Determinants of Saving in Rural Saving and credit cooperatives in Sodo ZuriaWoreda ,Wolaita Zone , Southern Ethiopia

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Abstract- It is undisputable fact that savings is of great value to a nation's growth and development. Mobilizing both domestic and international savings is necessary society can proceed into 'self-sustaining economic growth The primary purpose of this study is to investigate the determinants of saving SACCOs members in sodozuriaworeda ,wolaita zone in Ethiopia. The data for the study was obtained in the woredaSACCOs using purposive and randomly sampling selected 398SACCOs members seven SACCOs.The empirical analysis, using multiple regression model shows that age, training ,family size ,income, market distance and expenditureof SACCOmembership statically significant at 1% and 5% raise SACCOs member savings. Therefore, these factors have to be considered in designing strategies aimed at improving the saving pattern of SACCOs member Linear regression analysis result indicates that amount of loan utilization has a positive relationship with saving Since in case of SACCO's, all members have to save some amount of money in advance to get loan The loan has significant influence on the improvement of SACCO's, all members.Thus unplanned expenditures tend to take the bulk of people savings than the planned expenditures. The study therefore recommended for government policies to be geared towards subsidizing the cost of higher savings. Also sensitization programs on SACCO's, should be intensified to enable many people to enroll on the program

Index Terms- Saving ,SACCOs, linear regression and multiple regression

I. INTRODUCTION

Savings represent the portion of income not spent today. That portion is mainly accumulated to serve as a future investment, future consumption, and/or as a way to protect against future contingencies. At the macro level, domestic savings in the form of capital formation are recognized as compelling for economic growth, considering that they increase capital stock thereby boosting the economy to generate future higher incomes [3]. It is worth noting that have stressed the prominent role played by domestic savings rather than foreign debt in boosting domestic investments, hence enhancing the country's economic growth.

Succeeding to enhance national economic growth through domestic savings requires more than public savings and capital formation. It also needs to considerably increase private savings, particularly household savings to release substantial resources that would steer up economic growth through financing domestic investments. It is in this line that in the macroeconomic framework for identifies private saving as an important driver that will boost both domestic investments and GDP growth .To raise private savings and household savings, in particular, it is important to investigate the fundamentals that determine household savings. Unfortunately, in developing countries, the existing empirical literature related to the latter is lopsided.

Moreover, their social coverage is restricted and the credit and insurance markets are not well developed and civilized. Thus, these countries mostly face saving allocation problems and have difficulties to develop productive investments. The serious problem confronting poor countries is high gap in savings and investment. Because of this high gap, these countries mostly faced challenges to finance investments needed for growth from their domestic saving It is also not surprise to see these countries to finance their investment in the short run partly through domestic economy .The determinants of saving differ from rural region. In rural areas, the marginal propensity to consume is more rather than the marginal propensity to save which seems to be vice-versa in Households" saving is important to insure financial security of households and serves as insurance at the time of shocks. But given the differences in the demographic, social, economic environment and other factors of the households, there should be substantial variation in the household saving performance. The ratio of domestic saving to the gross domestic product (GDP) indicates the poor performance saving in Ethiopia. For example, (GDP) from 2010 to 2015 on average was 19.3, which indicates the poor performance saving in Ethiopia [4].which is below the average saving growth rate of the sub-Saharan African countries which is 30% of their GDP.

What pushes or pulls rural people in regional level to save? Although research has shown saving by rural SACCO,s people in

little is known about the factors that influence saving and assets accumulation Despite no previous studies were conducted on the issue in the study woreda and still many households are suffering from constraints related to low economic empowerment. Therefore, this study tried to investigate the determinants of saving its degree and magnitudes of rural SACCO,s the study area

II. OBJECTIVE OF THE STUDY

The general objective of the study was to analyses determinants of saving in Rural saving and credit cooperatives in Sodo Zuriya Woreda

Specific Objectives
1. Find out influence of demographic and economic factors in saving rural SACCOs
2. Identify challenges faced members saving rural SACCOs in the study area
3. Analysis determinants of saving rural SACCOs in the study area
4. Investigate effect of loan accesses in saving rural SACCOs in the study area

III. RESEARCH METHODOLOGY

Description of Study Area
Sodo Zuriya woreda is one of the 16 woreda Administrations of Woliata zone in the Southern Region in Ethiopia, Located 300 kilometers south of Addis Ababa it has a latitude and longitude of 6°50′N 37°45′E. Based on Census conducted by the Central Statistical Agency of Ethiopia [1]. Sodo Zuria woreda, which is study area, found between Damot Gale and Sodo city administration in Sodo zuriya woreda, its total population number was114, 673.The climate is stable, with temperature variation between 24 and 30 °C during the day and 16 to 20 °C at night, all year round.

Research Design
Research design is the plan of action that links the philosophical assumptions to specific methods research design forms the blue-print or maps that details how the researcher collect data that is relevant to address the research questions.

The research can be classified in to three as descriptive, and exploratory. Descriptive research sets out to describe & to interpret what it is. The major purpose of descriptive research is describing the state of affairs as it exists at present. Explanatory research is conducted when we encounter an issue that is already known and have a description of itExploratory research is a type of research conducted because a problem has not been clearly defined. Its purpose is to gain background information and better understand and clarify a problem. This gives adequate information for the researcher about saving in rural SACCO,s

Data Source and Method of Data Collection
The analysis of this paper is based on a SACCO,s survey conducted in the study sample of 398 saving members was interviewed from seven rural kebele saving SACCOs .A random sample method was used by probability proportion to size from the selected kebele; with each kebele's list of members used as the sampling frame.A detailed and structured interview schedule has been prepared and used for all SACCOs in selected kebeles. The study has utilized primary and secondary, qualitative and quantitative data from different sources.

Sample Size Determination
Sample Size Sample size is the number of items that are selected from the universe to constitute the sample, using a simplified formula provided by Yamane (1967), although it is possible to collect data from the whole population, the study covered only 398 respondents from seven kebels. The sample size was considered to represent characteristics of the whole population and bring good results at the analysis stage.

$n = \frac{N}{1+N(e)2}$ **Where** n = the required sample size

N = Total number of rural household saving

e = the level of precision

$n = \frac{3922}{1+3922(0.05)2} = \frac{3922}{9.85}$ =398

Sample technique
The study use both random and purposive sampling procedure. SACCOs of saving members were picked randomly for reducing bias. In addition, individuals with vital information including leaders were selected for further relevant information.Thus individual SACOO's members are the basic sampling units in the study area.

Method of data analysis
Two types of data analysis was used descriptive statistic and econometric model ofmultiple logistic regressionswas used to analysis of data collected from rural saving SACCOs in order to attain the objectives of the study. The data analysis is conducted by using STATA software.

Multiple regression
Multiple regression model aims at constructing relationships among a single dependent or response variable and more independent or predictor variables, and is one of the more widely used methods in data analysis.

$Y = β0 + β1X1 + β2X2 + β3X3 + β4X4 + B5X5 + β6X6 + β7X7 + β8X8 + ε$ Where: β0, β1, β2, β3, β4 B5,B6,B7,B8) are coefficients.

Y = rural saving SACCO,s

X1=Age ,X2= Gender, X3= Education, X4= Training, X5= Family size,X6= Income

X7= market distance ,X8= loan accesses

IV. RESULTS AND DISCUSSION

In this section, results obtained using statistical tools such as mean, percentage, standard deviation and frequency distributions are presented and discussed to examine factors affecting rural SACCOs savingin the study areas.

Table 4.1 Distribution of sample respondents by age group

No	Age group	Frequency	Percentage	Mean annual
1	15-25	77	19.3	2860
2	26 40	179	45	5150
3	41-55	98	24.6	4392
4	Above 55	44	11.1	2810
		398	100	

Source: Own survey result, 2022

Distribution of sample heads by age

In this study the age group is classified as (15 - 25), age group (26 – 40), (41-55) and above 55 years' age. There were 77(19.3%) young, 179(45 %) productive age, 98(24.6%) become old age 44 (11.1%) old age member respondents. In this study it was assumed that as age increases household would acquire knowledge and experience through continuous learning and the level of responsibility to manage the family and the need to accumulate assets for tomorrow becomes high. But the study proved the above that is as age increases at level of old the amount savings become decreases. In productive age saving amount was decrease during old age.

Table 4.2 Distribution of family member

No	Family size	Frequency	Percentage	Mean
1	1-4	120	31	6152
2	5-8	132	33	3918
3	9-12	95	23.5	2917
4	Above 12	51	12.5	2610

Distribution of sample by family size

Table 4.2 reveals that 120(31%) of the respondents has family size ranges from 1 to 4. The mean annual saving was 6152 , the family size range 5-8 members 13(33 %) of respondents has annual mean saving was 3918, the respondents has the family members range from 9 to 12 has 95(23.5%) their mean annual saving has 2917 and above 12. Member of family size 51(12.5%) annual saving has 2610.this result indicated that As the members' family size increases, the number of persons to be fed obviously increases and the amount of savings decreases by Birr 2234 from first and second category family size group. The difference between   third family size groups and fourth family size group 307 birr this implies, share available income to consume. Therefore, respondent who have large family size save less money than those who have less family size.

Table 4.3: Distribution of savings by Gender

No	Sex	frequency	Percentage	Mean annual saving	T value	P value
1	male	264	66.3	5109	2.16	0.036
2	female	134	33,7	3816		

total	398	100

Source: Own survey STATA output, 2022

Distributionof savings by Gender

In table 4.3 total respondent 66.3 percentage male respondent annual saving was 5109 and 33.7 percentage of female respondent annual saving was 3816 the results shows male household saving more than female households. The t - test (t - value) of sex distribution members of the difference between male and female household annual savings is statistically significant at 5 percent confidence The mean annual savings of female and male members were Birr 5109 and Birr 3816 respectively. The mean amount of savings of male is exceeds by 1293 than female. This indicates male save more than female. Therefore, participating male activities could be increase saving and improves the performance of rural households.

Distribution of educational status

Table 4.4 Distribution of respondents by their educational status

No	Education level	Frequency	Percentage	Mean annual saving
1	No education	102	25.5	2921
2	1-4	113	28.5	3005
2	5-8	96	24	3612
3	9-12	54	13.5	3710
4	Above 12	33	8.5	4293
		398	100	

Source: Own survey result, 2022

Educational status

Sample members' education status helps them not only to understand how to make money but also to prudently and profitably handle cash in financial institutions, which are found in nearby areas. The survey results revealed that 102(25.5 %) of the respondents were illiterate, 113 (28.5 %) were grade 1-4, 96 (24%) were grade 5-8, 54 (13.5 %) were grade 9-12, and 33 (8.5 %) of them have college Diploma and above. This indicate almost 56.8 % or more than half of survived respondents have low level education and this have great effect influence on the performance of household saving

Table 4.5 the effect of loan access rural SACCO,s

No	Source of income	Frequency	Percentage
1	Agriculture	150	37.6
2	Livestock and Agriculture	133	33.4
3	Off farm	116	29
4	Total	334	100

Source: Own survey result, 2022

The effect of loan access rural SACCO,s

Annual income is the other crucial factor in determining the wellbeing of improving the members saving .The table 4.5 above showed that (37.6 %) of the respondents obtain an annual income from agriculture, (33.4 %) from livestock production and agriculture (29%) of the annual income from off-farm. Agriculture and livestock production are important income sources for the sample respondents, however, off farm activity is relatively important source of income in rural SACCOS.

The amount of income represents the amount of annual income of the household from different activities, such as, agriculture, off-farm, livestock production and others. The higher the amount of annual income might reflect households' strategy of improving its agricultural production and productivity to secure the household basic needs and gradually to change the household members' life style. It was hypothesized that, household which have higher amount of annual income can save more than those who have low income and have positive correlation with performance of saving.

Table 4.6: challenges faced members in saving rural SACCOs

Challenges	frequency percent
Perception of borrowing is risky	41 10
Perception of high interest rate	56 14
Far distance from cooperatives	29 7.2
Lack of awareness creation/extension services	92 23
Limited amount of borrowing	99 25
Challenges in Members failed to repay back loans on time	21 5.4
Lack of capital and office furniture's	23 5,5
Lack of awareness creation	10 2.4
Lack of professional leaders	27 6.6
Total	398 100

Source: Own survey result, 2022

Challenges faced rural SACCOs members in saving performance

The study revealed that Perception of borrowing is risky respondents are 10% , Perception of high interest rate are 14 % respondents ,Far distance from cooperatives 7.2 % respondent, Lack of awareness creation/extension services 23% respondent , Limited amount of borrowing 25 % of respondent, Challenges in Members failed to repay back loans on time 5.4%, of respondent, Lack of capital and office furniture's5.5% of respondent , Lack of awareness creation 2.4% of respondent and Lack of professional leaders 6.6% of respondent's. Reported that the main problem or challenge's facing saving of rural SACCOS are limited amount

of borrowing,   lack of awareness creation, perception of high interest rate and Perception of borrowing is risky.

Table 4.7 model specification test

Saving	Coef.	Std. Err.	z	P>|z|
hat ***	1.358605	. 4417423	3.08	**0.002**
hatsq	-.0564692	.0490464	-1.15	0.250
cons	-.394415	.7712902	-0.51	0.609

Source: Own survey result, 2022

If the model is properly specified, variable hatsqs shouldn't have much predictive power except by chance. Therefore, if hatsq is significant, then the link test is significant. In this study, link test reports reveal that the model is correctly specified. Because linear predicted value (hat) is significant with p-value 0.002 in the model and linear predicted value squared (hatsq) is insignificant with p-value 0.686 at 1% degree of freedom in the model

Table 4.8 multiple regression model

Saving	Coef.	Std. Err.	t	P>|t|
Age **	.8249931	. 2147153	3.84	0.000
edu	52.6635	40.5018	1.30	0.194
training **	10.05232	4.190735	2.40	0.017
family size **	-193.2423	51.59888	3.75	0.000
gender	-46.25622	45.70189	-0.10	0.919
income	.2818932	.0694639	4.06	0.000**
mktdist	.3901446	.1512951	2.58	0.010**
Loanacc **	4.91545	1.193166	4.12	0.000

Significant level 5% **
Source STATA output, 2021/22

Determinants of Saving Rural SACCO's members Analysis

The regression equation above has established that taking all factors into account Savings as a result of the findings shows that taking all other independent variables at zero, a unit decrease in family size the rural SACCO's members saving 196 birr. If family size is much large households cannot save much amount of money than having small family size. Family size is also a major cause of fewer saving.

The coefficient of rural SACCO's member'sincome was statistically significant and positively related to savings. Results show that one Birr increase in income tends to raise household savings by 0.281 Birr because households' capacity to save increases with rise in income level. Marginal propensity to save (MPS) for member saving equation is indicates that portion of total income is saved per year.

The regression results of the study also show that rural SACCO's member's savings were affected by age. Considering the age we conclude that the amount of money saving has a positive coefficient and significant at 1%, as expected, indicating

that a one percent increases in age ofrural SACCO's members savings by 0.336 Birr.

As age of SACCO's, members increases by 1 year when all other thing constant it will result in a raise in rural SACCO'ssavings by .824 Birr. It is expected that, saving by the adult age member would be increase with age as beyond retirement age diminished. This shows that the members lessen their savings, as they grow old. This confirms with the life cycle hypothesis of savings, which claims that a person would be expected to save up to a point and then start dissaving as he grows old.

The findings show that use of the loan has significant influence on the improvement of rural SACCO's members saving by 4.91 birr. This shows that the members who have borrowed from the finical institution a invested in business activity chances of achieving improvement of household saving. This implies that household members is decreased borrow credit for the use of other non-productive purposes like domestic use and purchasing home equipment instead of injecting the borrowed amount into business in order to expand it. The marginal effect reveals that, the use of borrowed loans on other issues instead of directing into businesses may decrease saving of household.

Theregression result reveals that market access of rural SACCO's memberswas positively significant to saving. Results show that one percent increase market acces1000esse for rural SACCO's members tends to raise savings by .390 Birr this result indicated that business entity has market access which improve profit of the entity that enhance saving

The regression result of coefficient of training access of rural SACCO's members was significant and positively related to savings. The finding shows that one percent increase training access for rural SACCO's members tends to raise savings by 10.05 Birr indicated that business entity training access which improve entrepreneur skill rural SACCO's members to work hard.

Table 4.9Post diagnostic test of multicolinearity

Variable	VIF	1/VIF
Loan	1.00	1.00
Mean VIF	1.00	

Source: STATA output, 2021/22

Mulicolilarty test

The problem is essentially due to lack of sufficient information in the sample to allow efficient estimation of individual parameters. Multicollinearity of explanatory variables was tested via VIF (variance inflation factor). The test result indicates that the mean value of VIF was 1, which is less than 5 and signifying no multicollinearity problem.

Table 4.10 linear regression effect of loan on saving

Saving	Coef.	Std. Err.	t	P>|t|
Loan access **	.0338148	.0058228	5.81	0.000
Cons	431.1316	15.86589	27.17	0.000

Significant at 1% level **
Source: STATA output, 2021/22

4.4 The Effect of Loan access on saving on SACCO's, members

The regression analysis result indicates that amount of saving has a positive relationship with saving variables (table 4.10). Since in case of SACCO's, all members have to save some amount of money in advance to get loan saving has a positive relationship with all other variables. The finding shows that use of the loan has significant influence on the improvement of SACCO's, all members saving by 0.338 birr. This shows that the members who have borrowed from the finical institution an invested in business activity chances of achieving improvement ofsaving. This implies that SACCO's members is increased borrow credit for the use of business activity.

V. CONCLUSIONAND RECOMMENDATIONS

CONCLUSION

The purpose of this paper is to identify the determinants of rural household saving in woliata zone Sodo zuriy wored southern, nation, national, people regional, state of Ethiopia, using the data available from the household survey for the year 2021/22. Different characteristics of rural household were analyzed based on the data collected from the sample respondents. The characteristics were categorized in to two as demographic and socio economic. Demographic characteristics result of the study showed that savings is determined by gender of household, age of household ,family size of household, socio economic characteristic house hold income, amount of loan borrowed and market access of household were statistical significant at i% and 5% level. In this study cross sectional data were collected from 398 sample rural household from the study area using survey questionnaires.

In this study it was assumed that as age increases household would acquire knowledge and experience through continuous learning and the level of responsibility to manage the family and the need to accumulate assets for tomorrow becomes high. But the study proved the above that is as age increases at level of old the amount savings become decreases. In productive age saving amount was decrease during old age. that the main problem or challenge's facing saving of rural SACCOS are limited amount of borrowing, lack of awareness creation, perception of high interest rate and Perception of borrowing is risky.

Annual income is the other crucial factor in determining the wellbeing of improving the members saving .The table 4.4 above showed that (37.6 %) of the respondents obtain an annual income from agriculture, (33.4 %) from livestock production and agriculture (29%) of the annual income from off-farm. Agriculture and livestock production are important income sources for the sample respondents, however, off farm activity is relatively important source of income in rural household Therefore, the next section forwards the necessary recommendations which are suggested for financial institutions, government and policy makers in designing suitable domestic resource mobilization, identified in this study.

RECOMMENDATIONS

Based on the result obtained, it is recommended that rural household members should be encouraged and enlighten on the need for savings. Also institutions that are involved in development projects need to increase their support to improve

the business environment of the rural household populations. Such decisions include supporting through revolving funds since rural households are more effective in mobilizing funds with low default rate. This will enable them to expand their production output and increase their savings thereby stimulating the rural economy.

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