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**Article**

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## GENERAL & APPLIED ECONOMICS | RESEARCH ARTICLE

# Determinants of Village Savings and Loans Association membership and savings amounts in Awutu Senya West District of Ghana

Aaron Alesane<sup>1</sup>, Kamaldeen Yussif<sup>2</sup> and Benjamin Tetteh Anang<sup>3\*</sup>

**Abstract:** At the macro level, savings mobilization plays an important role in economic growth and development whilst at the micro household level it plays a critical role in production, consumption and investment decisions. However, savings mobilization in many developing countries remains low which calls for further research and insight into the savings behaviour of the poor and ways to encourage rural savings. This study therefore investigates the factors influencing the decision to join Village Savings and Loans Association (VSLA) in Awutu Senya West District of Ghana and the resulting amounts saved. Using a cross-sectional design and a linear regression with endogenous treatment-effects model, the study indicated that the propensity to join VSLA was positively related to household size and respondent being male but was negatively associated with respondent's age and educational status. Also, absolute amount saved increased with respondent's age, education and amount of current loan. In general, absolute savings amounts were very low. The estimated average treatment effect of VSLA membership on savings indicated

### ABOUT THE AUTHORS

Aaron Alesane is a Commonwealth doctoral scholar and researcher in International Development at the University of Reading. His research focuses on client-centric design of microfinance products and services for resource-poor, low-income households in the Global South. Aaron, who has a number of publications in refereed journals, has worked in partnership with government ministries, departments and agencies, the private sector, NGOs and local communities on water and sanitation, health, education, microfinance, livelihoods and gender issues among others.

Kamaldeen Yussif is a lecturer at the Faculty of Agribusiness and Communication Sciences, University for Development Studies in Ghana with research interest in agricultural extension, rural development and gender studies.

Benjamin Tetteh Anang holds a PhD in agricultural economics and is a senior lecturer at the Faculty of Agriculture, University for Development Studies in Ghana. His research focuses on efficiency and productivity analysis, access to financial services, and impact evaluation studies.

### PUBLIC INTEREST STATEMENT

Savings mobilization is critical to socio-economic development in developing countries and Ghana is no exception. Poor people face many livelihood challenges hence the need for measures to safeguard against future unexpected expenditures through local savings. The means for accumulating rural savings is important to ensure security of amounts saved and confidence to participate. Two savings models, the Village Savings and Loans Association (VSLA) and the Credit with Education (CwE), were investigated. It was observed that the propensity to join VSLA is positively related to household size and respondent being male but negatively associated with respondent's age and educational status. Also, absolute amount saved increased with age, education and amount of current loan. In general, absolute savings amounts were very low. Belonging to a VSLA increased the savings of members by GH¢ 268. Thus, VSLAs can be used as a channel to improve savings mobilization among the poor to enhance rural livelihoods.

that belonging to a VSLA increased the savings of members by GH¢ 268. Thus, VSLAs can be used as channels to deepen financial inclusion and savings mobilization among the rural poor to promote the growth of the rural economy.

**Subjects:** Rural Development; Development Economics; Credit & Credit Institutions

**Keywords:** informal financial sector; rural savings mobilization; microfinance; Village Savings and Loans association; Awutu Senya West District

## 1. Introduction

The ability of the poor to save is well documented in the existing literature (Banerjee & Duflo, 2007; Karlan, 2010). Poor people are active money managers: they “save up” (by keeping part of their income for future use) or “save down” (by borrowing and repaying later from future savings). Several studies allude to the fact that most poor people shy away from formal commercial banks, preferring informal sources of credit even though the interest rates charged by these sources are often usurious. As indicated by Elahi (2004), commercial banks serve those who are credit-worthy and thus profitable to them. On the other hand, the savings preference of poor savers has not been widely researched as compared to the demand for credit.

The informal financial sector in Ghana plays an important role in deepening financial inclusion among the rural poor. Ghana’s financial sector is made up predominantly of the formal and informal sectors. However, there is non-comparability in the required skills to design, develop and roll out products and services that meet the needs of the poor. An example is the integration of the loaning and savings functions in micro-lending. Informal financial sources such as the Village Savings and Loans Association (VSLA) and the Credit with Education (CwE) microfinance models seem to be preferred choices for poor people in term of saving and borrowing. The increasing importance of VSL associations in local financial intermediation has been reported by Ksoll, Lilleør, Lønborg, and Rasmussen (2016). Informal microfinance providers also tailor their products and services that meet the needs of the poor and effectively segment their market niche that target the productive poor.

The development economics literature is replete with studies that give attention to the poor’s need for microfinance products and services, particularly, enterprise loans. This is understandable because most rural dwellers are poor and need outside capital to finance production and investment activities. Rural households are not only consumers of financial products and services, but a potential source of loan funds in the form of savings. Savings mobilization has become an integral part of the activities of most microfinance institutions working with the rural poor due to the recognition that poor people have the capacity and willingness to save (Cull & Morduch, 2007).

Savings is integral to poor households’ risk management strategies; they constitute the first line of defense to help poor households to cope with external shocks, emergencies, and life-cycle events to which they are so vulnerable; and they play a crucial role in allowing the poor to take advantage of productive investment opportunities (Grosh & Somolekae, 1996; Karlan, Ratan, & Zinman, 2014).

Numerous studies indicate the poor’s preference for informal sources of finance despite the growth in the number of formal financial institutions providing loanable funds to borrowers (Jan, Munir, & Rehman, 2011). On the other hand, studies regarding where poor people choose to save are hard to find. It is a popular perception that many poor people prefer to keep their savings at home due to the smallness of the amounts available to save. Others prefer to save with informal savings groups referred to as SUSU groups. Two models are commonly practiced. In the first, participants make regular contributions to a collector who returns the savings after a given period of time and receives a commission for his services. In the second model, participants deposit equal

instalments and the total sum collected at the end of a specified period is given to one member, on a rotational basis. The SUSU model is attractive to poor people, even though it has its challenges, including collectors absconding with monies collected, or some group members refusing to contribute for others after they have benefitted from the group contribution.

One factor accounting for low savings mobilization among the poor is high incidence of poverty. However, given that the poor have the capacity to save, albeit not much in terms of amount, it suffices to find out where their savings preferences lie. Deepening financial inclusion among the poor is a policy goal of the government of Ghana as far as the development of the financial sector is concerned.

The pattern of financial accessibility in rural Ghana is generally the same nationwide and reflects low accessibility to financial services especially formal finance. Formal financial institutions, especially commercial banks are typically located in urban areas. There is also the presence of rural banks that provide commercial banking services to rural dwellers. Financial non-governmental organizations also provide financial services to rural dwellers, albeit on a scale much smaller than that of the formal financial sector in terms of size of credit or savings. Hence, provision and access to financial services in Ghana can be said to be disproportionately skewed in favor of urban areas.

There are a number of studies into savings behaviour (habit) in developing countries (see, for example, Agrawal, Sahoo, & Dasha, 2009; Anang, Dawuda, & Imoro, 2015; Dziwornu & Anagba, 2014; Mumin, Razak, & Domanban, 2013). Several authors have indicated that poor people shy away from formal financial institutions, especially in developing countries. Most of these studies focused on borrowing behaviour of the poor and the factors that make lending to the poor risky. Also, most of these studies focused on the formal financial sector, with less attention to the informal sector. This study seeks to add to the literature on savings behaviour of poor people and measures to enhance savings mobilization among the poor by focusing on the informal financial sector.

This study focused on participants involved in two models of microfinance programmes, namely, the Credit with Education (CwE) and the Village Savings and Loans Association (VSLA) in Awutu Senya West District of Ghana. The Credit with Education model enables participants to access credit and other non-credit services from the microfinance institution. Members of the CwE model obtain loanable funds from a rural bank and on-lends to members. Savings is mandatory for all CwE group members prior to obtaining group loan for on-lending to members. The goal is first, to cultivate savings culture among members and second, as a form of collateral against default. The VSLA model, on the other hand, allows group members to pool financial resources through the purchase of shares. The pooled financial resources become loanable funds, which generate interest. At the end of a cycle, the interest accrued is distributed proportional to the number of shares bought per member. The cycle usually ranges between 6 and 12 months.

Village Savings and Loans (VSL) associations help to create a local financial market and allocate local savings to borrowers who belong to the group (Ksoll et al., 2016). VSL groups have become widespread and operate in more than 72 countries. However, despite the increasing popularity and importance of VSL associations in rural financial intermediation, not much is known about their impact on the welfare of rural people. The overall objective of this study is therefore to assess whether VSLA membership enhances savings mobilization among the poor, using the Awutu Senya West District of Ghana as case study. Specifically, the study seeks to assess the determinants of VSLA membership as well as the determinants of savings amount.

## 2. Materials and methods

### 2.1. Study area and sampling procedure

The study was conducted in Awutu Senya West District, located in the Central Region of Ghana. The district has its capital at Awutu Breku and has a total land area of 244.473 km<sup>2</sup>. The population

of the district according to the 2010 Population and Housing Census stood at 86,884. Major economic activities in the district include fishing, crop farming, petty trading, arts and crafts. The district was chosen for the study due to its proximity to the national capital and the presence of microfinance institutions serving the needs of the poor. Clients of two microfinance models, namely Credit with Education (CwE) and Village Savings and Loans Association (VSLA) were targeted for this study. The VSLA is made up of 115 groups as against 250 CwE groups. Each of these groups is made up of approximately 30 members. A total sample of 202 respondents were randomly selected and interviewed from the two groups, made up of 101 VSLA members and 101 CwE members. However, due to incomplete information provided by some respondents, 178 of the respondents were included in the analysis.

### 2.2. The linear regression with endogenous treatment-effects model

The endogenous treatment-regression model is a specific endogenous treatment-effects model which is also referred to as an endogenous binary-variable model or an endogenous dummy-variable model. The model was introduced by Heckman (1976, 1978) while Maddala (1983) came out with the maximum-likelihood and control function estimators. Authors such as Cameron and Trivedi (2005) and Wooldridge (2010) link the model to recent work. Recent empirical applications of the model include Anang et al. (2019) in a study assessing the effect of agricultural extension on farm income in northern Ghana. Bidzakin, Fialor, Awunyo-Vitor, and Yahaya (2018) also used the model to estimate the effect of irrigation ecology of technical, allocative and economic efficiency of farmers in Ghana. The endogenous treatment-regression model is a linear potential-outcome model that permits a specific correlation structure between the unobservable factors that affect the treatment and the unobservable factors that affect the potential outcomes. The endogenous treatment-regression model provides an estimate of the average treatment effect (ATE) as well as the average treatment effect on the treated (ATT), which measure the impact of the endogenous treatment variable.

The endogenous treatment-regression model is made up of an outcome equation  $Y_i$  (saving amount) and an equation for the endogenous treatment  $t_i$  (VSLA membership). The endogenous treatment can be modelled as an index function with an underlying continuous variable  $t_i^*$ . The outcome and treatment equations may be specified as follows:

$$Y_i = X_i\beta + \delta t_i + v_i \tag{1}$$

$$t_i^* = w_i\gamma + u_i \tag{2}$$

$$\text{where } t_i = \begin{cases} 1, & \text{if } w_i\gamma + u_i > 0 \\ 0, & \text{if } w_i\gamma + u_i \leq 0 \end{cases} \tag{3}$$

where  $t_i^*$  is the probability of participating in VSLA,  $X_i$  is a vector of covariates used to model the outcome, and  $w_i$  is a vector of covariates used to model treatment assignment. The error terms  $v_i$  and  $u_i$  are bivariate normal having a mean of zero and the following covariance matrix:

$$\begin{bmatrix} \delta^2 & \rho\sigma \\ \rho\sigma & 1 \end{bmatrix} \tag{4}$$

The covariates  $X_i$  and  $w_i$  are unrelated to the error terms (hence exogenous).

### 2.3. Empirical VSLA participation model

The decision to participate in VSLA is binary, where  $t_i = 1$ , if the respondent participated and  $t_i = 0$  if non-participant. Covariates for the treatment assignment include the respondent's gender, age and its squared value, educational status and household size. The empirical model is indicated as follows:

$$t_i^* = \gamma_0 + \gamma_1 \text{sex}_i + \gamma_2 \text{age}_i + \gamma_3 \text{agesqd}_i + \gamma_4 \text{hhsz}_i + \gamma_5 \text{edu}_i + u_i \tag{5}$$

Mwansakilwa, Tembo, Zulu, and Wamulume (2017) included sex, age and education of the household head as independent variables to explain participation in village savings and loans association in Eastern and Western Zambia. The study showed that participation in VSL association increased with age and educational level of the household head. Also, female household heads were more likely to participate in VSL groups.

#### 2.4. Empirical savings amount model

The dependent variable is the absolute amount of money saved by the respondents in Ghana Cedis. Covariates for the outcome equation include the respondent’s gender, age, educational status, household size and current loan size. The model was specified as follows:

$$Y_i = \beta_0 + \beta_1 \text{sex}_i + \beta_2 \text{age}_i + \beta_3 \text{agesqd}_i + \beta_4 \text{hhsz}_i + \beta_5 \text{edu}_i + \beta_6 \text{loan}_i + \beta_7 t_i + v_i \quad (6)$$

The variables included in the model were selected based on the existing literature. Sebhatu (2012) included age, sex and education of the respondent as well as household size and loan (amount borrowed) as explanatory variables in a savings model in a study to determine savings behaviour of cooperative members in Ethiopia.

The variables in the selection equation (Model 1) and the outcome equation (Model 2) are defined in Table 1. The gender of the respondent is expected to have an effect on VSLA membership, but the direction of the effect is not known *a priori*. Similarly, age of the respondent is hypothesized to influence savings decision-making. Younger people may like to make savings towards a future endeavour hence likely to save more, whereas older people may have several financial commitments and may therefore save less. On the other hand, older people may be in the position of harvesting the fruits of their investments, hence able to save more. Age is therefore an important factor in savings decisions. Educational status is expected to have a positive effect on VSLA membership and total amount of savings. This is because education is expected to enhance the employability of the respondents and hence their level of income which is expected to translate into higher savings. Educated individuals are therefore expected to have a higher propensity to save.

Household size is expected to influence VSLA membership as well as the amount saved. This is because, larger households are expected to have scale economies in consumption, hence greater savings per person. Smaller households are expected to have higher expenditure per person, hence lower propensity to save. On the other hand, it is possible that for poor households, increase in household size may imply increase in food and non-food expenditure which

Table 1. Definition of variables used in the study			
Variable description	Definition	Model 1	Model 2
Sex ( <i>sex</i> )	Dummy: 1 for male; 0 for otherwise	±	±
Age ( <i>age</i> )	Age of the household head in years	±	±
Formal education ( <i>edu</i> )	Dummy: 1 if formally educated; 0 otherwise	+	+
Household size ( <i>hhsz</i> )	Total number of household members	+	±
VSLA membership ( <i>t</i> )	Dummy: 1 if VSLA member; 0 otherwise	N/A	+
Amount saved ( <i>Y</i> )	Amount of current savings in Ghana cedi <sup>a</sup>	N/A	N/A
Current loan size ( <i>loan</i> )	Respondent’s current amount of loan	N/A	±

<sup>a</sup>1 US dollar = 5.3 Ghana Cedis. Model 1 is the VSLA membership model. Model 2 is the savings model. N/A means not applicable. Source: Field survey.



may reduce household savings (Burney & Khan, 1992; Sebhatu, 2012). Furthermore, respondent's current loan size is hypothesized to influence amount of savings. The direction of effect is however indeterminate. This is because higher indebtedness may reduce the ability to increase savings amount. On the contrary, clients who are desirous to reduce their indebtedness may choose to contribute more to offset their debts.

The CwE group offers mandatory savings prior to group loan access but remain voluntary afterwards and there are no restrictions to where other savings can take place while the VSLA model provides some form of voluntary savings in terms of the number of shares purchased by a member. VSLA members are therefore likely to acquire financial literacy from the practice of buying shares and earning dividends which may enhance their savings habit. VSLA membership is therefore hypothesized to positively influence amount of savings.

### 3. Results and discussion

#### 3.1. Characteristics of the respondents

Membership in VSLA as well as total amount of savings are functions of socio-economic and demographic factors such as gender, age, educational status, household size and loan size of individuals. The descriptive statistics of the sample are presented in Table 2. The respondents had an average savings of GH¢ 163 and average loan size of GH¢ 493. The result indicates that average loan size exceeds average savings amount. The respondents therefore borrowed more than they saved. The respondents also had a mean age of 42 years and 5 household members. Twenty-three percent of the respondents were males while 65% were formally educated. The results indicate higher participation of women in the informal financial sector. Similarly, participation in the informal financial sector was higher for respondents with formal education. In addition, 47.8% of the respondents belonged to a Village Savings and Loans association.

#### 3.2. Amount saved by respondents

Table 3 shows the amount of money saved by respondents in the study. As shown in the table, the respondents saved very small amounts. Majority of the respondents (67.4%) saved up to 200 Ghana Cedis, representing about 47 US dollars. Less than 1.0% of the respondents saved more than 500 Ghana Cedis. The amount represents the total individual savings as at the time of the study. The results indicate that the respondents are poor and unable to save large amounts. Anang et al. (2015) identified low incomes, lack of employment opportunities, and low levels of education as factors accounting for the low savings amounts among clients of the Bonzali Rural Bank in Ghana. The low savings by the poor is a challenge to savings mobilization which at the micro household level plays a critical role in production, consumption and investment decisions. Hence, efforts by both governmental and non-governmental organizations at employment creation in rural communities are required to enhance rural incomes thereby breaking the cycle of rural poverty and low savings.

**Table 2. Characteristics of the respondents**

Variable	Mean	Std. Dev.	Min.	Max.
Amount of savings (GH¢) <sup>a</sup>	163.3	111.5	10	700
Gender	0.230	0.422	0	1
Age	41.84	9.417	19	65
Household size	5.124	2.296	1	15
Formal education	0.652	0.478	0	1
Current loan size	492.9	605.0	10	3,000
VSLA	0.478	0.501	0	1

<sup>a</sup>1.0 US\$= 5.3 Ghana Cedis (GH¢). Source: Field survey.



**Table 3. Amount of savings by respondents in the study**

Savings amount (GH¢)	Full sample		VSLA members		Non-members	
	Freq.	%	Freq.	%	Freq.	%
Up to 100	73	41.0	22	25.9	51	54.8
101–200	47	26.4	19	22.4	28	30.1
201–300	42	23.6	36	42.4	6	6.5
301–400	10	5.6	5	5.9	5	5.4
401–500	5	2.8	3	3.5	2	2.2
Above 500	1	0.6	0	0	1	1.1
Total	178	100	85	100	93	100

1 US dollar (\$) = 5.3 Ghana Cedis (GH¢). Source: Field survey.

The results also indicate that VSLA members saved higher amounts compared to non-members. For example, 48.3% of VSLA members saved up to 200 Ghana Cedis compared to 84.9% for non-members. In addition, 32% of VSLA members saved between 201 and 500 Ghana Cedis compared to 14.1% for non-members. VSLA membership is therefore associated with higher savings amounts.

### 3.3. Determinants of VSLA membership and savings amount

The results of the regression with endogenous treatment effect model assessing the determinants of VSLA membership and savings amount are presented in Table 4. The likelihood ratio (LR) test of independent equations shows statistical significance at 1% hence we reject the null hypothesis of no correlation between the treatment and the outcome errors. In other words, there was sample selection bias, which justified the use of an endogenous treatment-regression model to account for the bias. The estimated coefficient of rho (−0.861), which measures the correlation between the treatment-assignment errors and the outcome errors, indicates that unobservable factors that increase observed savings tend to occur with unobservable factors that lower VSLA membership.

As shown in the Table, membership in VSLA is positively related to gender of the respondent. Participation in VSLA was higher for male respondents, indicating that men have higher propensity to join Village Savings and Loans groups. The result is contrary to Mumin et al. (2013) who found female household heads to have a higher propensity to save with financial institutions in Ghana.

The results of the study further indicated that the propensity to join VSLA increases with household size at 1% significance level. Larger households may have a greater need for savings to meet future expenditures which may encourage membership of savings associations such as the VSLA. The study also indicates that membership in VSLA has a negative and statistically significant associated with age at 1% level. The negative relationship between age and VSLA membership implies that older people have a lower propensity to join VSLA. The result is contrary to the findings of Anang et al. (2015) which showed that older people had a higher propensity to save with the Bonzali Rural Bank in Ghana. The quadratic term of the age variable was found to be positive and statistically significant at 1% level.

Contrary to *a priori* expectation, educational status was negatively related to VSLA membership. This means that respondents with formal education had lower propensity to join the VSLA. It may be argued that educated individuals are likely to prefer formal financial institutions like commercial banks as source of savings which may reduce participation in VSLAs. The result of this study is contrary to Mwansakilwa et al. (2017) in a study in Western Zambia.

The determinants of respondents' savings amount are presented in the second and third columns of Table 4. From the results, savings amount increased with age of the respondent while the quadratic

**Table 4. Determinants of VSLA membership and savings amount**

Variables	Amount of savings		VSLA membership	
	Coefficient	P-value	Coefficient	P-value
Gender	-32.20 (26.01)	0.216	0.963*** (0.269)	0.000
Age	17.68** (7.862)	0.025	-0.287*** (0.080)	0.000
Age squared	-0.194** (0.094)	0.039	0.003*** (0.001)	0.001
Household size	-2.199 (4.311)	0.610	0.139*** (0.043)	0.001
Educational status	50.57** (22.07)	0.022	-0.465** (0.227)	0.040
Current loan size	0.056*** (0.013)	0.000		
VSLA membership	268.2*** (25.74)	0.000		
Constant	-390.2** (158.9)	0.014	5.416*** (1.575)	0.001
Rho	-0.899			
Sigma	122.4			
Lambda	-110.1			

Standard errors are in parentheses. \*\*\*, \*\* and \* indicate statistical significance at 1, 5 and 10%, respectively. Log-likelihood ratio (LR) test of independent equations. (rho = 0): chi2(1) = 12.99, Prob > chi2 = 0.000. Source: Field survey.

term of the age variable exhibited a negative relationship with savings amount. In other words, savings amount increases with age at a decreasing rate. As people grow older, they begin to save more, but beyond a certain age threshold, the amount of savings begins to decrease. A likely explanation for this is that older people are more likely to save to safeguard against unforeseen circumstances that threaten livelihood security of the family. Beyond a certain age, older people tend to depend on their savings and therefore dissave. The result is consistent with Anang et al. (2015) who found older people to have a higher propensity to save with the Bonzali Rural Bank in Ghana.

The study further indicates that formal education is significantly related to savings amount at 5% level. The result is consistent with *a priori* expectation as education has been shown to make individuals employable and hence more likely to earn higher wages than the uneducated. Hence, the educated are expected to save more due to their higher level of income, all things being income. The findings are consistent with Issahaku (2011) who found that savings amount increased with formal education in Nadowli in the Upper West Region of Ghana.

The results further indicated that respondents' current loan size had a positive relationship with total savings at 1% significance level. The result suggests that clients who are desirous to reduce their indebtedness choose to save more in order to pay off their debts. The finding of this study agrees with Sebhatu (2012) in a study on savings behaviour of cooperative members in Ethiopia. The result is also in agreement with Adams and Vogel (1986) and Attanasio (1998) in their studies on rural financial markets in low-income countries and cohort analysis of saving behaviour by US households, respectively.

The coefficient of the variable of interest, VSLA membership, measures the average treatment effect of VSLA membership on savings amount. The coefficient of VSLA membership indicates that membership in VSLA increases savings amount by 268.2 Ghana Cedis. Thus, VSLA membership has

a positive effect on savings amount and savings mobilization among poor people. An important feature of VSL groups is that members gain financial literacy as they learn to purchase shares and earn dividends, making them more confident to participate in the informal financial system.

The pervasiveness and growing public confidence in the informal financial system in Ghana are key factors that can spur savings by the poor in informal financial institutions. Mobilization of rural savings through the informal financial system will go a long way to complement savings mobilization by formal financial institutions such as the commercial banks. This is expected to deepen financial inclusion and rural savings mobilization for socioeconomic development.

#### 4. Conclusion and policy implications

The study investigated factors influencing membership in Village Savings and Loans Association (VSLA) and its effect on rural savings in Awutu Senya West District of the Central Region of Ghana. Respondents were drawn from two microfinance models in the study area, namely the Village Savings and Loans Association (VSLA) and the Credit with Education (CwE) microfinance groups. Members of the two groups were interviewed using a semi-structured questionnaire. Information on respondents' savings amounts, demographic and socio-economic characteristics was used to estimate a VSLA participation model as well as a savings model, using a linear regression with endogenous treatment-effects model (endogenous treatment-regression model). The procedure was implemented using Stata version 14. It was observed that the respondents had low absolute savings amounts. Determinants of VSLA membership included gender, age, educational status and household size. Factors that influenced the absolute amounts saved by respondents included age, educational status and current loan size of the respondents. The estimate of the average treatment effect of Village Savings and Loans Association (VSLA) membership on total savings indicated that belonging to a VSLA increased the savings of members by GH¢ 268.2. It was concluded from the study that poor people have the capacity to save, even if in small amounts to build up assets which can be used as collaterals, smooth recurrent risks, self-insure against shocks, and self-finance investment opportunities in their socio-economic settings. The amount of savings, however, is currently very low and cannot adequately meet the investment needs of the respondents. VSLA membership, according to this study, offers a promising opportunity for poor people to save, thus enhancing savings mobilization among the poor.

The level of savings has implications for the rural economy. At the micro household level, savings mobilization plays an important role in production, consumption and investment activities. The poor's inability to save implies that the rural economy does not have the ability to expand production, consumption and investment. Enhancing the human capital, as indicated by the level of education, is an important way to enhance savings mobilization. This recommendation is supported by findings of this and other previous studies which indicate that education positively influences individual and household savings.

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#### Conflict of interest

Authors declare no conflict of interest with regards to this research.

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