Advances in Social Sciences Research Journal – Vol. 10, No. 12
Publication Date: December 25, 2023
DOI:10.14738/assrj.1012.16049.
Milambo, F., Haabazoka, L., & Mwanaumo, E. (2023). Capital Structure and Sacco Growth: A Systematic Literature Review and Meta-Analysis. Advances in Social Sciences Research Journal, 10(12). 205-218.

Capital Structure and Sacco Growth: A Systematic Literature Review and Meta-Analysis

Fidelity Milambo
Graduate School of Business, University of Zambia

Lubinda Haabazoka
Graduate School of Business, University of Zambia

Erastus Mwanaumo
Directorate of Research and Graduate Studies, University of Zambia

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.

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 [1]. 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 [2]. 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 [2]. Yet SACCO growth was not even across all countries or among all SACCOs. SACCOs that grew were those that leveraged their capital structure [3]. 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 [4]. 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 [5]. The cornerstone of the SACCO sector is its ability for members to contribute equitably to the capital of their SACCO [6]. 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.

RESEARCH METHODOLOGY

According to [7], 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 [7]. Further, [8] 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 [9]. 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 [7]. 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 [7].

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?

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

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

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Meta-data, fee articles, and review articles	Exclusion
Exclude articles that do not cover capital structure and SACCO growth	Exclusion

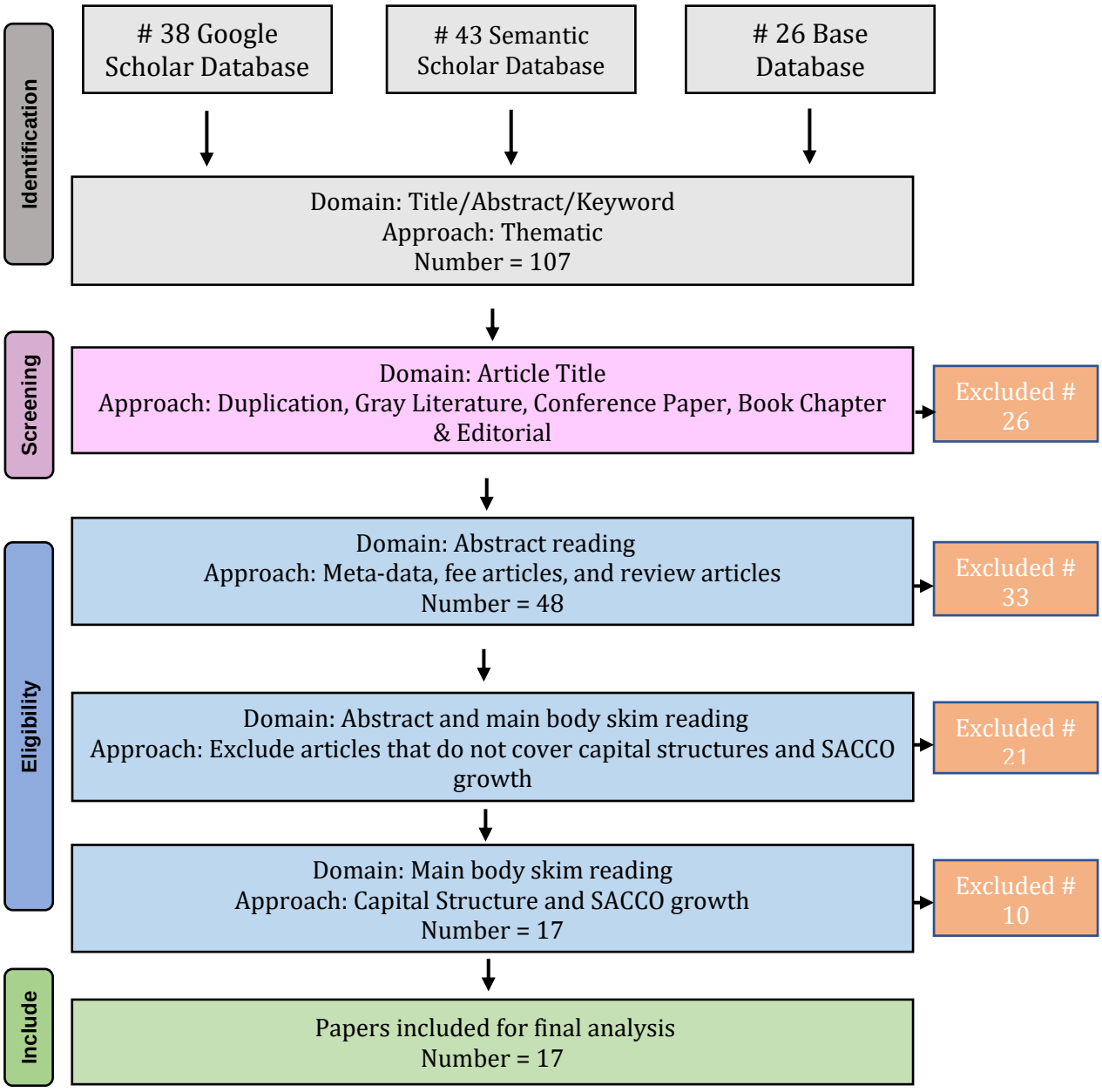


Figure 1: Process flow diagram for the search methodology

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.

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
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
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
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.
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
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.
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.
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.
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
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

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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
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
12	Effect of Capital Adequacy on the financial performance of SACCOs in Samburu County	Lekaaso, G.	2020	Kenya	Questionnaires	Descriptive research survey design	Survey
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
14	The Capital Structure of Co-operative Firms: An International Comparative Study	Bazzana, F. & Catturani, I.	2021	Netherlands	Questionnaire	Descriptive research survey design	Survey
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
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
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

	Findings
1	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	The SACCOs' financial pe rformance 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	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 study conclusions on the basis of findings revealed that core capital and membership growth have positive impact on SACCO's financial performance.
5	The study revealed that share capital has an insignificant positive relationship withperformance 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	The findings underscored that the selected SACCOSs 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	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	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	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	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	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	The study established that capital adequacy did not have a significant influence on the financial performance of SACCOs in Samburu County.
13	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 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	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	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	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.

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.

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.

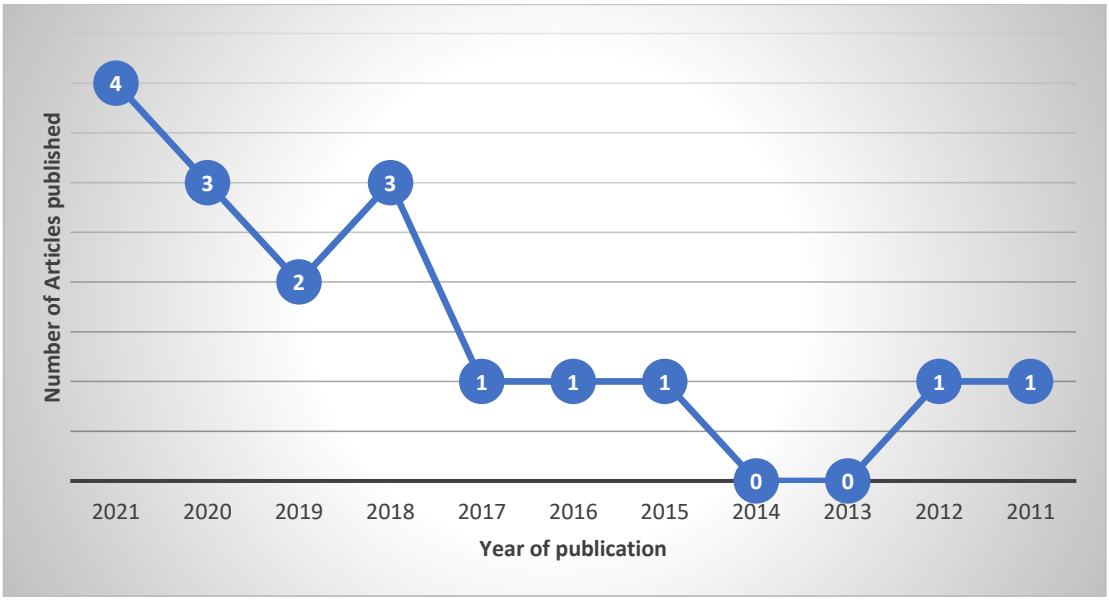


Figure 2: Articles by year of publication

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 [1]. The rest of Africa had 17.6% of articles, Europe accounted for 17.6% and Asia 5.9%.

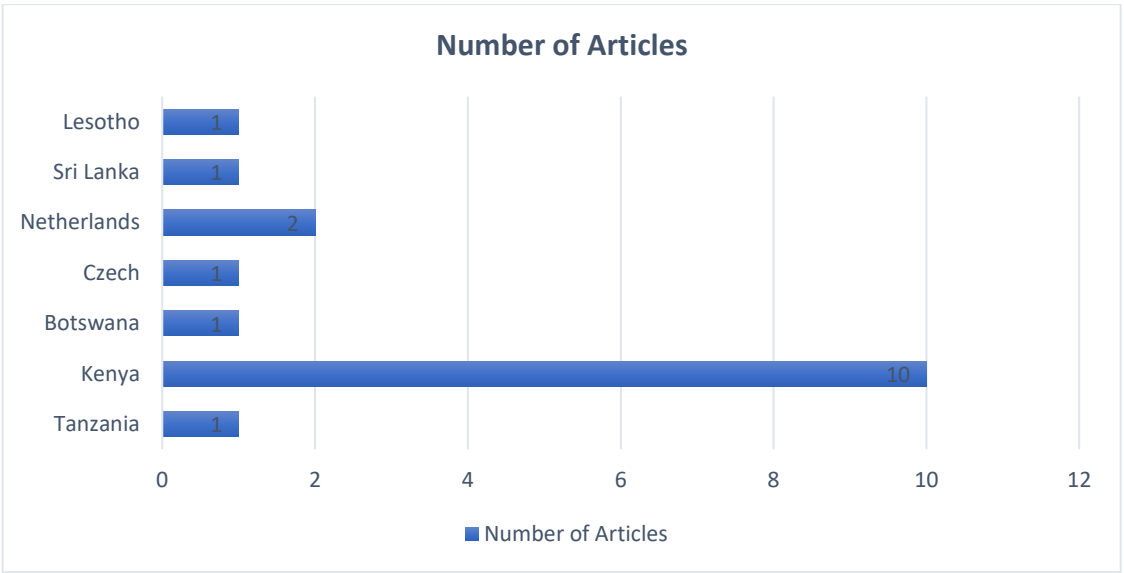


Figure 3: Articles by Country of publication

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%.

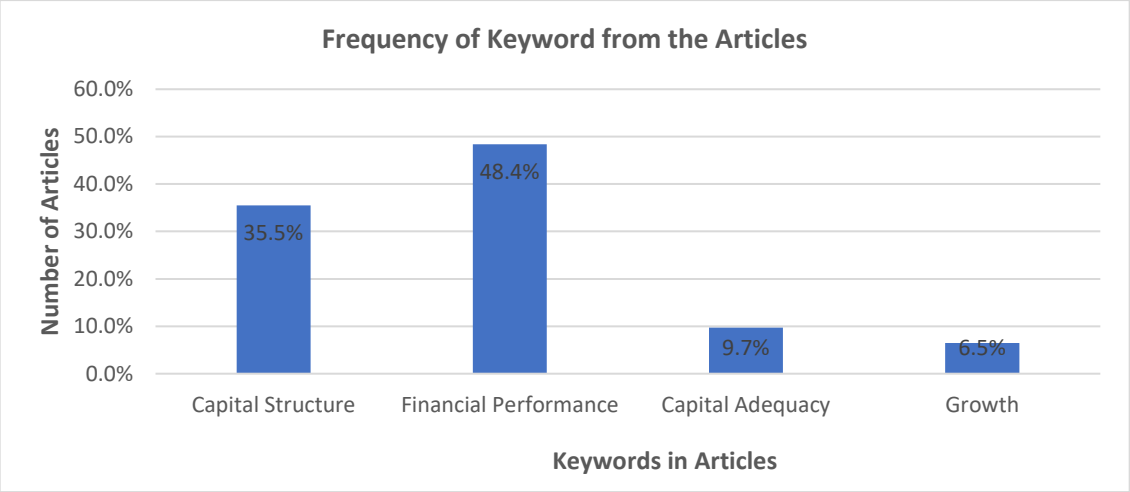


Figure 3: Keywords in Articles on Capital Structure and SACCO growth

The state-of-art studies have been carried out in different contexts to establish the relationship between SACCOs' capital structure and growth. In Ethiopia, [10], determined factors affecting sustainability and growth of SACCOs in Eastern Ethiopia and found a relationship between capital structures and growth and sustainability. [11] concluded that capital structure has a negative relation to firm value and growth. [12] 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. [13] 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. [14] found that higher-growth firms were on average younger. [15] indicated that core capital, credit management, liquidity, and membership growth are significant contributors to the growth of SACCOs.

According to [16], 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. [17] 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. [18] found out that there was a weak correlation between the capital structure and the growth of interest-bearing assets such as SACCOs.

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.

Current Challenges That Impair Capital Structure and SACCO Growth Studies:

Most studies on capital structure were conducted in Europe [19]; Asia [20] and [21]; Kenya [22], [23], [24], [25], [26], [27], [28], [29]; Lesotho [30], Botswana [31] and Tanzania [32]. 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.

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 [21]. 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.

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

URL: http://dx.doi.org/10.14738/assrj.1012.16049

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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