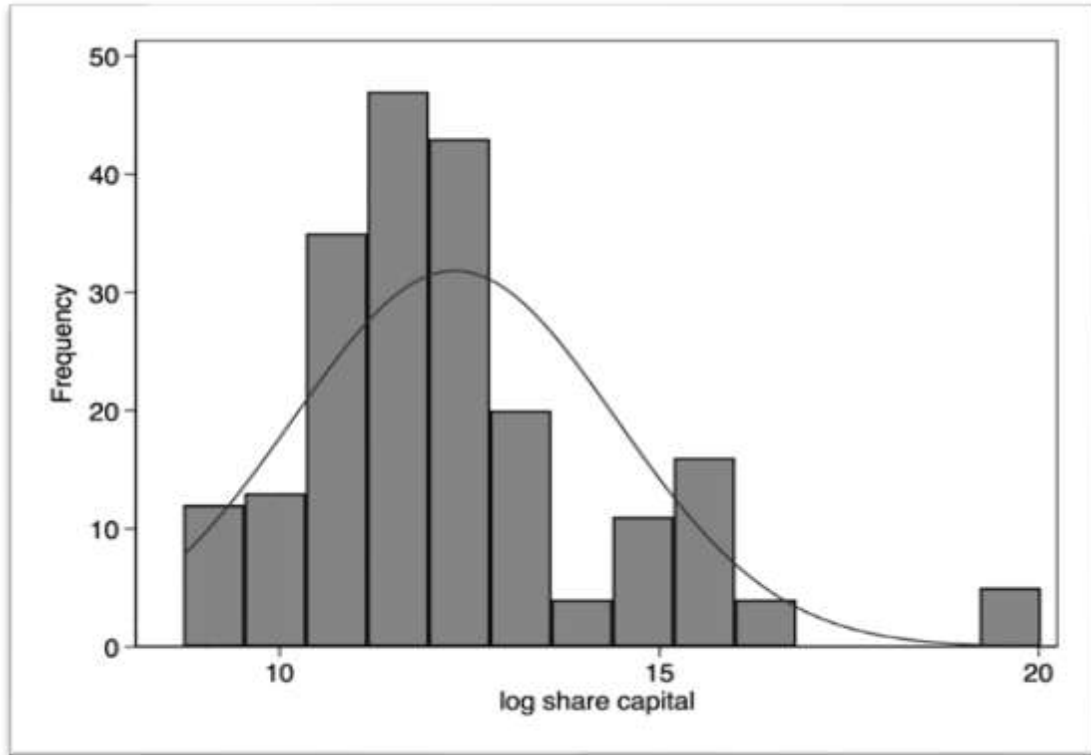


Figure 3-3: Log10 Transformation of Savings

3.5 Factor Rotation and Interpretation

Factors are sets of underlying composite dimensions of all the variables in the data set, while loadings are the correlation coefficients between the variables and the factors. Factor loading assumes values between zero and one, of which loadings below 0.3 are considered unacceptable (Mugenda and Mugenda, n.d.). This study assumed factor loadings above 0.3 as acceptable, while those less than 0.3 were dropped off.

Table 3-3: Factor Analysis of Independent Variables

Factor/Description	Eigenvalue	Difference	Proportion	Cumulative
Factor 1/Retained Earnings	2.13702	1.80659	0.8717	0.8717
Factor 2/Equity Financing	0.33043	0.34639	0.1348	1.0065
Factor 3/Member Savings	-0.01596		-0.0065	1.0000

LR test: independent vs. saturated: $\chi^2(3) = 170.66$ Prob> $\chi^2 = 0.0000$

Table 3-4: Factor Analysis of Dependent Variables

Factor/Description	Eigenvalue	Difference	Proportion	Cumulative
Factor 1/Share Capital	4.59659	2.76499	0.6795	0.6795

Factor 2/Share Reserves	1.83160	1.56884	0.2708	0.9503
Factor 3/Assets	0.26275	0.14576	0.0388	0.9891
Factor 4/Number of employees	0.11699	0.11122	0.0173	1.0064
Factor 5/Dividends	0.00577	0.00901	0.0009	1.0072
Factor 6/Number of members	-0.00325	0.00419	-0.0005	1.0068
Factor 7/Profit	-0.00744	0.03085	-0.0011	1.0057
Factor 8/Number of Shares	-0.03829	.	-0.0057	1.0000

LR test: independent vs. saturated: $\chi^2(28) = 3162.33$ Prob> $\chi^2 = 0.0000$

Interpretation: For the independent variables, factors one and two were retained, while factor three was expunged – factors one up to five were retained for dependent variables, and factors six up to eight were dropped.

3.6 Factor Correlation between Capital Structure and Growth of SACCOs

The three independent factors of savings, retained earnings, and member savings were subjected to further analysis to determine if they had a positive relationship with the growth of SACCOs in Lusaka Province. Results depicted in *Tables 3-5, 3-6, and 3-7* below show that each of these components has a positive relationship with the growth of SACCOs.

Table 3-5: Factor correlation between Member Savings and the SACCO growth model

Factor	Coefficient	Std Err	Z	P>|z|	[95 percent conf. Interval]
Savings	-5.30e-09	2.13e-09	-2.48	0.013	-9.48e-09 -1.11e-09
_cons	.052949	.1588191	0.33	0.739	-.2583308 .3642288
/sigma_u	1.017195	.1123259			.8192348 1.26299
/sigma_e	.168181	.			. .
rho	.9733907	.			. .

LR test of $\sigma_u=0$: $\chi^2(1) = 640.62$ Prob $\geq \chi^2 = 0.000$

Interpretation: For every one percent increase in savings, SACCOs grew by 0.17/100 units and the relationship is statistically significant (p-value <0.05).

Table 3-6: Factor correlation between Retained Earnings and the SACCO growth model

Factor	Coefficient	Std Err	z	P>|z|	[95 percent conf. Interval]
Retained earnings	1.63e-07	1.29e-08	12.63	0.000	1.37e-07 1.88e-07
_cons	-.1465678	.0485079	-3.02	0.003	-.2416415 -.0514941
/sigma_u	.2943673	.	.	.	.
/sigma_e	.180521	.0126532	.	.	.1573492 .2071051
Rho	.7267038	.	.	.	.

LR test of sigma_u=0: chibar2(01) = 59.41 Prob >= chibar2 = 0.000

Interpretation: For every 1 percent increase in Retained Earnings, SACCOs grew by 0.18/100 units, and suffice to mention here that the relationship is statistically significant (p-value <0.05).

Table 3-7: Relationship between Share Capital and the SACCO growth model

Factor	Coefficient	Std Err	z	P>|z|	[95 percent conf. Interval]
Share Capital	1.30e-08	1.08e-10	120.46	0.000	1.28e-08 1.32e-08
_cons	-.1684623	.0083505	-20.17	0.000	-.184829 -.1520956
/sigma_u	.0314263	.0103965	.	.	.0164323 .0601021
/sigma_e	.0964094	.0052596	.	.	.0866328 .1072892
Rho	.0960491	.0610546	.	.	.0223911 .2735543

LR test of sigma_u=0: chibar2(01) = 3.31 Prob >= chibar2 = 0.034

Interpretation: For every 1 percent increase in Share Capital, the growth index increases by 0.09/100 units, and suffice to mention here that the relationship is statistically significant (p-value <0.05).

4. Discussion of the Findings

The objective was to examine the influence of capital structure on the growth of SACCOs in the Lusaka Province of Zambia. A total of four dimensions of capital structure were reviewed, including; retained earnings, equity financing, member savings, and debt financing. Descriptive statistics, principal component analysis, correlation analysis, and multivariate regression analysis were used to answer the research problem.

The overall results revealed a statistically significant relationship between elements of capital structure, namely; retained earnings, equity financing, and member savings, to the growth of SACCOs in Lusaka Province of Zambia. The study further revealed that

SACCOs in Lusaka Province did not utilize debt financing as one of the key capital structures.

5. Conclusion and Recommendations

This study established the key capital structure of retained earnings, member savings, and equity financing as vital for a SACCO to achieve growth, as well as parameters for measuring growth that included assets, profits, membership, number of employees, dividends, employee competency, and capital reserves.

It was recommended that SACCOs pay special attention to the right mix of capital structure and strategically utilize all the available options if they were to achieve growth. In line with Pecking Order theory, SACCOs may prioritize internal financing and progressively use externalize financing such as debt financing as an option.

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