

Impact of Savings and Credit Cooperative Society Groups on Food Security in Zimbabwe: A Case Study of Marange Community in Mutare District.

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Abstract:

Objective: The study aimed to evaluate the impact of Savings and Credit Cooperative Society (SACCOS) on sustaining food security for households in Marange communal area of Mutare rural district in Zimbabwe.

Methods: An exploratory sequential mixed methods research (MMR) design was used in carrying out the present study. In this design, the study first collected primary qualitative data using 6 focus group discussions (FGDs) and 7 key informant interviews (KIIs) followed by collecting quantitative data using a household survey from 204 respondents. The 204 respondents consisted of 102 households participating in VSLAs and SACCOS, and 102 households not participating in VSLAs and SACCOS. NVivo, was used to analyse qualitative data from focus group discussions (FGDs) and key informant interviews (KIIs) to determine themes and content from the data, respectively. SPSS version 23 was used to analyse quantitative data to provide descriptive and inferential statistics for the research. Chi-square Test of Independence was used to analyse quantitative data to investigate the association between participation in SACCOS (independent variable) and food security (dependent variable).

Results: Qualitative results showed that there was an association between participation in SACCOS and the four pillars of food security, namely food accessibility, food availability, food utilization, and stability of the former three pillars. Quantitative results corroborated qualitative results ($p < 0.05$) and showed that, at 95% significance level, participation in SACCOS has positive impact on household food security in Marange communal area.

Conclusion: The study concluded that participation in SACCOS has positive impact on household food security in Marange communal area.

Recommendations: The study made two key recommendations. Firstly, the government of Zimbabwe through Ministry of Finance should provide conducive policy environment for SACCOS to thrive, particularly addressing economic challenges that are currently acting as barrier to viability of SACCOS. Secondly, there is scope for undertaking this study in a different approach such as replicating it over a period of two or more seasons instead of only one agricultural season, as was the case with the present study.

Keywords: Food security, food availability, food accessibility, food utilization, savings and credit cooperative society, village savings and lending associations, food utilization.

I. Introduction

Hunger is a problem for people, governments and development partners world-over since it denotes a population living in extreme poverty. Typically, the phenomenon of hunger is experienced more in developing countries (Food and Agriculture Organization (FAO), 2017) in which populations are predominantly smallholder farmers (Mutea et al, 2019). Additionally, food is a fundamental human need hence the concept of food security is an important agenda for social and economic development. According to the FAO World Food Summit held in November 1996 (FAO, 2006) food security was defined as a situation, when all people, at all times, have physical, social and economic access to sufficient safe and nutritious food that meet their dietary needs and food preferences for an active and healthy life. In another note, Zimbabwe depends significantly on agriculture for its food security. Economically, households in Marange communal area, like in the rest of Mutare rural district rely on subsistence agriculture in the form of livestock rearing, field crops and horticultural crops production. Government service is the biggest employer in the area in form of teachers, nurses, police officers, Agricultural Technical and Extension Services (AGRITEX) officers, and other civil servants. As such, there is potential for SACCOS to alleviate the plight of the rural poor through improvement of food security and social safety nets

especially those who are not formally employed. Thus, government of Zimbabwe, through the Ministry of Industry and International Trade, and in conjunction with the Ministry of Youth Development, Gender and Employment Creation established a Policy Document for the support which was approved by Cabinet in July 2002. Therefore, in Zimbabwe SACCOS are a formal savings and lending model. A SACCOS is formed when a group of 5 to 10 Village Savings and Lending Associations (VSLAs) come together to form a single group which is formally registered as a cooperative (Pasara et al, 2021). The group or cooperative then provides loans and credit for various development activities for its members and others who are not members of the cooperative, whereas the VSLAs model only gives loans to its members. Notably, in Zimbabwe SACCOS are registered under the Co-operative Societies Act Chapter 24.05 of July 1990. Also in other countries, for example, SACCOS in Tanzania were registered and operated under the Co-operative societies Act of 1991 and their financial services and credit operations are defined within the Financial and Banking institutions of 1991. In Zimbabwe, SACCOS are registered under the Ministry of Small and Medium Enterprises (SMEs) and Cooperative Development and operate more like formal microfinance institutions by providing loans and credit to individual beneficiaries. However, to this end, there is limited empirical evidence to suggest that households' participation in SACCOS results in food security, particularly taking into account the four pillars of food security namely, food availability, food access, food utilization, and stability (Peng and Berry, 2019). Thus, the present study's main objective was to evaluate the impact of SACCOS on household food security in Marange communal area of Zimbabwe. This objective had 4 sub-objectives listed below:

1. To examine the association between households' participation in SACCOS and household food accessibility in Marange;
2. To examine the association between households' participation in SACCOS and household food availability in Marange;
3. To establish the association between household's participation in SACCOS, and household food utilization in Marange; and
4. To examine the stability of access, availability and utilization of food within households that participate in SACCOS in Marange.

Based on the research objectives, key research questions were therefore constructed. The main research question was; what is the impact of SACCOS on household food security in Marange communal area? In addition, the study sought to answer the following four sub-questions.

1. What is the association between households' participation in SACCOS and household food accessibility in Marange?
2. To what extent is participation in SACCOS in Marange associated with food availability in the households?
3. How is households' participation in SACCOS associated to food utilization in Marange?
4. How stable is food accessibility, availability and utilization for Marange households as a result of their participation in SACCOS? In line with this research question, the study differs from previous studies in that it evaluated the impact of SACCOS on each of the four pillars of food security, as defined by Peng and Berry (2019).

II. Methods

Underpinned by a pragmatist philosophy and in line with pragmatism (Kaushik and Walsh, 2019), this study used a Mixed Method research (MMR) design that combined qualitative and quantitative approaches (Leavy, 2017) to collect and analyze data from Mafarikwa ward (16) of Marange communal area located in Mutare rural district in Manicaland province of Zimbabwe. The study applied an exploratory sequential approach (Jilcha, 2019). In this research design, the researcher began with a qualitative research phase and explored the views of participants, thus enabling the researcher to identify and specify variables to be measured through the quantitative phase of the study. After data analysis from the qualitative phase, the researcher used the information to build into a second, quantitative phase. The quantitative phase used a household survey questionnaire for collecting quantitative data from the sampled 204 households who did not participate in the qualitative phase of the study. To further justify adoption of the pragmatist' paradigm for this study, it was noted from literature review, that similar prior studies adopted either the positivist philosophy (Rehman and Alharthi, 2016) or the interpretivist paradigm (Kivuja and Kuyini, 2017), which the present study viewed as a methodological shortcoming to build upon. In terms of sampling for qualitative research phase, the present study adopted purposive sampling to identify 51 women who participated in 6 FGDs each with between 8 and 11 participants from ward 16 (Table 1). In addition, the same sampling method was used to select 7 key informants from ward 16, namely 2 male AGRITEX officers, 2 male Village heads, 2 female Community-based facilitators (CBFs) and 1 male ward councillor.

Table 1.0 Summary of focus group discussions held

FGD Number	Village	Date of FGD	Number of participants	Gender
A	Mafarikwa	13 December 2020	11 VSLAs	All Female
B	Mafarikwa	13 December 2020	8 Non-VSLAs	All Female
C	Mafarikwa	13 December 2020	8 SACCOS	All Female
D	Mushipe	13 December 2020	8 SACCOS	All Female
E	Mushipe	16 December 2020	8 Non-VSLAs	All Female
F	Mushipe	16 December 2020	8 VSLAs	All Female

Finally, the study used the stratified random sampling method to sample 204 households from 6 villages of ward 16 (Table 2) who became respondents for the quantitative research phase. The stratified random sampling placed the study population into two broad sub-groups or strata from which 102 households were sampled, respectively. One stratum was for households that were participating in SACCOS and VSLAs. The second stratum was for the households that were not participating in SACCOS and VSLAs. Ngegba et al (2022) posited that the stratified random sampling method gave equal probability for each household in the respective stratum to be selected for participation in the survey. VSLAs members were included in the study population because they also participate in SACCOS.

Table 2.0 Study sample for the household survey.

		Sample size in village per stratum		Total
		SACCOS/VSLAs	Non-SACCOS/VSLAs	
Village Name	Chikuni	9	4	13
	Dhaisi	17	19	36
	Mafarikwa	31	35	66
	Muchaangira	9	5	14
	Mushipe	9	9	18
	Torera	27	30	57
Total		102	102	204

Source: Author’s Compilation

Qualitative data from FGD and KIIs was analysed using NVivo software and Thematic Analysis (Nikku, 2020), respectively. On the other hand, SPSS version 23.0 was used for analyzing quantitative data using descriptive and inferential statistical analysis procedures. Specifically, Chi-Square Test was used to examine the association between participation in SACCOS and the food security status of households, based on food security and its 4 pillars (Peng and Berry, 2019). Participation in the SACCOS was the independent variable while 5 dependent variables were food security, food accessibility, food availability, food utilization, and stability of access, availability and utilization. In principle, food security and its 4 pillars were the dependent variables in the Chi-square Test analysis.

III. Results

Overall results showed that food shortage in Marange communal area is mostly experienced between August and January of every year. Pursuant to this finding, FGD participants indicated that SACCOS member households had better food security than their non-SACCOS counterparts. Chi-square test results corroborated qualitative results, showing that at ($p < 0.05$) and at 95% significance level, participation in SACCOS led to improved household food security in Marange communal area.

a) Food accessibility

Furthermore, FGD participants and key informants were of the perception that households participating in SACCOS have better access to food than non-SACCOS households since SACCOS households demonstrated ability to afford buying food from local and external food markets using income from their savings and their income generating activities (IGAs) they engage in using loans

from VSLAs and SACCOS. Chi-square test results also showed the calculated p-value ($p < 0.05$) is smaller, thus inferring that at 95% significance level, there is association between participation in SACCOS and household food accessibility in Marange communal area. Therefore, the study concluded that there is a significantly (95%) strong association between participation of a household in the SACCOS and the food accessibility for that particular household. In other words, quantitative results confirmed that households that participate in SACCOS have significantly better access to food than households not participating in SACCOS. The present study, therefore, concluded that participation in SACCOS contributes to improved household access to food.

b) Food availability

The FGD participants opined that they experienced poor food availability throughout the year. However, FGD and key informants indicated that households with access to SACCOS financial services had better food availability than those without. Triangulation of qualitative results with quantitative results from Chi-square test ($p < 0.05$) confirmed that there is a significant (95%) association between participation in VSLAs and SACCOS and household food availability in Marange communal area (shown in Table 3.0 below).

Table 3.0 Chi-square Test Results for Food Availability

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	121.929a	2	.000
Likelihood Ratio	154.968	2	.000
N of Valid Cases	204		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 32.00.			

Source: Author’s compilation from SPSS

Since the calculated Chi-square test p-value (0.000) is smaller than the critical p-value (0.05), the present research therefore rejected the Null (H_0) hypothesis and concluded that there is a significant (95%) association between participation in SACCOS and household food availability in Marange communal area.

c) Food utilization

Research participants from all 6 FGDs had a perception that households with access to SACCOS or their services had better food utilization. The research participants added that households of non-VSLAs/SACCOS members always had poor food availability and accessibility hence they suffered poor food utilization almost throughout the year. One member of a SACCOS group opined: *Those SACCOS members can eat groceries from the group. They can also use profits from their projects to buy food so they can eat meat. Non-SACCOS members do not get money to buy meat. They eat only sadza and vegetables throughout the year.* (FGD participant C3, SACCOS group). In this regard, research participants generally contend that SACCOS members had better food access, availability and potentially better utilization than non-SACCOS members. One FGD participant had to say: *Households without a member in VSLAs or SACCOS suffer serious poverty. We do not have food. We cannot buy food for ourselves* (FGD participant F1, non-VSLAs group). The researcher further inferred from the responses that VSLAs and SACCOS households have better food utilization than non-VSLAs and non-SACCOS members as non-VSLAs/non-SACCOS members suffer more poverty than VSLAs and SACCOS members. In further exploring the concept of food utilization from FGD participants, the present study found out that households participating in VSLAs and SACCOS have at least two meals per day even in the dry season. On the other hand, non-VSLAs/non-SACCOS members experience poor food availability throughout the year and end up consuming less than two meals per day, especially during the dry season: between August and January. Results of Chi-square test on food utilization, illustrated in Table 4.0 below, show a calculated p-value of 0.000, which is less than the critical p-value of 0.05.

Table 4.0 Chi-square Test Results for Food Utilization

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	159.213 ^a	2	.000
Likelihood Ratio	212.540	2	.000
N of Valid Cases	204		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 18.50.			

Source: Author’s compilation from SPSS

Since the calculated p-value (0.000) is smaller than 0.05, the present study therefore concluded that, at 95% significance level, there is an association between participation in SACCOS and household food utilization in Marange communal area. In other words, this suggests that households participating in SACCOS or with access to SACCOS services have better food utilization than households which do not participate in SACCOS. Thus, the present study further inferred that participation in SACCOS leads to improved food utilization by households in Marange communal area. These results were supported by further statistical tests which indicated that SACCOS households consume more proteins than non-SACCOS households (Table 5.0). A Chi-Square test was applied to the data, at the 0.05 level of significance to provide concrete evidence on whether SACCOS members have better consumption of proteins.

Table 5.0. Chi-Square Test results on protein consumption

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	22.667 ^a	1	.000		
Continuity Correction ^b	21.181	1	.000		
Likelihood Ratio	23.692	1	.000		
Fisher's Exact Test				.000	.000
Linear-by-Linear Association	22.556	1	.000		
N of Valid Cases	204				

Source: Author’s Compilation from SPSS output.

Chi-square test results in Table 5.0 indicate that there is a significant association ($p < 0.05$) between participation in SACCOS and protein consumption. This confirms that members of SACCOS are more likely to consume food with proteins compared to non-members of SACCOS. The study concludes that participation in SACCOS has a positive impact on protein consumption. Thus, there is need to strengthen the SACCOS so that more households benefit from the positive attribution observed. The present study further investigated association between participation in SACCOS and the food utilization by comparing consumption of vitamin-rich foods by SACCOS members households versus non-SACCOS households. The data was analysed using cross-tabulations (Osei-Fosu et al, 2019) and results were presented in Table 6.0 below.

Table 6.0. Cross-tabulation results for vitamin-rich food consumption

			Vitamin Consumption		Total
			No	Yes	
Membership Type	Yes, is a member	Count	4	98	102
		% within Membership Type	3.9%	96.1%	100.0%
	No, not a member	Count	4	98	102
		% within Membership Type	3.9%	96.1%	100.0%
Total		Count	8	196	204
		% within Membership Type	3.9%	96.1%	100.0%

Source: Author’s Compilation from SPSS output.

The study found out that 96.1% of total respondents (N=204) which comprises, and SACCOS members and non-members had consumed food with vitamins in the previous 24 hours. Of the 196 households that consumed food with vitamins, 50% of them were members of SACCOS. The proportion of respondents who consumed vitamin-rich foods (96.1%) were higher than those who consumed protein (73.5%) but were less than those who consumed carbohydrates (99.5%). The reason for this finding could be that vitamins are found in cereals, nuts and green vegetables which most households consume in their staple food (Akram et al, 2020). This result is comparable to the Zimbabwe Vulnerability Assessment Committee (ZimVAC) (2021) findings which pointed that household consumption of cereals, vegetables and oils were high in 2020. The result could mean that cases of diseases and health conditions related to vitamin deficiency could be low in Marange community. To follow up on this, the study used Chi-square test to investigate whether there was a statistical relationship (Turhan, 2020) between households participating in SACCOS, and the

vitamin consumption by households. The Chi Square statistical test was carried at the 0.05 level of significance to determine whether there is any significant difference in the vitamin consumption among the member and non-member households. As such results for this test are presented in Table 7.0 below.

Table 7.0. Chi-Square Test results on vitamin-rich food consumption

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.109 ^a	1	.741		
Continuity Correction ^b	.000	1	.983		
Likelihood Ratio	.106	1	.745		
Fisher's Exact Test				.758	.469
Linear-by-Linear Association	.109	1	.741		
N of Valid Cases	471				

Source: Author’s Compilation from SPSS output.

Chi-square test results (Table 7.0) indicate that there is no difference ($p > 0.05$) in vitamin consumption between members and non-member of SACCOS. Thus, SACCOS member households and non-member households consume, approximately, the food with the same vitamins’ quantities. To establish material evidence on whether households of SACCOS membership consumed balanced meals in the 24 hours prior to this survey, statistical tests and descriptive statistics were carried out. It was therefore concluded that households consumed balanced meals when the food consumed in the last 24 hours provided the following nutrients: Vitamins, Carbohydrates and Proteins. In terms of comparison with results from reviewed literature, it can be concluded that SACCOS households use their income from IGAs as well as the groceries they share out in VSLAs groups to boost their food availability and dietary diversity (Moyo and Chinoda, 2022). The Chi-Square test was also carried out to analyse the materiality of the above assertions, and results are presented in Table 8.0 below.

Table 8.0. Chi-Square test results on food consumption (balanced diet)

	Value	df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	19.314 ^a	1	.000		
Continuity Correction ^b	18.005	1	.000		
Likelihood Ratio	19.873	1	.000		
Fisher's Exact Test				.000	.000
N of Valid Cases	204				

Source: Author’s Compilation from SPSS output.

The results show that there is a statistically significant ($p < 0.05$) relationship between participation in SACCOS, and the consumption of a balanced diet by a household. Households with membership in SACCOS consume food that is of balanced diet compared to non-members. Other literature reviewed does not refer specifically to relationship between participation in SACCOS, and consumption of balanced diets. However, the results from SEEP Network (2017), Dawuni et al (2021) in Ghana, Ngegba et al (2022) in Sierra Leone and Nnama-Okechukwu et al (2019) in Nigeria seem to compare with the findings of this study when they reported increased expenditure on food by SACCOS households.

d) Stability of food accessibility, availability and utilization

As the only key informants knowledgeable about food security issues in VSLAs/SACCOS and non-VSLAs/non-SACCOS households, the 2 CBFs opined that SACCOS households had the capacity to buy their own food, unlike the non-SACCOS households. In addition, CBFs opined that households with access to SACCOS services use loans obtained from SACCOS to engage in IGAs to earn income. In turn, the income raised from IGAs is used on food expenditure hence the stable access to food, availability of adequate food and stable consumption of diverse food products than households without access to SACCOS loans. The present study therefore concluded that, in Marange communal area, households that have access to or participate in SACCOS have stable

access to food, stable food availability, and stable food utilization than for households that do not participate or have no access to SACCOS loans. Since all the calculated p-values (0.000) for stability of food accessibility, availability and utilization, respectively, were smaller than the critical p-value (0.05), the present study therefore inferred that, at 95% significance level, there is an association between participation in SACCOS in Marange communal area and stability of the other three pillars of food security.

IV. Conclusions

Results from both qualitative and quantitative research showed that households participating in SACCOS or at least have access to SACCOS financial services such as loans have improved food security. It was observed from qualitative and quantitative results that strong relationship exists between household's participation in SACCOS and its food accessibility, food availability, food utilization, as well as with stability of food accessibility, availability, and utilization. Therefore, the study concluded that SACCOS have positive impact on food security in Marange communal area, and potentially so across Zimbabwe.

V. Recommendations

The study made two key recommendations. Firstly, the government of Zimbabwe through Ministry of Finance should provide conducive policy environment for SACCOS to thrive, particularly addressing economic challenges that are currently acting as barrier to viability of SACCOS. Secondly, there is scope for undertaking this study in a different approach such as replicating it over a period of two or more seasons instead of only one agricultural season, as was the case with the present study.

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