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Characterising Loan Default among Women Microcredit Borrowers an Empirical Study in Wolaita Zone, Southern Ethiopia

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Authors' contributions

This work was carried out in collaboration between two authors. Author NK designed the study, wrote the protocol, managed the analyses, edited and finalized the draft. Author SCC collected the field data, conducted statistical analysis and wrote the first draft of the manuscript. Both authors read and approved the final manuscript.

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ABSTRACT

Aims: Credit is a critical input for agriculture and women empowerment. Rural Savings and Credit Cooperatives (RuSACCOs) are important financial institutions in remote villages of Ethiopia offering avenues for savings and credit for farmers and the poor. The aim of this study was to find out the repayment status of loans obtained by women farmers who were members in RuSAACOs.
Study Design: The Study design followed was Ex-post facto Design through survey research.
Place and Duration of Study: This study was undertaken in Kindo Koysha Woreda (district) in Wolaita Zone, Ethiopia. The study was held between December 2015 and May 2016.
Sample: From four randomly selected RuSACCOs of the study district, 96 women farmers who had been members of RuSACCOs were selected as respondents.
Methodology: Primary and Secondary data were gathered respectively from women members and district government agencies respectively. The sample size was determined using Yamane formula. The primary data yielded quantitative information on repayment status (Repaid regularly or otherwise). Similarly, data was gathered on 17 personal, socio-economic characteristics of the

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women members to provide the backdrop for their loan repayment status and to analyze the possible linkage between such characteristics and the repayment status.
Results: Descriptive statistics of the study showed that out of 96 respondents 50 per cent repaid the loan before due dates and the rest 50 percent could not repay the loan before due dates. The following categories of women borrowers were found to have higher tendency to repay rather than not to repay on time: Younger women, more educated, married, with lower dependency ratio, with higher household income and expenses, with higher livestock holding, with prior business engagement, having better access to road and market, who availed higher loan amount and having higher amount as savings in RuSACCO, higher level of training, following weekly repayment rather than fortnightly or monthly and higher economic motivation. Interestingly, the characteristics of women like family size, household social ceremony expense, timeliness and adequacy of loan did not show any association with repayment status.
Conclusion: The study recommended that RuSACCOs must follow up closely with women borrowers having the characteristics opposite of those aforementioned (in "Results" paragraph) for ensuring prompt repayment of loan. The cooperative management could consider frequent cooperative training of women members for ensuring prompt repayment of loan.

Keywords: RuSACCO; microcredit repayment; micro-finance; rural credit.

1. INTRODUCTION

Institutional credit is a very critical component of interventions directed at poverty alleviation amongst poor women in developing countries [1]. Micro credit institutions in developing countries had for long time being involved in poverty reduction through credit provision particularly to women. Credit made available to economically active poor has a greater potential for job creation, household income enhancement [2]. Financial services in general involve women's social and political development through group trainings and saving culture.

Access to financial service has been identified as a major problem experienced by many in attempt to do business in Ethiopia. There have been sustained efforts to finance the low income earners and rural people by microcredit institutions and Rural Savings and Credit Cooperatives (RuSACCOs) supported by NGOs in rural Ethiopia. Despite all these interventions, a large percentage of the rural people are out of reach of financial services. The MFIs and RuSACCOS face problems of loan default as large percentage of the rural poor have been unable to effectively service the credit borrowed from these institution [3].

Institutional credit arrangement is constrained by inefficient utilization among credit recipients and consequent irregular repayment. The majority of small credit programmes have been affected by serious default rates ranging from 50 percent to as high as 80 percent have been reported in small credit programmes in Africa, Asia and Middle East [4,5]. Loan diversion and deceit are found to be the reasons behind loan default. Kashuliza [5] argued that defaults adversely affect credit institutions solvency, liquidity and the capacity to issue loans to other clients. These situation further results in a negative impact on potential borrowers, who may find their access to credit delayed, restricted or denied because of the declining liquidity of the lender.

A study in Eastern part of Arumeru District in Tanzania noted late loan repayment was among problems faced by women groups [6,7]. The study noted that 50 percent of the member respondents said that the major problem was loan repayment by members which disabled the rest of the members to receive further loans. A study on the determinants of credit demand in Southern Highlands of Tanzania found that 39.1 percent of the respondents reported to experience late loan repayment or loan default. In some cases women micro-entrepreneurs are subjected to loss of assets pledged/mortgaged due to loan default, aggravating their poverty situation [8].

A research was conducted with the objective of analyzing and identifying factors that influence the loan repayment performance of the beneficiaries of Addis Credit and Saving Institutions (AdCSI). Age and five business types (baltinaandpetty market, kiosk and shop, services providing, weaving and tailoring and urban agriculture) were important in influencing loan repayment performance of the borrower. In addition, sex and business experience of the

respondents were found to be significant determinants of loan repayment rate [9].

The foregoing studies are among very few studies conducted to understand the underlying reasons behind the level of repayment of loan borrowed from rural financial institutions. In the absence of such studies for the loan repayment behaviour of women farmers borrowing from RuSACCOs, the fledgling financial system of RuSACCOs in Southern Ethiopia has been a source of concern for the stakeholders including policy makers. This study examined the repayment status among women borrowers in RuSACCOs and the characteristics of women borrowers affecting the repayment status.

1.1 Objective of the Study

The objective of the study is to characterize loan default among women borrowers in rural saving and credit cooperatives (RuSACCOs) in *Kindo Koysha Woreda* [1] *of Wolaita Zone of Ethiopia.*

2. METHODOLOGY

2.1 Description of the Study Area

This research was conducted in *Kindo Koysha* district of *Wolaita* zone, southern Ethiopia. *Kindo Koysha woreda* is one of the 12 districts of *Wolaita* zone, is among the food insecure district of the zone where continuous fragmentation of land and rain-fed agriculture is the mainstay of the local economy. The study area is located 370 km south of Addis Ababa and 290 km outh west of southern nations, nationalities and people's regional town *Hawassa* and 40 km west on the way to *Jimma from* Wolaita sodo town. *Kindo Koysha Woreda* is one of the 12 districts of Wolaita zone with a geographic area of 52,623.3 km^2. The land characteristics of the *woreda* are; forest land 4957 ha, cultivated farm land 37,566 ha, pasture land 6922ha, cultivable land 338ha, and non-cultivable land 695ha.

2.2 Sampling Technique

2.2.1 Sample size

The data for this research were obtained from women recipients of microcredit loans from rural saving and credit cooperatives in *Kindo Koysha Woreda*. A simplified mathematical formula was used to determine sample size as shown below:

$$n = \frac{N}{1+ N (e)^2}$$

Where N is the total members of rural women saving and credit cooperatives in *Kindo Koysha Woreda, e (margin of error) was* 0.1(10%) while the confidence level was 95% and the precision level was 90% [that was 10% (0.1) margin error] was used. Using the total population of 2695 women members of RuSACCOs in twenty three *kebeles* and error margin of 0.1, the sample size was calculated as follows:

$$n = \frac{2695}{1+ 2695(0.1)^2} = 96$$

Hence, out of the total women RuSACCO members of 2695 in four *kebeles*, a sample size of 96 women was taken.

2.2.2 Sampling design

Out of 31 rural saving and credit societies in the study *woreda*, four rural saving and credit societies were randomly selected. Then simple random sampling technique was employed to select 96 sample participants.

Data for the study was collected from 96 sampled women borrowers using structured interview schedule. This was according to the list of women microcredit recipients in each saving and credit cooperative societies.

2.3 Data Type and Source

The major research method employed in this study was primary and secondary data which was supplemented by review of existing literature. The main reporting unit in this study was microcredit recipient woman and hence the data was collected from women members of RuSACCO and analysed. Data collection included documentary review, interviews and discussion with key informants. Interviews with individual woman were carried out using a structured interview schedule, while interviews to key informants were conducted using a semi-structured open ended checklist. In addition to this, documentary reviews were collected from secondary data like (books, journals, manuscripts and research and official reports).

[1] *Woreda in Ethiopian language refers to a district. Similarly, Kabele refers to the lowest administrative unit (equivalent to a village)*

2.4 Methods of Data Analysis

A single method of analysis may not capture issues with regard utilization of microcredit and repayment performance among women recipients. For this reason, different techniques of analysis including descriptive and inferential statistics such as Chi-square tests and t-tests as well as econometric models were employed using statistical packages for social sciences (SPSS, V.20).

2.5 Working Hypothesis and Definitions of Variables

2.5.1 Dependent variable

2.5.1.1 Loan repayment performance

It refers to the loan repayment status of women borrowers who were supposed to repay their loan before due date of repayment as per the repayment schedule agreed upon between the borrower and RuSACCOs. It is represented by 1 if the borrower repaid the loan before due dates (Non-Defaulter) and 0, if the she did not repay the loan before the due dates (Defaulter).

2.5.2 Independent variables

The summary of independent variables used for analysis is presented in Table 1.

3. RESULTS AND DISCUSSION

3.1 Repayment Vs Credit Utilization

Rural Savings and Credit Cooperatives (RuSACCOs) provide credit for its members to invest in productive purposes, encourage farm production, and promote non-farm business enterprises in rural area. In this study the Table 2 shows that from the total 96 respondents, 34 (70.8 %) defaulters utilized their loans for household consumption purposes whereas, 14 (29.2 %) of defaulters utilized their loan for an intended productive investment purposes. Similarly, 42 (87.5%) non-defaulters properly used their loan for an intended productive investments and the remaining only 6 (12.5%) utilized their loans for household consumption purposes. The survey result shows that majority of non-defaulter borrowers used the loan for productive investments rather than defaulters. Similarly, the Chi-square value of (33.60***) shows there is statistically significant difference at less than 1 percent level between non-defaulters and defaulter borrowers in credit utilization.

3.2 Socio-demographic Characteristics of Borrower

3.2.1 Age and default

Age of the women is one of the factors affecting the utilization choice of microcredit loans and repayment performance. As age progresses the capability of women to engage in productive activities declines. Regarding loan repayment, age of the borrower women was assumed to affect the performance of women in productive activities and have increasing tendency of engaging in domestic spheres. Younger women tended to participate more in active labour and mobility requiring business activities. Hence, out of the total 96 respondents 48 (50%) were defaulters and again 48 (50%) were non-defaulters. As Table 3 depicts, the majority of non-defaulters 24 (37.5%) were in the age group of 36-45 and also majority of defaulters 27 (56.2%) were in the age group of 46-55. The chi-square value 23.98*** indicated that there was significant relationship between age groups and the dependent variable repayment performance. The result indicated that majority of those utilized the money for productive investments were non-defaulters and majority of those used for consumption purposes were defaulters.

3.2.2 Education and default

Education is a social capital which has a positive impact on household ability to understand and utilize new technological information and also to know their rights and obligations. It can help them to understand their rights to borrow microcredit loans and also their obligation to repay their debt on time. Lack of education and poor awareness level therefore may be a bottleneck to efficiently utilize loans on productive activities and repay on the stated repayment date. The survey result indicated that out of the total 96 respondents, the majority 48 (100%) were illiterate and are defaulters. Similarly, the majority of literates were 29 (60.4%) (Who attend 56.2% Primary and 4.2% junior school) are non defaulters. Therefore, the literate borrowers are well informed and responsible to repay their loan on time than illiterate borrowers. The chi-square value (41.552***) indicates that there is significant relationship between education and repayment performance.

Table 1. Summary of independent variables and their definition

S. no	Independent variable / characteristics	Description of variable	Unit of measurement	Definition
1	Age	Continuous	Year	Age of women recipient.
2	Education	Categorical	Grade	Illiterate / Elementary / Junior
3	Household Size	Continuous	No. of persons (adult equivalent)	Family members occupying a single dwelling.
4	Marital Status	Dummy	Categorical	Marital status of woman is unmarried/ married/ divorced widowed.
5	Dependency Ratio	Continuous	Ratio	The ratio of non-working age groups to the working age (adult) group.
6	Household Income	Continuous	Ethiopian Birr	Total income gained in a year.
7	Household Expenditure	Continuous	Ethiopian Birr	Household total expenditure and social expenditure in a year.
8	Livestock Ownership	Continuous	Number of animal in Tropical Livestock Units (TLU)	Number of animals owned by women borrower household.
9	Farm Size	Continuous	Hectare	Hectare of cultivable land a woman household owns.
10	Prior Business Engagement	Dummy	Yes / No	Engaged in business before loan/otherwise
11	Transport Road Access	Continuous	Kilometre	Proximity to near-by motor vehicle transport access road.
12	Market Access	Continuous	Kilometre	Proximity to near-by market.
13	Loan Amount	Continuous	Ethiopian Birr	Amount of money in birr a woman borrowed.
14	Savings in SACCO	Continuous	Ethiopian Birr	Amount of money saved in RuSACCO
15	Training	Continuous	Number per year	No.of Training undergone or otherwise
16	Loan Repayment Frequency	Categorical	Weekly/Fortnightly/ Monthly	Frequency of loan repayment scheduled.
17	Timeliness of Loan Sanction	Dummy	Yes/No	Timely/Otherwise
18	Adequacy of Loan	Dummy	Yes/No	Adequate/ Not adequate
19	Economic Motivation	Categorical	Low /Medium / High	Level of aspiration to earn in income/ pursue economic prosperity
20	Perception towards SACCO	Categorical	Negative/Neutral / Positive	Perception towards SACCO

Note: 1 Ethiopian Birr = 0.044 USD (Approx)

Table 2. Credit utilization vs. repayment performance

Microcredit utilization	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
Consumption purposes	34	70.8	6	12.5	33.60***	40	41.7
Productive investments	14	29.2	42	87.5		56	58.3
Total	48	100	48	100		96	100

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

Table 3. Age of the women

Age group (years)	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
25-35	2	4.2	13	15.6	23.98***	15	15.6
36-45	12	25	24	37.5		36	37.5
46-55	27	56.2	8	16.7		35	36.5
56-65	7	14.6	3	6.2		10	10.4
Total	48	100	48	100		96	100
Overall mean age	49.69		41.65			45.167	
Standard deviation	6.751		8.34			8.810	
Maximum						60	
Minimum						25	

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

Table 4. Education status of women respondents

Education group	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
Illiterate	48	100	19	39.6	41.55***	67	69.8
Elementary	0	0	27	56.2		27	28.1
Junior	0	0	2	4.2		2	2.1
Total	48	100	48	100		96	100
Overall mean education	0.00		2.73			0.865	
Standard deviation	0.000		2.856			2.189	
Maximum						10	
Minimum						0	

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

Table 5. Family sizes of respondents

Family size group	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
1-3	2	4.2	2	4.2	0.345	4	4.2
4-6	44	91.7	45	93.8		89	92.7
7-10	2	4.2	1	2.1		3	3.1
Total	48	100	48	100		96	100
Overall mean family size	4.92		4.73			4.82	
Standard deviation	0.964		0.984			0.973	
Maximum						8	
Minimum						3	

Source: computed from data 2016; P value = 0.842; Non -significant

3.2.3 Family size and default

The family size of the respondents was categorized into three groups. As Table 5 revealed respondents with family size of 1-3, 4-6, 7-10 and categories are 4.2%, 92.7% and 3.1% respectively. The average family size of the respondents was 4.82 (4.73 persons for non-defaulters and 4.92 persons for defaulters. Similarly, the majority of 44 (91.7%) defaulters and 45 (93.8%) non-defaulters are having at 4-6 family sizes. The computed χ 2 –value (0.345) revealed that there is statistically no significant difference between the defaulters and non-defaulters with respect to family size.

3.2.4 Marital status and default

Marital status of women is an important factor which influences repayment performance of

respondents. It is expected that when a woman is married she has better chances of involving in non-farm income generating activities and hence better utilization of microcredit on productive activities and better loan repayment. This is because husbands are supposed to share domestic labour and also contribute substantial amount in provision of food for household consumption and hence more chances of loan being invested productively. As Table 6 revealed majority of 37 (77.1%) defaulters and 18 (37.5%) non-defaulters are widowed women. The computed χ2 –value of (20.79***) for repayment performance reveals that there is statistically significant difference between the defaulters and non-defaulters with respect to marital status of the sample respondents.

3.2.5 Dependency ratio and default

Dependency ratio is the ratio of non productive labour to productive labour of the household. Dependency ratio is believed to affect the consumption pattern of the household and hence affecting utilization of microcredit either to invest or allocate for household consumption purpose. Dependency ratio for default group is 1.59 and it was 1.26 for non-default group. From the table the computed t-value of (1.735*, p-value 0.086) with statistically significant value revealed that the higher the dependency ratio higher would be the likelihood of default.

3.3 Economic Characteristics of Borrower

3.3.1 Household annual income and default

Household annual income from both farm and non-farm sectors believed to have a positive impact on repayment performance of the borrowers and also utilization of microcredit. It was revealed that those households with relatively better-off household income repay the

Table 6. Marital status of respondents

Marital status group	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
Unmarried	1	2.1	0	0.00	20.790***	1	1
Married	9	18.8	16	33.3		25	26
Divorced	1	2.1	14	29.2		15	15.6
Widowed	37	77.1	18	37.5		55	57.3
Total	48	100	48	100		96	100

*Source: computed from data 2016 P value = 0.000; *** significant: at less than 1% level of significance*

Table 7. Dependency ratio of respondents

	Defaulters		Non-defaulters		t-value	Total	
	Mean	SD	Mean	SD		Mean	SD
Dependency ratio	1.597	2.5	1.268	0	1.735*	1.433	0.941
Maximum						5.00	
Minimum						0.00	

*Source: computed from data 2016 P value = 0.086; * significant: at less than 10% level of significance*

Table 8. Household annual income

Household income	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
2500-3500	16	33.3	4	8.3	31.548***	20	20.8
3501-4500	29	60.4	16	33.3		45	46.9
4501-5500	2	4.2	25	52.1		27	28.1
Above 5500	1	2.1	3	6.2		4	4.2
Total	48	100	48	100		96	100
Overall mean income	3669.90		4491.15			4040.52	
Standard deviation	609.50		788.68			813.58	
Maximum						6300	
Minimum						2200	

*Source: computed from data 2016 P value = 0.000; *** significant: at less than 1% level of significance*

loan regularly and on due time without default. Various literatures revealed that borrowers of microcredit with relatively better-off household income utilize the money for productive investment activities. This is mainly because household income is very important to stimulate the household economies that they have relatively better source of income for household consumption during the emergency season while those with low income tend to consume the loan during emergency seasons. Majority 29 (60.4%) of defaulters have annual household income of 3501-4500 Birr while the majority of 25 (52.1%) of non-defaulters have annual household income of 4501-5500 Birr. Chi-square value (31.548***) indicated that there was significant difference between defaulters and non-defaulters in their household annual income. The average annual household income of defaulters and non-defaulters is 3669.90 Birr and 4491.15 Birr respectively. The mean annual household income of the respondents is 4040.52 Birr.

3.3.2 Household annual expenditure and default

Household total expenditure indicated the income level of a household which included household expenditure on purchase of agricultural inputs, education expenses; health treatment expenses, food purchase and industrial products purchase expenditure, etc. On the other hand household social ceremony expenditure relate to holly day's ceremony, wedding, funeral etc. The survey results revealed that 38 (79.2 %) of defaulters and 42 (87.5%) of non-defaulters have social ceremony expenditure of 401-800 Birr annually. The average annual social ceremony expense of defaulters is 518.54 Birr whereas, the average annual social ceremony expense of non-defaulters is 553.75 Birr and the total mean annual social ceremony expense is 536.15 Birr. Pearson Chi-square value 1.343 shows that there is statistically no significant difference between the non defaulters and defaulters. Majority of 34 (70.8%) of defaulters have total annual expenditure of 2501-3500 Birr whereas, the majority of 25 (52.1%) of non-defaulters have total annual expenditure of 3501-4500 Birr. The average annual household total expenditure of defaulters and non-defaulters were 3091.67 Birr and 3707.29 Birr respectively. The overall mean of annual total household expenditure was 3399.48 Birr for both groups. Pearson Chi-square value 31.548*** showed that there was statistically significant difference between the non defaulters and defaulters in their total household expenditure.

Table 9. Household social ceremony expenditure

Household social ceremony expenditure	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
100-400	9	18.8	5	10.4	1.343	14	14.6
401-800	38	79.2	42	87.5		80	83.3
801-1200	1	2.1	1	2.1		2	2.1
Total	48	100	48	100		96	100
Overall mean social expense	518.54		553.75			536.15	
Standard deviation	126.625		139.202			133.538	
Maximum						1100	
Minimum						290	

Source: computed from data 2016; P value = 0.511

Table 10. Household total expenditure

Household total annual expenditure	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
1500-2500	5	10.4	2	4.2	31.548***	7	7.3
2501-3500	34	70.8	14	29.2		48	50
3501-4500	8	16.7	25	52.1		33	34.4
4501-5500	1	2.1	1	14.6		8	8.3
Total	48	100	48	100		96	100
Overall mean total expense	3091.67		3707.29			3399.48	
Standard deviation	600.363		690.787			714.247	
Maximum						5500	
Minimum						1560	

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

3.3.3 Livestock ownership and default

Household total livestock ownership is an indicator of the wealth status of a household and be likely to affect the credit utilization and also repayment performance. Wealthier households with relatively higher number of livestock tend to repay their loan on due time. This is mainly because, additional income from livestock and livestock product sales increased the capacity of a household to save substantial amount of money on regular bases and also source of income for loan repayment. Moreover, ownership of oxen enhanced the capability of a household to properly cultivate their land, engage in share-in cropping and rent out of oxen as additional income source. Majority of 27 (56.2%) of loan defaulters and the majority of 26 (54.2%) of non-defaulters were having livestock unit of 0.71-1.40. Pearson's chi-square value of 10.326*** indicated that there was statistically significant relationship between livestock ownership repayment performance at P-value of 0.01.

3.3.4 Land Size and default

Household total cultivable land ownership is an indicator of the wealth status of a household and expected to affect the credit utilization and also repayment performance. Wealthier households with relatively higher farmland holdings expected to utilize the loan for farm improvements and new inputs and technologies. Households with relatively better cultivable land holdings are of better adaptation of new and improved agricultural technologies and get higher farm income which as result leads to better saving and repayment of the loan on time. On the other hand, when the cultivable farmland holding is minimum a household forced to seek for other livelihood strategies like off-farm and non-farm sectors to sustain their life. The survey result in Table 12 indicated that majority of 24 (50%) of loan defaulters and majority of 25 (52.1%) of non-defaulters were having cultivable landholding of 0.10-0.25. Pearson's chi-square value of 3.85 indicated that there was statistically no significant relationship between landholdings and repayment performance.

3.3.5 Prior business engagement and default

Business skill is one of the important factors in utilizing microcredit and repayment performance of a household. Business engagement enabled the women to invest in high risk but high return non-farm business activities and determines the success and profitability from the business. Those households having prior business engagements but lacked capital were more successful when access to credit was provided. Majority of 28 (58.3%) of those defaulters had never been engaged in business activities before the loan. Similarly, majority of 37 (77.1%) of those non-defaulted households were having business experience before the loan. From Table 13 the computed Chi-square value of 12.48*** indicated that there was statistically significant relationships between repayment performance and respondents business skill.

3.4 Institutional Access to Borrowers

3.4.1 Access to transport road and default

Access to motor vehicle transport road indicated that the relative proximity of the respondents household to the nearest transport access roads in the area. Highest distance from transport access road indicated the remoteness of the area from different institutional facilities. Access to transport road tend to affect the ability of women to engage in productive business activities, enhanced their success, reduces time required for travelling, and enables a women to be accessible to current market information. The average proximity of defaulted respondents to the transport access road was 8.4 km and it was 7.4 km for non-defaulters. As shown in Table 14, the computed t-value of (2.259) indicated statistically significant relationship between repayment performance and respondents access to transport roads.

3.4.2 Access to market and default

Access to market indicated that the relative proximity of the respondents household to the largest market in the area. Highest distance from market affects the decision of women to involve in non-farm business activities because of cost of travel and transport, time and energy consumption. The average proximity of defaulted respondents to the largest market in the area was 12.9 km and it was 8.0 km for non-defaulters. From Table 15 the computed t-value of (4.51***) indicated that there was statistically significant relationship between repayment performance and respondents access to market.

Table 11. Livestock ownership

Livestock owned (TLU)	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
0.00	16	33.3	6	12.5	10.326***	22	22.9
0.71-1.40	27	56.2	26	54.2		35	55.2
1.41-2.00	5	10.4	16	33.3		21	21.9
Total	48	100	48	100		96	100
Overall mean livestock	0.568		1.07			0.820	
Standard deviation	0.507		0.539			0.578	
Maximum						1.65	
Minimum						0.00	

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

Table 12. Total cultivable farmland owned

Farmland owned (group)	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
0.10-0.25	24	50	25	52.1	3.85	22	22.9
0.26-0.35	19	39.6	12	25		35	55.2
0.46-0.55	5	10.4	11	22.9		21	21.9
Total	48	100	48	100		96	100
Overall mean farmland	0.28		0.32			0.30	
Standard deviation	0.010		0.108			0.105	
Maximum						0.50	
Minimum						0.13	

Source: computed from data 2016; P value = 0.146; Non-significant

Table 13. Prior business engagement

Prior business engagement	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
No	28	58.3	11	22.9	12.48***	39	40.6
Yes	20	41.7	37	77.1		57	59.4
Total	48	100	48	100		96	100

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

Table 14. Access to transport roads

	Defaulters		Non-defaulters		t-test value	Total	
	Mean	SD	Mean	SD	t-value	Mean	SD
Transport road distance (KM)	8.4	5.089	7.4	5.281	2.259**	7.9	5.183
Maximum						20.0	
Minimum						0.5	

*Source: computed from data 2016; P value = 0.026; ** significant: at less than 5% level of significance*

Table 15. Market access of respondents

	Defaulters		Non-defaulters			Total	
	Mean	SD	Mean	SD	t-value	Mean	SD
Market Distance (Km)	12.9	5.080	8.0	5.472	4.51***	10.5	5.792
Maximum	24.0					24.0	
Minimum	2.5					2.5	

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

3.4.3 Amount of RuSACCO loan received and default

The amount of loan provided by the microcredit programs is likely to affect the utilization choices and also repayment performance of the clients. When the loan amount is very small it could not stimulate the household economy of sample respondents. Similarly when the loan amount is very large it could be beyond the capacity of a household and could lead to default cases. Over fifty percent (54.2%) have received the amount of 1001-2000 birr and defaulted. Similarly, majority of 35 (72.9%) of respondents have received the loan amount of 2001-3000 birr and were non-defaulters. The Pearson's chi-square value (21.56***) indicated that there was statistically significant relationship between loan amount and repayment performance.

3.4.4 Savings in RuSACCO and default

There are two types of savings for members in their individual account in RuSACCOs. The first one is compulsory saving that member has to save fixed amount of money regularly on weekly, fortnightly or on monthly bases depending on the preference of RuSACCO societies. The second type of saving is optional saving that members save chosen amount of money in their account based on their interest. Hence, saving amount indicates the households' income status and commitment to perform better in the RuSACCO and also related to the repayment performance of an individual member. Larger amount of saving enables to borrow higher amount of microcredit loans and have better opportunity to invest on high return productive activities which can able to stimulate the household economies. The average saving for defaulters and non-defaulters were 520.52 birr and 700.75 birr for defaulters and non-defaulters respectively. The computed t-value of (3.922***, P-value of 0.00) indicated that there was statistically significant relationship between repayment performance and total amount of savings.

3.4.5 Training and default

Trainings related to business skills, cooperative administration, and enterprise promotions are most likely to have important role in microcredit utilization and repayment performance of women. But, the outcomes of training could be determined partly by the types and topics of skill trainings, facilitation skills of trainers, education status and interest of trainees etc. The result in Table 18 depicted that majority of 21 (43.8%) of defaulters have received business skill trainings only one session. The majority of 24 (50%) of non-defaulter households have received three session of trainings on business skills, enterprise development and cooperative administrations. The computed Chi-square value of 30.922*** indicated that there was statistically significant relationships between repayment performance and number of trainings sessions of business skills.

Table 16. Total amount of loan received

Loan amount (group)	Defaulters		Non-defaulters		Chi-square value	Total	
Vs Repayment performance	N	%	N	%		N	%
1000 or less	4	8.3	5	10.4	21.568***	9	9.4
1001-2000	26	54.2	5	10.4		31	32.3
2001-3000	17	35.4	35	72.9		52	4.2
3001-4000	1	2.1	3	6.2		4	4.2
Total	48	100	48	100		96	100
Overall mean loan amount	2110.42		2525.00			2371.71	
Standard deviation	597.598		803.781			734.667	
Maximum						4000	
Minimum						500	

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

Table 17. Total amount of saving in RuSACCO

	Defaulters		Non-defaulters		t-test value	Total	
	Mean	SD	Mean	SD	t-value	Mean	SD
Total saving amount	520.52	167.747	700.75	270.550	3.922***	610.46	241.539
Maximum						1200	
Minimum						125	

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

3.4.6 Loan repayment frequency and default

Repayment frequency is also an important factor for timeliness of loan repayment before default dates. Those non-defaulters pay their loan regularly on weekly, fortnightly and monthly bases with their reasonable amount of instalments. The result in Table 19 depicted that majority of 32 (66.7%) of defaulters have repaid their loans on fortnightly basis. On the other hand, the majority of 35 (72.9%) of non-defaulter households have repaid their loans on weekly basis. From the Table 18 the computed Chi-square value of 53.452*** indicated that there was statistically significant relationship between repayment performance and loan repayment frequency.

3.4.7 Adequacy and timeliness of the loan and default

The adequate amount of credit means that the supply of credit equivalent to the amount demanded. On the other hand if the households get enough amounts of loan and timely credit service may help eliminate from the discrimination of informal lenders. The survey results reveal that 50 (52.1 %) of the borrowers acquired that sufficient amount of credit was disbursed whereas 46 (47.9%) borrowers not received sufficient amount of credit. The majority of 30 (58.3%) of the non-defaulters had reported that they received sufficient amount of loan whereas, and 26 (54.2%) of the defaulters reported that they had not received sufficient amount of credit. In the study area if the households acquired sufficient amount of loan, it might enable them to utilize properly and repay their loan timely. Pearson Chi-square value 1.503 showed that there was statistically no significant difference between the non defaulters and defaulters. On the other hand the basic logic regarding the timeliness of credit is: if the borrower acquires credit on time, he/she can utilize the loan on proper time and get a better output. Therefore, Table 20 indicated that 30 (62.5%) non-defaulters and 24 (50%) defaulters reported that credit services were delivered on time. The remaining did not acquire timely. In this study Pearson Chi-Square value 1.524 revealed that there is a statistically no significant difference between the non defaulter and defaulter borrowers.

Table 18. Trainings

Trainings provided	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
No training	5	10.4	1	2.1	30.922***	6	6.2
One times	21	43.8	4	8.3		25	26
Two times	17	35.4	18	37.5		35	36.5
Three times	3	6.2	24	50		27	28.1
Four times	2	4.2	1	2.1		3	3.1
Total	48	100	48	100		96	100

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

Table 19. Repayment frequency of loan

Repayment frequency	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
Weekly	1	2.1	35	72.9	53.452***	36	37.5
Fortnightly	32	66.7	12	25		44	45.8
Monthly	15	31.2	1	2.1		16	16.7
Total	48	100	48	100		96	100

*Source: computed from data 2016; P value = 0.000; *** significant: at less than 1% level of significance*

Table 20. Timeliness of the loan

Timeliness of the loan	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
Yes	24	50	30	62.5	1.524	54	56.2
No	24	50	18	37.5		42	43.8
Total	48	100	48	100		96	100

Source: computed from data 2016; P value = 0.217

3.5 Psychological Characteristics of Borrower

3.5.1 Economic motivation and default

Economic motivation is one of the important psychological factors that affect credit utilization and repayment performance of women respondents. Economic motivation is an indication for women's commitment to create an economic asset soon and invest in high risk non-farm business enterprises. It is also an indicator for high commitment of women to increase regular saving and repayment instalment amount and getting higher amount of loans to invest in productive activities. Out of the total 96 respondents the majority of 38 (79.2%) of those defaulter respondents had got medium score to the economic motivation statements. On the other hand out of the total 96 respondents the majority of 40 (83.3%) of those non-defaulters had got highest score to the economic motivation statements. Chi-square value of 45.735*** indicated that there was statistically significant relationship between economic motivation and repayment performance.

3.5.2 Perceptions towards RuSACCO and default

Perception of members towards RuSACCO is an important factor for success of members in the cooperatives societies. Perception towards RuSACCO is an indicator of confidence of members in their cooperative organization, management structures and autonomies of the RuSACCO as an independent entity. Perception also indicated the overall benefits of RuSACCO and timely and sufficient service delivery systems of the cooperatives to its members. The survey result indicated that out of the total 96 respondents, the majority of 33 (68.8%) of those non-defaulters had positive perception towards their RuSACCOs. Chi-square value of 12.463*** indicated that there is statistically significant relationship between perception towards RuSACCOs and repayment performance of respondents.

Table 21. Adequacy of loan

Adequacy of the loan	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
Yes	22	45.8	30	58.3	1.503	50	52.1
No	26	54.2	18	41.7		46	47.9
Total	48	100	48	100		96	100

Source: computed from data 2016; P value = 0.220

Table 22. Economic motivation

Economic motivation vs repayment performance	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
Low	3	6.2	0	0	45.735***	3	3.1
Medium	38	79.2	8	16.7		46	47.9
High	7	14.6	40	83.3		47	49
Total	48	100	48	100		96	100

*Source: computed from data 2016; *** significant: at less than 1% level of significance*

Table 23. Perception of respondents towards RuSACCO

Perception towards RuSACCO vs repayment performance	Defaulters		Non-defaulters		Chi-square value	Total	
	N	%	N	%		N	%
Negative	1	2.1	0	0	12.463***	1	1
Neutral	31	64.6	15	31.2		46	47.9
Positive	16	33.3	33	68.8		49	51
Total	48	100	48	100		96	100

*Source: computed from data 2016; P value = 0.002; *** significant: at less than 1% level of significances*

4. CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Borrowers of credit are expected to utilize the borrowed money for the intended productive investments purpose and repay their debt in time. This would help the borrower to enhance their standard of living and the credit provider the much needed liquidity and financial sustainability. The study brought to light characteristics of women borrowers of RuSACCO and their loan repayment in Kindo Koysha woreda, Ethiopia.

The descriptive analysis showed that from a total of 96 respondents, 48 (50%) of them have repaid the loan properly while, another 48 (50%) did not repay the loan properly.

The following categories of women borrowers were found to have higher tendency or higher percentage of women found to be repaying loan promptly: Younger women, more educated, married, with lower dependency ratio, with higher household income and expenses, higher farm size, with higher livestock holding, with prior business engagement, having better access to road and market, who availed higher loan amount and having higher amount as savings from / in RuSACCO, higher level of training, following weekly repayment rather than fortnightly or monthly and higher economic motivation.

4.2 Recommendations

RuSACCO management should motivate aged borrowers to use the loan amount for productive purposes and their follow up should be closer. Less educated women and single women should be followed up closely and be trained for use of loan for productive purposes so as to ensure prompt loan repayment. The women having higher dependency ratio should be supported to use the loan for productive purposes so as to make them repay the loan regularly. Interestingly, those women with higher income and expenses have the tendency to repay promptly. This might be because of their skill to use loan for productive purpose earning more income and consequently spending more as well. RuSACCOs should not be concerned about the higher expenses of women borrowers as long as they earn higher income and hence can lend them without much hesitation. Women with lower livestock possession, not having any business experience, lower savings with RuSACCO, residing in remote locations need higher level of training and proper post-loan sanctioning follow up for repayment of borrowed loan. The higher loan size with weekly mode of repayment facilitates prompt repayment of loan. RuSACCO may consider sufficient loan amount so as to encourage women to use properly and repay. Similarly, RuSACCO shall try to collect loan in weekly instalments which would facilitate ease of repayment.

CONSENT

The due consent of the respondents was obtained before colleting the data after detailed briefing them of the purpose of the study, the confidentiality, etc.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Kyungay EM. Harmonizing the factors constraining accessibility of credit to women entrepreneurs in Tanzania. A case of Morogoro District'. Dissertation for Award of M.A Degree at Sokoine University of Agriculture, Morogoro, Tanzania. 2007;91.
2. Satta T. Rural and micro enterprise in Tanzania: Lessons from other Developing Countries'. The African Journal of Finance and Management. 1999;8(1):54-60.
3. Rhyne E, Otero M. Financial services for micro-enterprises: A new view of micro-enterprises'. The Tanzanian Bankers Journal. 1997;9(2):33-38.
4. Sanderatne N. An analytical approach to loan defaults by small farmers'. Saving and Finance Development Journal. 1978;2(4): 290–304.
5. Kashuliza A. Financing small scale farmers in Tanzania. An evaluation of institutional credit allocation and borrower repayment trends'. Dissertation for Award of M.A. Degree at University of Guelph, Toronto, Canada. 1986;219.
6. Mongi M. The role of women savings and credit groups in the alleviation of poverty in Eastern part of Arumeru District in Tanzania'. Dissertation for Award of M.A

Degree at Sokoine University of Agriculture, Morogoro, Tanzania. 2005; 101.
7. Satta T. Rural and micro enterprise in Tanzania: Lessons from other Developing Countries. The African Journal of Finance and Management. 2000;8(3):54–64.
8. Kasambala M. The determinants of credit demand for micro enterprises. A case study of Southern Highlands of Tanzania'. Dissertation for Award of M.A Degreeat Sokoine University of Agriculture, Morogoro, Tanzania. 2007;139.
9. Reta FK. 'Determinants of loan repayment performance: A case study in the Addis credit and saving Institution, Addis Ababa, Ethiopia'. Wageningen University. © 20 15 Global Journals Inc. (US) 37Global Journal of Management and Business Research Volume XV; 2011.

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