The Efficacy of VICOBAs Intervention in Alleviating Poverty in Emerging Economies: A Study of the ORGUT SEDIT VICOBAs Lending Scheme Project in Morogoro, Tanzania

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ABSTRACT

Microfinance institutions have emerged as crucial agents in the fight against poverty, particularly in emerging economies. Despite debates about their effectiveness, microfinance interventions have contributed positively to socio-economic conditions, improving livelihood access. Recognising the importance of the microfinance subsector, Tanzania has instituted tools to foster financial inclusion. The Village Community Banks (VICOBAs) are an example of these efforts, aiming to empower marginalised communities through financial inclusion and access to credit. This study assesses the effectiveness of the VICOBAs intervention in alleviating poverty in Morogoro District, Tanzania. Using a cross-sectional design and logistic regression analysis, the study examines the relationship between key variables (access to credit, ability to save, access to insurance services, entrepreneurship skills) and poverty alleviation. The results show the effectiveness of access to credit, savings, and access to insurance services in poverty alleviation.

INTRODUCTION

Microfinance institutions are widely recognised for their role in poverty alleviation, particularly in emerging economies (Geremewe, 2019; Kasali, 2015). The institutions have positively impacted the socio-economic conditions of people experiencing poverty, leading to better access to health, education, and essential services (Geremewe, 2019). However, the effectiveness of microfinance initiatives in reducing poverty has been questioned, with some studies suggesting that they may only sometimes lead to poverty alleviation (Chikwira, 2022). Still, these institutions have been found to reduce household poverty by improving incomes through financial services (Ngong et al., 2021). Furthermore, institutions are recognised as essential tools for poverty reduction and are increasingly identified as critical and strategic initiatives for economic empowerment (Mamun et al., 2017; Ahmad, 2022).

The United Republic of Tanzania recognises the importance of microfinance in poverty alleviation and has put in place policies and frameworks that facilitate the growth and sustainability of the institutions. The National Microfinance Policy of 2012 outlines the government’s commitment to promoting financial inclusion and inclusion of people experiencing poverty. Additionally, the Cooperative Societies Act of 2003 established a regulatory framework for the operation of cooperative financial institutions. The Village Community Banks (VICOBAs) is a prominent microfinance institution that aims to empower marginalised communities through financial inclusion and access to credit. In Tanzania, microfinance institutions such as VICOBAs are crucial in providing financial services to people excluded from the conventional banking system, promoting economic development and contributing to poverty reduction efforts. VICOBAs’ effectiveness in poverty reduction and economic growth in Tanzania can be further illustrated through various studies and reports.

In addition, the World Bank’s Global Findex database provides empirical evidence on the effectiveness of microfinance institutions on poverty reduction globally, with a specific focus on Tanzania. Information from the Global Findex database can provide insights into the reach and effectiveness of microfinance institutions such as VICOBAs in addressing financial exclusion and promoting economic empowerment among marginalised populations.

The effectiveness of microfinance interventions in poverty alleviation has been highlighted in various contexts, including rural areas, Bangladesh, and Ghana (Kasali et al., 2017; Ali et al., 2016; Batinge & Jenkins, 2021). Despite debates about the depth of outreach required to address the demands of poverty reduction adequately (Ali et al., 2015), the microfinance subsector is widely recognised as capable of alleviating poverty even in impoverished areas (Annim & Alnna, 2013), with particular emphasis on its role in ensuring poverty alleviation for women in Africa (Batinge & Jenkins, 2021).

Even with the increasing number of microfinance interventions such as VICOBAs implementations, there is a rising need to examine their effectiveness in poverty alleviation. This study uses the ORGUT SEDIT VICOBAs Lending Scheme project to assess the efficacy of VICOBAs in alleviating poverty in Morogoro District. ORGUT SEDIT implemented this VICOBAs lending scheme project to empower marginalised communities in the Morogoro Region through financial inclusion, savings promotion, and access to credit facilities. By assessing the effectiveness of VICOBAs on poverty alleviation in Morogoro District, Tanzania, this study provides empirical evidence on the role of microfinance institutions in poverty reduction.

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alleviation in Morogoro District, this study makes an academic contribution by extending empirical evidence and previous studies to inform microfinance policy and practice. Given the dynamic nature of the microfinance subsector and the poverty alleviation landscape in Tanzania, it is paramount to conduct this investigation to promote poverty alleviation initiatives.

MATERIAL AND METHODS

Study Area

This study was conducted in Morogoro District, located in the eastern part of Tanzania within the Morogoro Region. The district is a vibrant economic hub with a diverse geographical landscape and thriving commercial activities. Its strategic location and well-developed transport infrastructure make it a vital link between major cities and towns, facilitating trade flows and economic activities, particularly with Dar es Salaam, Tanzania’s largest city and port.

The district’s commercial environment is characterised by diverse activities such as trading, transport, and logistics, supported by a vital local economy. Agricultural activities, including cultivating staple crops such as maize, rice, sugar cane, various fruits, and livestock, contribute significantly to the district’s economic strength. Its tropical climate, with distinct wet and dry seasons, provides favourable conditions for agriculture, further enhancing its economic potential. With its blend of natural resources, agricultural productivity, and commercial opportunities, the district is a crucial economic centre within Tanzania, driving growth and development in the region.

Morogoro District was selected as the study area due to its reputation as a hub for microfinance institutions from among the districts where the ORGUT SEDIT VICOBA Lending Scheme Project was implemented. The area is renowned for its extensive microfinance infrastructure due to the expansion of commercial activities, which makes it a fast-growing town. The district's diverse microfinance landscape provides a rich context for assessing the effectiveness of microfinance interventions in poverty alleviation through the VICOBA intervention.

Study Design

The study employed a cross-sectional design, primarily for financial and time reasons. This design allows researchers to collect data from a representative population sample simultaneously. It is based on practical considerations. Conducting a longitudinal study or using repeated measures designs would have required multiple visits to respondents over an extended period, which would have significantly increased the financial and time burden of the study. Given the resource constraints, a cross-sectional design was a feasible approach to data collection and assessment of the effectiveness of the VICOBA on poverty reduction within a reasonable timeframe. In addition, the cross-sectional design allowed the study to capture a snapshot of the present situation regarding poverty and the effectiveness of the VICOBA lending scheme in the district.

Sample Size Determination and Sampling Technique

The sample size for this study was determined based on practical considerations and the need for adequate representation of VICOBA members and key informants. Sixty-two respondents were selected, comprising sixty VICOBA group members and two key informants. Purposive sampling was employed to select key informants, including a community development officer dealing with VICOBA and SEDIT staff. This sampling technique allowed an intentional selection of individuals with relevant expertise and experience in microfinance and community development, ensuring precise data collection and perceptions of the effectiveness of the VICOBA.

In selecting VICOBA members, a combination of multistage sampling, simple random sampling, and purposive sampling was employed as follows: Morogoro district was selected from among the nine districts in the region. This initial stage of multistage sampling involved purposefully selecting the Morogoro district due to its significance as the study area with a concentration of microfinance institutions. Within the Morogoro district, five wards were purposively selected: Kihonda, Mji Mpya, Bigwa, Kingolwira, and Mazimbu. These wards were chosen due to the prevalence of VICOBA groups in comparison to others. Additionally, they are situated in areas where VICOBA members have spearheaded numerous initiatives. Within each selected ward, twelve respondents were chosen randomly. Random selection ensured that every VICOBA member had an equal chance of being included in the sample.

Source of Data and Data Collection Techniques

The study data was gathered from primary sources, i.e., VICOBA members and officers from the Morogoro district and SEDIT. The exercise involved surveys, interviews, questionnaires, and interview guides. They were utilised as follows:

Surveys were conducted in a structured manner to maintain consistency and ensure the quality of the collected data. Questionnaires were distributed to VICOBA members to gather quantitative data on various aspects of their group involvement. The semi-structured questionnaires collected information on demographic characteristics, financial behaviours, perceptions of the VICOBA intervention, and its effectiveness in poverty alleviation. The distribution process involved obtaining consent from participants, explaining the purpose of the study, and providing instructions for completing the questionnaires.

In addition to surveys, interviews were conducted with key stakeholders involved in the implementation of the project. This included a community development officer and a programme leader. The interviews were semi-structured, utilising interview guides to ensure consistency and focus on key topics. Through interviews, qualitative data were collected to understand the operational aspects of the VICOBA intervention, challenges faced, successes achieved, and perceptions regarding its effectiveness.
in poverty alleviation. Interviews with community development officers and VICOBΑ lending scheme leaders were arranged through prior appointments.

Interview guides escorted the conversation to ensure that relevant topics were covered. Interviews were conducted face-to-face and by phone, depending on the availability and preferences of the interviewees. During interviews, probing questions elicited detailed responses and captured perspectives on the effectiveness of the VICOBΑ intervention in poverty alleviation. The need to gather in-depth and firsthand information directly from the study’s stakeholders led to using survey questionnaires and interviews as the primary data collection methods. Surveys allowed for the systematic collection of quantitative data, while interviews, on the other hand, provided a platform for stakeholders to share experiences and perceptions, enriching the understanding of the study.

Data and Analytical Strategy
The data analysis involved descriptive and inferential techniques to assess the effectiveness of the VICOBΑ intervention in alleviating poverty. Before the analysis, data was processed and managed via the Statistical Package for the Social Sciences (SPSS) version 26; IBM imported it to STATA version 13 for analysis.

Descriptive Analysis Techniques
This analysis involved summarising and presenting key characteristics of the VICOBΑ members. Demographic variables such as age, gender, and education level were described using frequencies. The descriptive analysis findings were presented using percentages to provide a clear and concise overview of the data, facilitating the interpretation of socioeconomic characteristics among VICOBΑ members.

Econometric Analysis Strategy
The econometric analysis in this study involved the application of statistical and econometric techniques to assess the relationship between VICOBΑ output and poverty reduction among members of the study area. Specifically, a logit regression model was utilised to assess the impact of the VICOBΑ on poverty reduction among beneficiaries. The logit regression model was selected for this study to assess the effectiveness of the VICOBΑ intervention on poverty reduction among beneficiaries. The Logit model is suitable for analysing binary outcomes and categorical dependent variables, making it an appropriate choice for assessing the likelihood of poverty reduction due to the VICOBΑ intervention.

The logit regression model is a statistical technique commonly used to estimate the probability of an event occurring (Waqas & Md-Rus, 2018). It establishes a non-linear maximum likelihood function to determine the likelihood of a specific outcome, being a failure or success. Logit regression provides a probabilistic model that can predict the probability of an event based on the input variables (Ullah et al., 2023). In this case, it was employed to assess the effectiveness of the VICOBΑ intervention on poverty alleviation in the study area. The model quantified the relationship between factors, such as the ability to save, access to credit, insurance services, and entrepreneurship skills, and their effectiveness in poverty alleviation. The model assumed a linear relationship between the log odds of poverty being reduced and the independent variables. It can mathematically be represented as:

\[
\log\left(\frac{P}{1-P}\right) = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \mu
\]

Where:
- \( \log\left(\frac{P}{1-P}\right) \) is the natural logarithm of the odds ratio (log-odds), also known as the logit function.
- \( P \) is the probability that poverty is alleviated due to the VICOBΑ intervention.
- \( 1- P \) is the probability that poverty is not alleviated as an impact of the VICOBΑ intervention.
- \( \beta_0 \) is the intercept term representing the baseline log-odds of poverty alleviation when all independent variables are zero.
- \( x_1, x_2, x_3, x_4 \) imply ability to save, access to credit, access to insurance services and entrepreneurship skills respectively.
- \( \beta_1, \beta_2, \beta_3, \beta_4 \) are the coefficients associated with each independent variable (\( x_1, x_2, x_3, \) and \( x_4 \)) respectively, indicating the change in log-odds of poverty reduction for a one-unit change in the corresponding independent variable.
- \( \mu \) represents the error term, capturing the variability in poverty alleviation that is not explained by the independent variables.

Variables and Measurements
Table 1 illustrates the variables under consideration and the corresponding measurements used to analyse the effectiveness of the VICOBΑ intervention on poverty alleviation in Morogoro District.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Description</th>
<th>Measurement</th>
<th>Expected Sign</th>
<th>References</th>
</tr>
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<tbody>
<tr>
<td>Ability to Save</td>
<td>After becoming a VICOBΑ member, an individual manages to set aside a portion of their income towards a savings purpose</td>
<td>1 represents setting aside income for savings, and 0 indicates otherwise</td>
<td>Positive</td>
<td>Ngong et al., 2021; Ali et al., 2023</td>
</tr>
</tbody>
</table>

https://journals.e-palli.com/home/index.php/ajase
After becoming a VICOBA member, an individual gains access to various financial services that can be utilised to fulfil their financial needs. 1 represents gaining access to various financial services, and 0 indicates otherwise. Positive

A member has an insurance policy for mitigating business risks. 1 represents a member having an insurance policy for mitigating business risks, and 0 indicates otherwise. Positive

A member equipped with the necessary entrepreneurship skills. One represents a member equipped with entrepreneurship skills, and 0 indicates otherwise. Positive

When one becomes a member of VICOBA, there is a possibility of experiencing a reduction in poverty status. 1 represents a reduction in poverty status after becoming a VICOBA member, and 0 indicates otherwise. Positive

Sex of the Respondents
In the study, a significant proportion of respondents were female, constituting 66.7% (N = 40) of the sample. This higher representation of females in VICOBA initiatives indicates a greater engagement in microfinance endeavours, which may alleviate poverty by creating income-generating and entrepreneurship opportunities. This aligns with Beyene and Dinhabo (2019), who identified that women's participation in microfinance programmes significantly positively impacts poverty reduction. Further, Minja et al. (2023) noted that these programmes provide women access to financial and non-financial products and services, enabling them to improve their portfolios and living. Women's participation in microbusinesses, notably registered ones, has been shown to have a higher and more beneficial impact on their consumer spending, decision-making power, and provision of resources for their families (Imai et al., 2012).

Age of the Respondents
The respondents' age indicates a notable presence of individuals aged 18–35, aligning with the youth category outlined in the Tanzania Youth Development Policy 2006. This demographic pattern suggests the possibility of economic advancement and alleviation of poverty, given the association of the youth demographic with productivity and engagement in income-generating endeavours. Hafeez and Fasih (2018) commend that the potential can only be realised if the youth are effectively engaged in economic activities. This implies that economic development can be fostered and sustained by empowering youth and allowing them to shape their future.

Education Level of the Respondents
The distribution of respondents based on their education level, with a substantial percentage having secondary education (43.3%) and higher education levels (28.3%), highlights the significance of education in influencing financial behaviours and outcomes within microfinance interventions. The findings suggest that individuals with higher education levels are more likely to possess the knowledge and capabilities necessary to engage effectively in income-generating activities. Education levels play a crucial role in shaping individuals’ choices and participation in microfinance interventions, with higher levels of education enhancing entrepreneurial skills and income-generating opportunities. Ngong et al. (2021) discuss the critical role of education in influencing entrepreneurial intentions, with universities and entrepreneurship education programmes seen as crucial for developing entrepreneurial skills, attitudes, and behaviours. Khanam et al. (2018) argue that higher education levels are essential for developing entrepreneurial intentions and behaviours, highlighting the role of education in fostering entrepreneurial skills and attitudes.

Logistic Regression Model Results
The following section presents the logistic regression analysis results, illustrating the relationship between key variables and their effectiveness in poverty reduction in the context of the VICOBA lending programme. The logistic regression model allows for a thorough analysis of the factors that impact the success of VICOBA members in poverty reduction. The results are interpreted in light of existing literature on microfinance interventions and their role in promoting economic empowerment and poverty reduction. The findings are discussed with previous studies providing helpful evidence on the effectiveness of the VICOBA lending scheme in addressing poverty challenges. The results are presented in Table 2 as follows.
Table 2: Logistic Regression Results

| Variable                   | Coefficient | Std. Err | z     | P>|z|<  |
|---------------------------|-------------|----------|-------|------|
| Access to credit          | 5.280119    | 1.791468 | 2.95  | 0.003**|
| Ability to save           | 4.321305    | 1.386219 | 3.12  | 0.002**|
| Access to insurance services | 2.500522    | 1.288625 | 1.94  | 0.052**|
| Entrepreneurship          | 0.3215854   | 1.794436 | 0.18  | 0.858 |
| Constant                  | -7.41177    | 2.638245 | -2.81 | 0.005**|
| Number of Obs             | 60          |          |       |      |
| LR chi2(4)                | 43.72       |          |       |      |
| Pro>chi2                  | 0.0000      |          |       |      |
| Pseudo                    | 0.6283      |          |       |      |
| Log-likelihood            | -12.9349    |          |       |      |

Significance Codes. *** = 1% significance level, ** = 5%, and * = 10% significance level

From Table 2, it is determined that;

**Access to Credit**
The study results show that having access to credit has a significant positive effect on reducing poverty in VICOBA groups. For every unit increase in access to credit, the chance of reducing poverty increases by about 5.28 units. Alternatively, the odds ratio calculation reveals that a unit increase in access to credit is linked to a 197.54-fold rise in the probability of poverty reduction among VICOBA members. These results contribute to the understanding of microfinance’s role in poverty reduction by highlighting the significance of access to credit within VICOBA groups.

Khanam et al. (2018) previously determined the contribution of microfinance services, particularly credit, to poverty reduction, especially among female participants. The current findings align with this perspective, indicating a positive impact of credit access on poverty reduction among VICOBA members. Furthermore, Utonga and Ndoweka (2023) and Hussain et al. (2018) emphasised the importance of microfinance in poverty alleviation, further supporting the notion that access to credit can lead to tangible outcomes in reducing poverty. Scholars such as Ngong (2023) also discussed the nexus between microfinance and poverty alleviation, reinforcing the significance of access to credit for enhancing financial inclusion and reducing poverty levels.

The convergence of findings from these scholars emphasises the critical role of access to credit in poverty alleviation efforts within microfinance institutions like VICOBA groups. This corroboration confirms that enhancing credit accessibility can effectively contribute to poverty reduction outcomes, empowering individuals to improve their economic conditions and achieve sustainable development goals.

**Savings**
The study findings suggest that the ability to save has a statistically significant positive effect on poverty reduction among VICOBA members. Each unit increase in the ability to save is associated with a predicted probability of poverty reduction of approximately 4.32 units. Using the odds ratio formula, a value of 4.321305 equals an odds ratio of 75.53. This means that when other factors are considered, a one-unit increase in VICOBA members’ ability to save is linked to a 75.53-fold increase in their chances of falling out of poverty. This study contributes to the growing body of literature on microfinance and poverty reduction by demonstrating the significant impact of saving behaviour within VICOBA groups.

The findings align with previous research by Ngong et al. (2021), which discussed the role of financial inclusion in poverty alleviation, highlighting the contribution of saving behaviour to enhancing financial stability and reducing poverty levels. The current study’s findings corroborate this perspective, indicating that the ability to save plays a pivotal role in empowering individuals to improve their economic conditions. Additionally, Ali et al. (2023) argued that financial literacy impacts financial satisfaction, suggesting that encouraging saving can result in economic well-being and poverty reduction. This aligns with the present study’s results, which indicate that increasing the ability to save among VICOBA members can effectively contribute to poverty reduction outcomes.

**Insurance Services**
The study findings suggest that access to insurance services has a statistically significant positive effect on poverty reduction among VICOBA members in the study area. Specifically, each unit increase in access to insurance services is associated with a predicted probability of poverty reduction of approximately 2.50 units. Using the odds ratio formula, 2.500522 equals an odds ratio of 12.18. This means that when other factors are considered, a one-unit increase in VICOBA members’ access to insurance services is linked to a 12.18-fold increase in their chances of getting out of poverty. These results establish the importance of access to insurance services in poverty reduction efforts within microfinance interventions.

Furthermore, Ngong et al. (2021) discussed the micro-financial inclusion nexus and its role in poverty alleviation,
supporting the idea that access to insurance services enhances financial stability and reduces poverty levels. Similarly, Khanam et al. (2018) argued for the significant role of microfinance services, including insurance, in poverty reduction, further reinforcing the positive influence of insurance services on poverty reduction outcomes. The collaborative view from these studies supports the critical role of access to insurance services in poverty alleviation efforts within microfinance interventions. The evidence fortifies that improving access to insurance services can effectively contribute to poverty alleviation outcomes, empowering individuals to enhance financial security and achieve sustainable development goals.

**Model Fitness**

The LR chi-square statistic yielded a value of 43.72 (p < 0.0001), indicating statistical significance. This shows that the logistic regression model is an excellent way to explain the connection between the independent variables (like access to credit, savings, insurance services, and business skills) and the dependent variable (like reducing poverty) among VICOBA members in the study area. Furthermore, the pseudo-R-squared value of 0.6283 suggests that the independent variables in the model can account for about 63% of the variation in poverty alleviation. This indicates the model's moderately explanatory power, implying that the selected independent variables collectively contribute to understanding the factors influencing poverty alleviation among VICOBA members.

**CONCLUSION**

The results of this study shed light on the socio-demographic characteristics of respondents and their relationship with poverty reduction among members of VICOBA. The findings reinforce the importance of access to credit, savings, and insurance services in promoting poverty reduction initiatives within microfinance systems. The significant representation of women in VICOBA initiatives highlights the potential of microfinance to empower women economically, thereby contributing to poverty reduction efforts. Similarly, the presence of youth and individuals with higher levels of education suggests a demographic well-positioned for economic advancement and participation in income-generating activities, further promoting poverty alleviation. Furthermore, logistic regression analysis revealed the significant positive impact of access to credit, the ability to save, and access to insurance services on poverty reduction among VICOBA members. Each unit increase in these factors was associated with a substantial increase in the predicted probability of poverty reduction, highlighting the effectiveness of these interventions in addressing poverty challenges. The LR chi-squared statistic and pseudo-R-squared value, which indicate the logistic regression model's statistical significance, confirmed the model's robustness in explaining the connection between independent variables and VICOBA member poverty reduction. Approximately 63% of the variation in poverty alleviation could be explained by the variables included in the model, demonstrating moderately explanatory power.

**RECOMMENDATIONS**

Based on the findings of this study, several recommendations are made to strengthen poverty alleviation efforts within microfinance initiatives such as VICOBA.

a. Efforts should be intensified to promote women's economic empowerment through targeted interventions within microfinance programmes. This may include providing tailored financial products and capacity-building programmes to increase women's participation and leadership in micro-enterprises.

b. There is a pressing need to actively engage youth in economic activities and provide them with skills training and entrepreneurship opportunities. Initiatives aimed at harnessing the potential of the youth demographic can contribute significantly to poverty reduction and sustainable development.

c. Policymakers and stakeholders should prioritise efforts to strengthen financial inclusion by expanding access to credit, savings, and insurance services, especially among marginalised groups. This may involve the development of innovative financial products and using technology to reach underserved populations effectively.

d. Educational programmes aimed at improving financial literacy and promoting a culture of saving and insurance should be implemented within communities. Raising awareness of the benefits of microfinance and financial planning can empower individuals to make informed decisions and improve their economic well-being.

e. Regular monitoring and evaluation of microfinance programmes is essential to assess their impact, identify areas for improvement, and ensure accountability. Stakeholders should adopt reliable monitoring mechanisms to track progress towards poverty reduction goals and make evidence-based decisions to improve the programme.

**REFERENCES**


