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CAPITAL STRUCTURE AND PERFORMANCE OF SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES IN TANZANIA

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ABSTRACT

The study examined the impact of capital structure on the performance of Savings and Credit Co-operative Societies (SACCOS). Specifically, the study examined how the sources of capital and how the allocation of SACCOS capital influences the performance of the SACCOS. Using secondary data of the SACCOS financial statements from Tanzania and, random effect regression model in the analysis, the findings reveal that higher net loan, liquid investment, members' savings and institutional capital are both crucial determinants of performance. Also, there was no evidence on the impact of leverage on the performance of SACCOS. Moreover, the findings indicated that allocating more resources into non-financial investments lower the performance. The study recommended that giving loans should be the major business of SACCOS. SACCOS should be encouraged to focus on extending financial services to its members who will invest, rather than SACCOS investing in non-financial investments. Also, members' savings and institutional capital should remain the primary financing instruments in SACCOS.

Keywords: *Capital Structure, Performance, Co-operatives, SACCOS, Tanzania*
Paper type: *Research paper*
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1. INTRODUCTION

An analysis of a firm's capital structure is an important practice for getting acquainted with information about the sources of funding and their implications. The capital structure which is how a firm finances its assets, through some combination for instance of equity and debt (Taani, 2013), is important component toward explaining the firm's performance (Kipesha & James, 2014). The combination of external and internal sources of funds that make up capital structure is highly associated with the competence of a firm to fulfill its objectives (Mireku, *et al.*, 2014). Consequently, the capital structure has become an important concept in recent finance researches whereby one of the main and frequent inquiries is the relationship between capital structure and performance of a firm, which is also the subject of this study.

Many recent studies on capital structure and performance have considered commercial banks (Kipesha & James, 2014; Taani, 2013), non-financial firms (Mireku *et al.*, 2014; Xiang *et al.*, 2014; Zhong *et al.*, 2014; Sheikh & Wang, 2013; Ahmad *et al.*, 2012; Norvaisiene, 2012; Shubita & Alsawalhah, 2012; Azhagaiah & Gavoury, 2011; Ebaid, 2009; Zeitun & Tian, 2007) and microfinance institutions (Bogan, 2012; Kar, 2012; Hoque *et al.*, 2011; Bogan, *et al.*, 2007; Kyereboah-Coleman, 2007). Despite the growing literature on capital structure and firm performance however, there are fewer works in the case of co-operative financial institutions. This study, therefore, differs from many

former works by focusing on capital structure and performance of Savings and Credit Co-operative Societies (SACCOS) using Tanzania as the case study.

The SACCOS are member-based microfinance institutions (MFIs) which are historically developed to meet financial services to support the lower-income earners become economically active (Fiorillo, 2006; Wangwe & Lwakatare, 2004). Currently, the SACCOS industry is among the main and widespread form of co-operatives as well as microfinance institutions in many low-income countries (Kaleshu & Temu, 2012; Temu & Ishengoma 2010; Fiorillo, 2006). The most essential thing is that literature attests that SACCOS are the important drive in financial deepening and economic prosperity especially among the rural population (Auka & Mwangi, 2013; Nahayo *et al.,* 2013). Despite the impressive growth in the number of SACCOS across the globe, various empirical evidence shows that the life span of many SACCOS in Africa is less than a decade (Ssekiziyivu, Mwesigwa, Bananuka, & Namusobya, 2018). In Tanzania particularly, it has been reported that about 70% of registered SACCOS have poor performance that leads to their collapse (TCDC, 2018). As such the desire to understand how these institutions work and can be boosted out is high among governments, policymakers, academicians and other practitioners.

As co-operative institutions traditionally the main sources of capital for SACCOS is member savings. A member should save if s/he has to borrow. But recent literature, for instance, Kaleshu and Temu (2012) and Temu and Ishengoma (2010) attest that SACCOS are financed both through internal sources (mainly shares, savings, equity or institutional capital) and external sources (loan from commercial banks). So the matter is how this combination of capital structure affects the performance of SACCOS. The answer for such question is important as will contribute to informing on how to manage SACCOS and ensure their long-term contributions to poverty reduction (Marwa & Aziakpono 2014; Nyamsogoro, 2010).

To make scientific analysis, we defined the performances of SACCOS based on the objective which SACCOS have to fulfill as co-operative organizations. As co-operatives the basic characteristics of SACCOS is that they are members based, owned, controlled and used organizations, thus they have wide varieties of functions to perform at one time, consequently have multiple objectives (Moyer, 2014). Generally, the literature agrees that the core objective is to maximize members' returns or welfare, both socially and economically. To ensure the core objective is met, the neoclassical co-operative theorists assert that co-operative institutions work toward; maximization of co-operative net earnings, maximize operating efficiency, maximization of member returns and maximization of quantity (Marwa, 2014; Moyer, 2014). According to Moyer, these are specific objectives or strategies of co-operative organizations.

These specific objectives can be translated in more simple ways which can further give financially measurable proxies. That is: to archive certain level of net income is the same as profit maximization (profitability); to maximize operating efficiency is signify efficiency and sustainability, and maximization of quantity is the same with reaching more clientele (outreach). In this connectivity, therefore, the current study use profitability, sustainability, and efficiency as the proxy measures for the SACCOS performance indicators. These measures have been used in previous literature (e.g. Marwa & Aziakpono, 2014; Nyamsogoro, 2010; Temu & Ishengoma 2010).

In the case of capital structure, we used PEARLS[1] monitoring system ratios by concentrating on 'E' which stands for the effectiveness of the financial structure. This element gives a broad understanding of how SACCOS is funding and allocating its resources (Tirfe, 2014; Richardson, 2012). It gives an understanding of the leverage, savings, shares, and capital concerning the SACCOS assets. The PEARLS monitoring system is widely used by practitioners including policymakers, managers, the board of directors, members and researchers to judge and suggest on the performance of a SACCOS. The most key aspect is the decision criteria for which a SACCOS is categorized as either poorly performing or otherwise, which are carefully employed in this work.

[1] PEARLS = Protection, Effective financial structure, Asset quality, Rates of return and cost, Liquidity and Sign of growth. For a broader understanding visit (Richardson, 2012).

1.1 SACCOS in Tanzania

Savings and Credit cooperatives are financial institutions that are member-owned, member-controlled and member-used. Co-operative philosophy[2] connects membership to a common bond that varies from geographical location, employer to religion. According to Kaleshu and Temu (2012), common bond allows people from different localities and activities to form and own SACCOS and ensures that the members know each other to guarantee effective management. Therefore, SACCOS have been useful to members, particularly the poor and low-income earners who are usually excluded from formal financial institutions (Wangwe & Lwakatare, 2004). As such, SACCOS are co-operative based Microfinance Institutions (MFIs) which provide financial access and inclusion to enable low-income earners to become economically active. Currently, the SACCOS industry is the primary and popular form of MFIs in many low-income countries and is increasingly becoming the high drive in financial deepening and economic prosperity (Auka & Mwangi, 2013; Nahayo, Gisele Mukakimenyi & Mutandwa, 2013).

Members are a group of people with the same interest who have agreed to save together and issue credits to each other for productive or visionary purposes (Kaleshu & Temu, 2012). SACCOS provide their members with an opportunity for accumulating their savings (Temu & Ishengoma, 2010). The accumulated savings, provide members with access to credit at fair and reasonable interest rates compared to commercial banks and other lending financial institutions. Ideally, the members of SACCOS through annual general meetings determine the interest rates for their organization.

In Tanzania, the history of SACCOS can be traced back to 1938 (Seimu, 2015) when the Agha Khan Foundation, supported the formation and registration of Tanganyika, Moshi, Tanga and Mwanza Credit Societies. In 1946, the same Ismailia Community established another Ismailia Credit Cooperative Society in Dodoma. The membership of these societies came from the Ismailia Indian Community, composed of traders who received loans as their main financial service.

No similar attempt was made by native Tanzanians owing to legal restriction, particularly, the 1923 Credit to Natives (Restriction) Ordinance, which denied natives access to credit. The natives remained on the periphery as far as access to credit is concerned until October 1961 when they got their first credit society named Kiyanga, registered in Dar es Salaam. Despite the legal constraints, savings and credits services all along were provided by most of the Agricultural Marketing Co-operatives (AMCOs), as an integral part of their business services to their members.

Access to financial services to growers was adversely affected following the abolition of the agricultural marketing co-operative unions in 1976. But, Tanzania's Co-operatives Societies Act of 1991, Financial Sector Reform Policy of 1991, the National Microfinance Policy of 2000 and the Co-operative Development Policy of 2002[3], were pivotal instruments that paved the way for the promotion of Savings and Credit Co-operative Societies (SACCOs) in Tanzanian Mainland. Tanzania's Co-operatives Societies Act of 1991, also provided the legal framework for the establishments of privately-owned equity-based institutions, registered under the Ministry of Co-operatives and Marketing. The 1991 Co-operatives Societies Act did not promote SACCOs particularly in rural areas, where farmers had lost the trust of co-operatives, following the malpractices among co-operative officials and lack of clear government policy. But promotional efforts after 1991, led to an increased number of SACCOS and membership in Tanzania from 156 societies with 19,884 members in 1991 to 5478 societies with 935,121 members by March 2014[4].

Currently, SACCOS in Tanzania account for more than 60% of all co-operative societies in Tanzania Mainland (Sumelius, Tenaw, Bee & Chambo, 2014). The Ministry of Agriculture, Food Security and Co-operatives (MAFC) of Tanzania report for the year 2012, indicates that there were 5,424 SACCOS, of which 56% was rural-based, with a

[2] Various writers including McKillop et al. (2011) clarify that credit unions are Co-operative organizations because they meet the principles of Co-operatives. SACCOS is also known as a credit union. The ICA official classifications of Co-operatives settle that SACCOS classified as consumer co-operatives institutions.
[3] Co-operative Development Policy of 2002 was in line with the 1995 ICA Statement of Cooperative Identify and Principles
4 The Department of Co-operative Development; Ministry of Agriculture Food Security and Co-operative

total of 1059213 members. In the same year, members' shares were Tshs. 55 billion (47.8 million USD), the amount of savings was Tshs. 75 billion (47.4 million USD), and loans were Tshs. 703.2 billion (444.2 million USD). According to the Bank of Tanzania (BOT) report, in the year 2012, SACCOS contributed 5% out of 22% of the proportion of the population formally included in the financial sector. Such a significant contribution made the government of Tanzania recognize the SACCOS as a major player in the cooperative movement in Tanzania.

1.2 Capital Structure and Performance

As it is pointed out in the introduction section, previous researches on the relationship between capital structure and performance have involved different types of firms. The most attention-grabbing thing in literature is the different conclusions reported in respect to this connection. Whereby the findings seem to differ across the studies both when there are different measures of performance and sometimes even when the same indicator is applied. In some situation, the same study reported different findings when it employed more than one indicators of performance. Also, many studies appear to use profitability as the indicator of performance and few used efficiency and sustainability. This is due to the reason that they (researchers) take the line of Investment Owned Firms (IOFs) in which the main objective is profit maximization. Contrary to the IOF's, in a co-operative institution like SACCOS, even though we cannot ignore profit maximization but it is not the core objective to overrule the performance of SACCOS. In this section, therefore, we provide a wide discussion on the previous empirical work findings for the tabled subject in regards to the different types of firms.

In case of commercial banks, for instance, Kipesha and James (2014) used panel data for 5 years and 38 banks operating in Tanzania and fixed effect regression model to estimate the relationship between leverage and performance. They indicated a negative trade-off between the use of debts and firm performance when the capital structure was measured using the ratio of debts to equity and performance was measured by cost efficiency and return on equity. Taani (2013) examines the impact of capital structure on the profitability of banks in Jordan using multiple regression models. The findings were that bank performance, which was measured by net profit, return on capital employed and net interest margin was significantly and positively associated with total debt, but the total debt was found to be insignificant in determining the return on equity. There are two important lessons here: First of all the two studies' findings disagree with each other though they all studied commercial banks. Also, different proxy measures may have impacts on the results. For instance, while all measures of profitability used in Taani (2013) were significantly and positively associated with total debt, return on equity was not.

Also, many studies have been conducted in the case of non-bank firms where the common result is that depending on leverage tends to affect performance negatively. In general, the negative relationship between capital structure and performance show that overleveraging may increase the lenders' influence which in turn limits the managers' ability to manage the operations, hence negatively affecting the firm performance. Example of studies that indicated significant negative impact of capital structure on the firm's profitability includes Ahmad et al. (2012) who investigated the effect of capital structure on Malaysian firms and asserted that a firm's capital structure had a significantly negative impact on the firm's profitability measured by Return on assets and return on equity. Zeitun and Tian (2007) investigated the effect of capital structure on corporate performance in Jordan and Sheikh and Wang (2013) investigated whether capital structure affects the performance of non-financial firms in Pakistan, both indicated that capital structure is negatively related to return on assets.

Also, Shubita and Alsawalhah (2012) revealed a significant negative relation between debt and profitability and they suggested that profitable firms depend more on equity as their main financing. Zhong *et al.*, (2014) showed that the asset-liability ratio and profitability have a significant negative correlated relationship, and shareholders equity ratio has a significantly positive correlated relationship with profitability in case of listed Chinese companies in the cultural media industry. Norvaisiene (2012) evidenced that the higher financial indebtedness level affects negatively the profitability ratios of companies in the Baltic countries (Lithuanian companies, Estonian companies, and Latvian companies). Xiang et al. (2014) showed that Small and Medium Enterprises (SMEs) in China experienced significant negative relations between their short term debt ratio and profitability. Contrary to much other literature, Ebaid (2009) investigating the impact of capital structure choice on firm performance

non-financial Egyptian listed firms, Using return on equity (ROE), return on assets (ROA) and gross profit margin, indicated that capital structure choice decision, in general terms, almost has no significant impacts on the firm's performance.

In the case of the studies that assessed the companies Stock Exchange (SE), they generally showed that companies with less debt have high-profit margins and good financial performance. Such conclusion was made by Mireku *et al.*, (2014) who established the relationship between capital structure measures and financial performances in Ghana Stock Exchange (GSE) and found that many measures of firm's performances were negatively correlated with financial leverage. Also, Azhagaiah and Gavoury (2011) analyzed the effects of capital structure on the Profitability of Information Technology firms and that increase in the use of debt fund in capital structure tends to minimize the net profit of the firms listed in Bombay Stock Exchange in India.

For the literature reviewed in the case of microfinance, empirical literature supports that microfinance should reduce dependency on external sources of funding. Microfinance institutions indeed need to be self-sustaining if they are to achieve their outreach potential providing rapid growth in access to financial services to poor people (Wambugu & Ngugi, 2012). For instance, Bogan (2012) and Bogan *et al.*, (2007) explored the effects of changes in capital structure on MFI efficiency and financial sustainability and asserted that increased use of grants by large MFIs decreases operational self-sufficiency. Besides, Hoque *et al.*, (2011) indicated that leverage decreases the relative level of outreach to the very poor, increases in the cost of capital leads to higher cost of borrowing, higher default rate, and increased risk. Also, Sekabira (2013) said debt and grants were negatively correlated to the operational and financial sustainability of Ugandan microfinance and thus MFIs must reduce dependence on debts and grants and resort to accumulating share capital for long-term sustainability.

However, Kyereboah-Coleman (2007) examined the impact of capital structure on the performance of microfinance institutions in Ghana, focusing on the amount of debt used to finance microfinance assets (leverage) and findings were different. They asserted that highly leveraged microfinance institutions have higher performance in terms of outreach, scale economies, and enhanced ability to deal with risk. Kar (2012) remain in between by indicating that an increase in leverage raises profit-efficiency in MFIs but cost efficiency is worsened with decreasing leverage and the negative significant impact of leverage on the depth of outreach. ◎
However, even though SACCOS are widely used financial institutions especially in developing economies no study was found in this subject in particular. Some works like Nyamsogoro (2010) studied the relationship between capital structure and sustainability by considering SACCOS as just a component of microfinance studied. This does not give a precise understanding of the behaviour of SACCOS. Thus this study is adding knowledge on capital structure, allocation of resources and performance using SACCO's experience.

2. DATA AND EMPIRICAL MODEL

This paper has deployed secondary data from financial statements of 60 audited SACCOS in Kilimanjaro Region in Tanzania for the years 2004-2011. The information employed was gathered from Co-operative Audit and Supervision Corporation (COASCO) in Kilimanjaro office. The data were unbalanced panel data with 399 total observations. The paper has used three proxy measures of performance (dependent variables) which are sustainability, profitability, and efficiency, as operationalized in Table 1 as explained in the introduction section, the three proxy measure for performance increases the horizon for analysis and interpretation. The Sustainability (SUS) is operating self-sufficiency that signifies the ability of an institution to cover its costs of operations, through internally generated income. In this proxy measure, an increasing ratio is encouraged. Profitability (PRO) measured as net income divided by average assets. This shows the financial productivity of credit services and investment activities whereas an increasing ratio is encouraged. Efficiency (EFF) is measured by the operating cost ratio whereby when the rate is decreasing; it means an improvement of efficiency. These measures have also been used in previous works such as Ahmad, Abdullah & Roslan (2012), Bogan (2012), Azhagaiah & Gavoury (2011) and Ebaid (2009) for different types of financial institutions.

Table 1: Performance Indicators

Variable	Formula
Sustainability (Operating self-sufficiency)	Total revenue/financial costs + operating expenses + loan loss provision
Profitability (Net income)	Surpluses(deficit) for the year (net income)/average total assets
Efficiency (Operating costs ratio)	Operating expenses + financial costs/average total assets

The PEARLS financial ratios were used to define and calculate the independent variables. The summary of the Effectiveness of financial structure ratio is as shown in Table 2. The use of PEARLS ratios in defining financial ratios in SACCOS is reliable and has been adopted by researchers including Kivuvo & Olweny (2014) and Maina, Owuor, Mutai & Kibet (2013). In this paper, the PEARLS monitoring provides three important types of information; these are leveraging level, resources allocation and goal achievement for each element (Tirfe, 2014; Richardson, 2012). Together with these ratios, the study included the year as an independent variable to increase understanding of the behavior of the SACCOS performance with time.

Table 2: PEALS monitoring system measure of financial effectiveness

Financial effectiveness indicator	Symbol	Goal
Total loan to members-provision to bad and doubtful debts (Net loan)/total assets	E1	70-80%
Cash and bank balances (Liquid investment)/total assets	E2	Max.10%
Investments (Financial investments) /total assets	E3	Max.10%
Buildings furniture and fixtures (Non-financial investments)/total assets	E4	0%
Members' savings (Savings deposits)/total assets	E5	70-80%
Short term loans (External credit)/total assets	E6	Max. 5%
Members' shares (Member share capital)/ total assets	E7	10-20%
Reserves + accumulated surplus (Institutional capital)/total assets	E8	Min 10%

A panel regression model was used in the analysis of the relationship between capital structure and the performance of SACCOS (Gujarati (2012). The operational panel regression model was identified as;

$$Y_{it} = \beta_{0i} + \beta_1(E_1)_{it} + \beta_1(E_2)_{it} + \beta_3(E_3)it + \beta_4(E_4)it + \beta_5(E_5)_{it} + \beta_2(E_6)_{it} + \beta_6(E_7)_{it} + \beta_8(E_8)_{it} + \beta_9(YEAR)_{it} + \varepsilon_{it} \quad \text{.....(1)}$$

From Equation, Y_{it} is the dependent variable (SUS, PRO, EFF), E_{kit} are independent variables (this means k regressors (E_s) vary across both individuals (i) and time (t)), β_S are coefficients and ε_{it} are error terms.
Then, the null hypotheses (H_0) is: $H_0 = \beta_1 = \beta_2 = \ldots\ldots. \beta_9 = 0$, ($H_0$ and H_1 are not opposite, i.e. the opposite of H_0 is H_1: $\beta_i \neq 0$ for any i ∈ {1, 2, 3, and 9} (not all i ∈ {1, 2, 3, and 9})).
From Equation 1 the model specification was performed to choose between Fixed Effects (FE) and Random Effects (RE) model by applying the Hausman test (Gujarati, 2012).

Table 3: Hausman tests results

	H_0: That the random effect would be consistent and efficient		
	Chi-square	Probability of chi-square	Decision
SUS model	7.88	0.5465	Do not reject H_0
PRO model	7.14	0.6221	Do not reject H_0
EFF model	15.70	0.0734	Do not reject H_0

Table 3 summarizes the Hausman tests. A null hypothesis is that both two estimation methods are good enough and they yield similar coefficients. Therefore, the random-effects model should be used. The alternative hypothesis is that the fixed effects estimation is satisfactory and the estimation of the random effects is not. The findings show that the probability of the chi-square is more than 5% for all models. Then, the H_0 is accepted for the random effects regression model.

3. FINDINGS AND DISCUSSION

PEARLS monitoring system goals presented in Table 2 shows SACCOS performance based on capital structure and resources allocation by using descriptive statistics as summarized. Table 4 shows the descriptive statistics for both dependent and independent variables which are defined in Table 1 and 2. The discussion is based on PEARLS monitoring system goals on SACCOS' performance, capital structure and resources allocations.

Table 4: Descriptive statistics

Variable	Observations	Mean (%)	Std. Deviation (%)	Minimum (%)	Maximum (%)
E1	399	69.67	20.20	1	98
E2	399	17.11	16.15	0	96
E3	399	1.80	5.24	0	45
E4	399	4.95	9.84	0	75
E5	399	57.60	27.16	0	227
E6	399	8.79	16.33	0	82
E7	399	13.49	12.12	0	112
E8	399	13.27	18.06	-117	98
SUS	399	141.62	65.51	-24	600
PRO	340	0.41	2.40	-14	4
EFF	340	7.73	5.44	0	47

According to the PEARLS monitoring system goals, the findings in Table 4 indicate that, on average, SACCOS in Tanzania do not meet all the standards (see the goals in Table 2). The mean percentage values for a net loan (E_1), financial investment (E_3), members' shares capital (E_7) and institutional capital (E_8) are congruent to the PEARLS standards. On the same line, findings show that SACCOS are over-investing in Liquid investment (E_2) and Non-financial investments (E_4). The findings are parallel with Tirfe (2014) who also asserted that SACCOS have been investing in less productive investments in Ethiopia. Moreover, the use of members' savings (E_5) as capital in many SACCOS is only by 58%, instead of 70% or above. Meanwhile, the external credit to assets ratio (E6) is exceeding the ceiling goal. These observations on members' savings to assets as well as external credits to assets are congruent with the previous studies like Ndiege *et al.* (2014) which showed that SACCOS depend on external funding rather than how it should be.

The summary of empirical regression in Table 5 shows the findings of random effects for three performance indicators (sustainability, profitability, and efficiency). It should be noted that when interpreting the results, positive coefficients of the independent variables in the Efficiency (EFF) model, imply efficiency deterioration and vice versa are true. For the rest of the two models, a positive coefficient means increases in sustainability or profitability.

Table 5: Regression findings for the sustainability, profitability, and efficiency models

Variable	SUA model		PRO model		EFF model	
	Coefficient	z-value	Coefficient	z-value	Coefficient	z-value
E1	1.047529	(2.77)**	0.0179592	(2.69)**	0.0039097	0.13
E2	1.050149	(2.82)**	0.0147398	(2.25)**	-0.0430959	-1.42
E3	0.7282882	0.80	0.0006398	0.04	0.0425316	0.56
E4	-0.7833659	-1.36	-0.0373808	(-3.10)***	0.0985551	(1.84)*
E5	0.870542	(5.51)***	-0.0015656	(-1.55)*	-0.0345353	(-2.65)**
E6	0.3586584	1.57	0.0000975	0.02	-0.0194806	-1.04
E7	0.4593591	1.65	-0.0079504	-1.55	0.043796	(1.88)*
E8	1.650109	(5.97)***	0.0944185	(17.19)***	-0.025318	-1.06
YEAR	-7.244887	(-5.26)***	-0.0026386	-0.09	0.5659968	(4.31)***
Constant	14519.31	(5.26)***	3.437007	0.06	-1126.578	(-4.29)***
Observations =	399		Observations =	340	Observations =	340
No. of Groups =	60		No. of Groups =	60	No. of Groups =	60
R-square =	28%		R-square =	62%	R-square =	17%
Wald chi2 (9) =	84.85		Wald chi2(9) =	454.70	Wald chi2 (9) =	50.96
Prob > chi2 =	0.0000		Prob > chi2 =	0.0000	Prob > chi2 =	0.0000

Note: ***, ** and * indicate significant level at 1%, 5% and 10% respectively.

3.1 Sustainability

The net loan (E_1), Liquid investment (E_2), members' savings (E_5) and institutional capital (E_8) have significant positive impacts on sustainability (operating self-sufficiency). The implication is that the sustainability of SACCOS increases as a net loan fund for the members' increases. Also, SACCOS should increase liquid investment (E_2) to increase its sustainability. Moreover, the increase in members' savings increases the performance of SACCOS. Similarly, an increase in the use of institutional capital, allow more sustainability. However, SACCOS should increase liquid investment (E_2) to increase its sustainability.

3.2 Profitability

The findings also show that the net loan (E_1), Liquid investment (E_2), members' savings (E_5) and institutional capital (E_8), have significant positive impacts on profitability. This indicates that the increase in the net loan, liquid investment and members' savings and institutional capita increases the profitability of SACCOS. However, the effect of Non-financial investments (E4) on profitability is negative and significant. In this case, the SACCOS that as allocate its resources in buildings, furniture, and fixtures (Non-financial investments) it becomes less profitable than when it channel resources towards the net loan fund.

3.3 Efficiency

In the Efficiency model (measured by operating costs ratio), the findings show that non-financial investments (E_4) and member shares capital (E_7) are significant and have a positive sign on operational cost ratio. Members' savings (E_5) are significantly and negatively determining the operational cost ratio. This implies that, as the percentage of non-financial investments increases over the assets, SACCOS become more inefficient. Likewise, dependence on members' shares lowers the effectiveness of the SACCOS, but the increase in members' savings increases efficiency. The empirical findings support other studies including Zhong, Song & Xie (2014) and Shubita & Alsawalhah (2012) that, firms that depend on more on equity as their primary financing tend to perform better.

3.4 External credit and life span of SACCOS

It has been established that, although the coefficient of external credits (E_4) shows a positive sign to sustainability and profitability, negative to the efficiency, which indicates that the increase in external credits improves performance, it appears not to be significant in all cases. Thus there was no evidence on the influence of external sources of capital on the performance of SACCOS. Similar to Temu & Ishengoma (2010) which showed that there was no evidence of a difference in performance between SACCOS that received commercial loans from

commercial banks and those which did not this study failed to disapprove or approve previous studies which argued that highly leveraged microfinance institutions have higher performance (e.g. Kyereboah-Coleman, 2007).

Moreover, the findings show that sustainability, efficiency, and profitability are decreasing with time. As such, the findings in this study show that the performance of many SACCOS decreases as their age increases. These observations reflect the SACCOS survey data which were collected by Tanzania Cooperative Development Commission (TCDC) of 2018, which indicates that only 30% of SACCOS are active, whereas the remaining 30% and 40% are dormant and unreachable respectively.

4. CONCLUSION

This paper aimed at contributing to an understanding of the determinants of performance of SACCOS in Tanzania in efforts to increase the contribution of SACCOS towards poverty reduction. It examined how the decisions on financial structure and resource allocation have consequences on the performance of SACCOS. The empirical findings have two main features as far as the co-operative philosophy is concerned. 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. Savings create a source of accumulated funds from which credit can be made available to members for both provident and productive purposes. Also, if internal savings are used as a source of credit to members, the interest rates are reasonably low. This stresses the use of members' contributions as the primary source of capital, confidently enables the members to use and control their money for their mutual benefits.

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. Thirdly, coefficient and signs of the independent coefficients, adhere primarily to the PEARLS monitoring system goals. This phenomenon, therefore, demonstrates the relevance of using PEARLS system in the evaluation and recommendation on the performance of SACCOS in Tanzania. Lastly, while it was observed that performance is decreased with time, indicating that the life span for SACCOS is short. However, this study did not establish what might be the reason for such phenomena. this is another area that requires comprehensive study.

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