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Statistical analysis of outreach and financial sustainability of kifanya Saccos limited in Njombe

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Abstract
The main objective of this paper is to review financial performance of Kifanya SACCOS Limited, Tanzania, through its outreach and financial sustainability. Outreach was assessed by analyzing historical data on the number of clients who are offered financial services together with the growth of the working capital for the period starting with the year 2003 up to 2017. While financial sustainability was assessed by investigating the trend of loan borrowing and its repayment. Financial sustainability of the SACCOS through lending, was analysed using yearly data on loan borrowing and its repayment by computing the operational self-sufficiency (OSS) indices for the period starting 2004 through 2017.
The results of the study had shown that the performance of the SACCOS is good in terms of breadth outreach as it is reaching many rural dwellers who have no access to formal financial services. Although the sustainability indexes has shown that there has been a positive trend showing that the SACCOS has moved toward gaining sustainability in its role of financial intermediation as the sustainability index grows towards 1.

Keywords: Outreach, financial sustainability, microfinance institutions (MFIs), trend of loan borrowing and repayments and SACCOS

1. Introduction

A cooperative is a voluntary network of individuals who own or control a business that distributes benefits basing on the use or ownership of the business, with ownership being largely weighted equally across its members (Altman, 2009) [1]. The main objective of cooperative societies is to mobilize resources and create source of funds that can benefit their members (Ndiege, Mataba, Msonganzila, & Nzilano, 2016) [14]. Cooperatives are well known for their provision of financial services by encouraging voluntary savings among cooperators and providing them with cheap credits. In many developing countries, these semi-formal financial institutions are the main source of savings account and loan services for the poor in rural areas, where formal financial institutions are beyond the reach of many (Mwakajumilo, 2011) [13].

Saving and credit cooperatives (SACCOS) which are known as credit unions in some countries are cooperative movements which can equip their members with convenient and secure means of saving money to make cheap credits available (Karimi, 2011) [8]. According to Mumanyi (2014) [12], SACCOS is a voluntary association which is owned and controlled by its members with the aim of promoting saving, providing cheap credits and other financial services to its members. Therefore, the idea behind establishment of SACCOS is to promote savings and make cheap credits available to its members.

There are many studies which have been done pointing out the importance of SACCOS in its role of financial intermediation. Most of these studies have focused on three important areas. The first one is the role of SACCOS in poverty alleviation. It is to mean that whether the provision of financial service mostly of credit and saving has improved the lives of the poor economically and socially. The second area is about the outreach of the services provided by these institutions especially to the poor who are not covered by the formal financial services. In microfinance, outreach refers the provision of financial services to many clients (breadth of outreach) especially those who are very poor (depth of outreach). The third area that needs more attention in SACCOS is the problem of financial sustainability.

This study has been conducted to assess the outreach and evaluate the financial sustainability of Kifanya SACCOS Ltd. Outreach is assessed by considering the breadth of outreach while financial sustainability is assessed by investigating the trend of loan borrowing and its repayment.

2. Materials and Methods

2.1 The Concept of Outreach: According to Conning (1999) [5], outreach refers to the efforts made by Micro finance Institution (MFI) to extend loans and financial services to many clients (breadth of outreach) and especially to the poorest of the poor (depth of outreach). Some studies have shown that this definition of outreach is vague because it includes quantitative as well as qualitative aspects. The clients who are the subject of assessment are difficult to identify and obtain their status. The difficulty is encountered when one tries to answer the following two questions.

1. Should outreach be assessed in terms of the number of clients accessing financial services in general or only the number of the poor accessing financial services?
2. If only the poor accessing financial services should be considered, how can they be identified?

Therefore, the definition of outreach given by Conning is very restrictive because it specifically refers to the poorest of the poor. In this study we adopt a less restrictive definition of outreach, which defines outreach as the extent to which formal financial services are accessible to low-income groups, measured by the scale of outreach.

2.2 Measure of Outreach: The definition of outreach given by Conning (1999) [5] describes two important aspects of outreach; breadth of outreach and depth of outreach. Basing on these aspects scholars have classified measures of outreach into two categories:

I. Scale (or breadth) of outreach: The scale of outreach refers to the number of clients served in a defined period of time.
II. Depth of outreach: Depth of outreach refers to the level of poverty of the clients served.

Breadth of outreach is the number of users. In this case outreach is measured in terms of a numeric value such as the number of clients to whom a MFI is providing financial services especially those previously having no access. Depth of outreach which is more nebulous, is also very important because it explains the poverty status of the clients being served.

Scale of outreach is a straightforward measure but less nebulous than the depth of outreach because the former captures the total number of clients served by an MFI without taking into account their poverty status. A more nebulous measure is one that captures the characteristics of the poor clients served. In this study we adopt a less restrictive definition of outreach, which defines outreach as the extent to which formal financial services are accessible to low-income groups, measured by the scale of outreach.

2.3 The Concept of Sustainability: In microfinance industry, sustainability is same as self – sufficiency, financial self - sufficiency, profitability, financial sustainability, viability, financial efficiency (Hulme, 1996; Johnson & Rogaly, 1997; Ledgerwood, 1999; Yaron, 1992) [6, 7, 9, 7]. According to UNESCAP (2006:15), sustainability is defined as the ability of the organization or institution to meet the cost of the operations and build enough reserves for capitalization. Chaves, R. A. and Gonzalez-Vega (1996) [3], assert that sustainability is the institution's ability to grow and provide financial services on continuous basis by the financial resources that they have or by borrowing from other financial or non-financial institutions based on market interest rate.

Conning (1999) [5] argues that "in most discussions sustainability is taken to mean full cost recovery or profit making and is associated with the aim of building microfinance institutions that can last into the future without continued reliance on government subsidies or donor funds". When related to profitability, sustainability refers to an adjusted measure of profitability in an accounting sense, which is the difference between total revenue (TR) an institution generates from its operations and the total costs (TC) incurred in those operations (Okumu, 2007) [15].

While profitability is generally used to assess the financial performance of organizations that does not depend on external subsidies, sustainability is considered more appropriate to assess the financial performance of subsidy-depend organizations (Hulme, 1996) [6].

Specifically the concept of sustainability in microfinance is used to describe the performance of institutions or programmes that at one point or another rely on external support in the form of grants, or subsidies. It is a concept developed to answer the question of whether it is possible for an institution to exist for a long time providing valuable services without subsidies. In this study sustainability of a SACCOS means its ability to earn enough profit through lending that can enable the continuation of financial intermediation without relying on any other source of income.

2.4 Measures of financial sustainability

Financial sustainability also known as financial self-sustenance (FSS) and operational self-sustenance (OSS) in microfinance context, is the measure of the ability of MFIs to go on operating indefinitely using their own resources without depending on donations, grants, or subsidized loans from outside individuals, NGOs, or governments (Yeshi, 2015).

There are two common methods of measuring financial sustainability; Sustainability Index (SI) method and Subsidy Dependency Index (SDI) method.

I. **Sustainability Index (SI) method:** It is expressed as a percent of total cost covered by the income generated in a given period. This measure describes the extent to which a MFI is able to cover all its operating and financial costs by its operating income (Rao & Fitamo, 2014) [16]. It is well described by operational self-sufficiency (OSS) which measures operating revenue as a percentage of operating and financial expenses, including loan loss provision expense. If this ratio is greater than 100 percent, the MFI is covering all of its costs through own operations and is not relying on contributions or subsidies from donors to survive (Churchill *et al*. 2006) [4].

Operational self-sufficiency index measures the extent to which the operating revenue of MFIs cover its operating cost. Revenues mainly come from interest and fees paid by borrowers, but a typical institution also generates income from investment and other services. OSS is the most basic measurement of sustainability showing the extent at which operating revenues are enough to finance financial loan loss provision and operational expense (Barres, I., Norell, D., Porter, B., and Curran, 2005) [2]. According to Okumu (2007) [15], OSS is calculated as

$$OSS = \frac{LY}{FINCO + OPCO + LLP} \quad (1)$$

Where,
LY=Total operating financial income
FINCO= Financial costs
OPCO=Direct and indirect costs incurred by the MFI in the process of lending
LLP=Loan loss provisions

Note: Total expenses=FINCO+OPCO+LLP
OSS is a continuous variable fully defined when (FINCO+OPCO+LLP)≠0. This means that at least one of the variables in the denominator, that is, either FINCO, OPCO or LLP≠0.
OSS<0 implies that either LY or total expenses are negative. This cannot occur because negative income or cost is not feasible.
OSS=1, it means the MFI is at break-even point.
OSS>1, implies that MFI fully covers all costs.
0< OSS<1, means that total expenses are more than the income generated, therefore MFI is making losses.

II. Subsidy Dependency Index (SDI) method
Subsidy Dependency Index measures the extent to which a MFI depend on external support for its operation. This index measures how much the average lending interest rate would have to be increased to compensate for complete and immediate subsidy elimination (Rao & Fitamo, 2014) [16]. The lower the index value, the more sustainable the institution. According to Yaron (1992) [7], the following formula is used to determine SDI:

$$\text{SDI} = \frac{\text{Subsidies}}{\text{Revenues from Lending}} \quad (2)$$

In this study we adopt the OSS index because it is the basic measurement of sustainability that can indicate whether revenue from a particular activity is sufficient to cover all costs incurred in that activity or not.

3. Results and Discussion
Outreach was assessed by analysing historical data on the number of clients for the period starting with the year 2004 up to 2017. More explanations were obtained from the trend of growth of the working capital for the same period. Financial sustainability of the SACCOS through lending, was analysed using yearly data on loan borrowing and its repayment by computing the operational self-sufficiency (OSS) indexes for the period starting 2004 through 2017.

3.1 Findings on Outreach
The time series plots in figure1 and 2 show that there is an increasing trend in the number of SACCOS members as well as the working capital. To meet the needs of the increasing number of its members, the SACCOS has been increasing the number of branches as well as the workforce. Currently, the SACCOS operates using its three branches which are located in three villages namely Kifanya, Ihanga and Lwangu covering two wards; Kifanya and Ihanga.

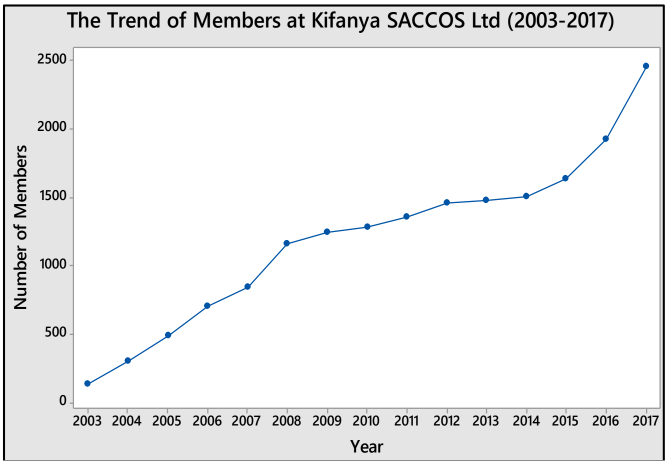

Fig 1: The trend of members at Kifanya SACCOS Ltd from 2003 to 2017

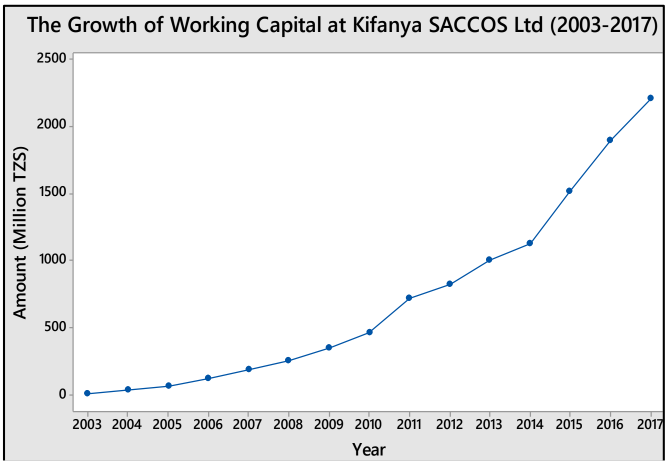

Fig 2: The growth of the working capital at Kifanya SACCOS Ltd from 2003 to 2017

The increasing number of members increases the working capital in the SACCOS as it receives more savings from its members. According to Miriti (2014) [11], increasing the number of members increases the capital base of the SACCOS. Also, Malamsha and Kayunze (2014) [10] asserts that a successful SACCOS is one that has been able to possess large number of members and extends its financial services over a long period. Therefore, when the number of members in the SACCOS increases, saving deposits and shares are increased and this leads to increased SACCOS outreach.
The growth of working capital is likely to have been contributed by factors such as government support, increase in number of SACCO's members, Expansion of agriculture and agribusiness and absence of formal financial institution in the area in which the SACCOS operates.

3.2 Findings on Financial Sustainability
The figure-3 displays the time plot of loan borrowing and its repayment. The financial sustainability indices on loan operations are shown in table 1 and displayed in figure 4. From the sustainability index plot, the values are less than 1 showing that in each year the amount borrowed is more than the amount repaid. But the trend shows that the SACCOS has moved toward gaining sustainability in its role of financial intermediation as the sustainability index grows towards 1. This positive trend in OSS is an indication of long term financial sustainability in which the SACCOS can lend more and earn more profit.

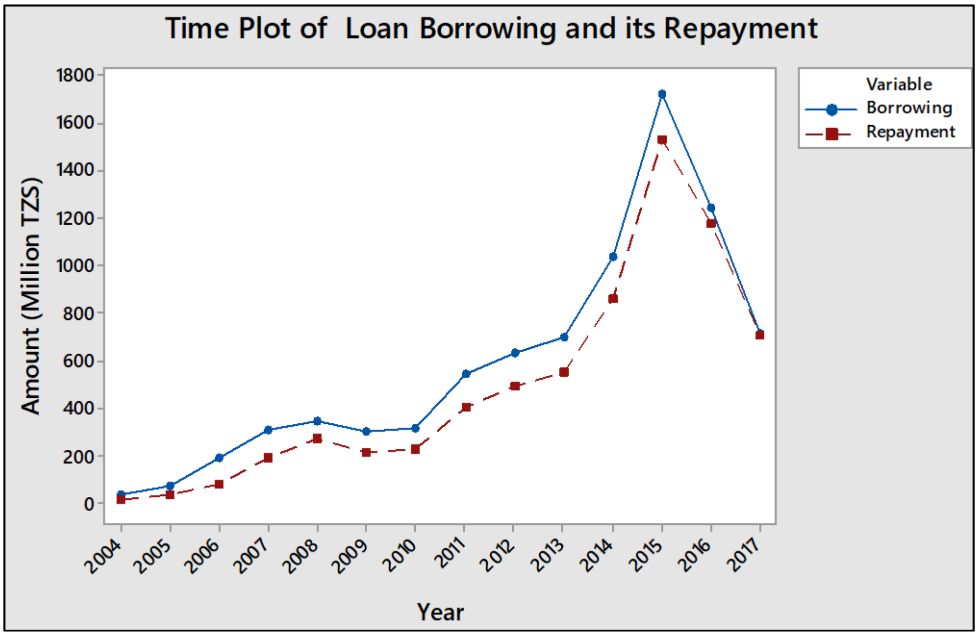

Fig 3: Time plot for loan borrowing and its repayment for the period 2004-2017

Table 1: Financial Sustainability Indices

Year	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
SI	0.3804	0.4993	0.4266	0.6155	0.7817	0.7084	0.7214	0.7481	0.7761	0.7922	0.8279	0.8890	0.9456	0.9933

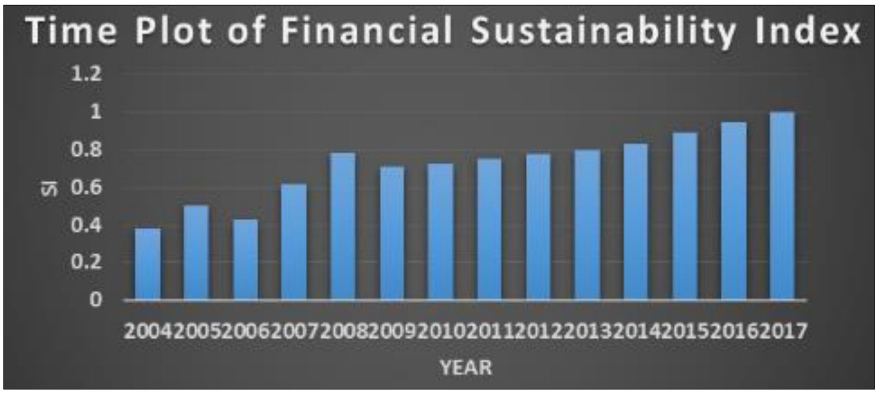

Fig 4: Sustainability indexes on loan operation for the period 2004-2017

4. Conclusion

From this study it was found that Kifanya SACCOS Ltd is good in breadth outreach because the number of its members has been increasing with time. Also, this has been revealed by the increased workforce and number of branches. Regarding sustainability, it was observed that the SACCOS is not sustainable in terms of financial intermediation. However, the trend of sustainability indexes from 2004-2017 revealed that the SACCOS was moving to attain financial sustainability.

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