THE IMPACT OF INFORMAL SAVINGS SCHEMES ON HOUSEHOLD WELFARE OF SMALLHOLDER FARMERS IN KILOLO DISTRICT, IRINGA, TANZANIA

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS IN MONITORING AND EVALUATION OF THE OPEN UNIVERSITY OF TANZANIA

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CERTIFICATION

The undersigned certifies that he has read and herby recommends for acceptance by the Open University of Tanzania the dissertation entitled, **"The Impact of Informal Savings Schemes on Household welfare of Smallholder Farmers in Kilolo District, Iringa, Tanzania''** in partial fulfilment of the requirements for the degree of Masters of Arts in Monitoring and Evaluation of the Open University of Tanzania

…….

Dr. Slaus Mwisomba

(Supervisor)

……

Date

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DECLARATION

I, **Kasukura Nyamaka**, do hereby declare that this dissertation is my own original work and that it has not been represented and will not be presented to any university for similar or any other degree award.

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Signature

.....

Date

DEDICATION

This dedication is dedicated to all smallholder farmers of Tanzania

ACKNOWLEDGEMENT

Without the efforts and contributions of many people who gave their time, hard work thoughtful attention to make this dissertation possible, this work would have not reached this stage. I thank all of them for their help. However, I feel obliged to a few because without their support, guidance and encouragement, this accomplishment would have been in vain.

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ABSTRACT

This study explored the impact of the Village Saving and Loan Associations (VSLA's-an informal saving scheme) in enhancing welfare (Social economic Status of smallholder farmers households in Kilolo District, Iringa region. Objectively the study determined the impact of rural households' participation in the informal savings schemes (VSLAs) on their farm productivity, assessed the impact of VSLA in supporting education. Moreover it analysed on how VSLAs contributed on supporting in education financing expenditure and reduction in school dropout rates amongst rural households. Also it examined the impact of VSLAs in supporting the development and/or diversification of small holder farmers' income generating activities (IGAs). The study employed a mixed methods design, with emphasis on qualitative approach. It involved 208 respondents from VSLA and non-VSLA members reached through questionnaires, focus group discussions and interviews. The result shows that the participation in the saving scheme has been found to have created positive impact on the smallholder farmers' household welfare in four aspects which are household income, education support (education expenditure and school dropout rates) and establishment, development and diversification of IGA's. The VSLA have also reduced the women in men dependence economy on the household welfare. The VSLA programme has significantly contributed to women to in establishing and managing the IGA's which in turn has enhanced their economic status, which enables them to earn extra income through which they can gain greater financial autonomy. It is recommended that Kilolo District leaders should replicate and enhance VSLA program to smallholder farmers in other villages within district to enable them to have planned saving mobilization.

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LIST OF ABBREVIATIONS AND ACRONYMS

%	Percent
ASCA	Accumulating Saving and Credit Association
DFID	United Kingdom Department of International Development
F	Frequency of respondents in relation to asked question
IGA (s)	Income Generating Activity (ies)
MDG	Millennium Development Goals
MFI	Microfinance institutions
ROSCA	Rotating Saving and Credit Association
SACCOS	Saving and Credit Cooperative Societies
SES	Socio-economic status
SHG	Self Help Groups
VSLA	Village Saving and Loans Association

CHAPTER ONE

1.0 INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

This chapter explain the background of this study on the importance and actors of informal financial services and the gap it feels on the local welfares to local communities. It further provides the knowledge of what is already known about the Village Saving and Loans (VSL) and what is the research gap (the research objectives) which that research done and covered. Not only that but also it put broad on the relevance of the research (research justification).

1.2 Background of the Study

Formal financial institutions like banks and micro-financial institutions (MFIs) in most cases do not reach the rural poor with their services (Girabi and Mwakanje, 2013; Mohamed *et al.,* 2016). Therefore, the poor devise their own mechanisms using locally formed associations or groups that are self-initiated, self-managed and unregistered in order to meet their demand for financial services and ultimately improve their livelihood and/or living conditions (Myers, 2011). However, whether these mechanisms/schemes can significantly contribute to the enhancement of the poor people's socio-economic status (SES) is a matter that requires scientific and empirical investigations. Up to now it is not clear to what extent these informal institutions (associations/groups) among them include Village Saving and Loans Associations (VSLAs) support the SES or the welfare of rural households (Bulke *et al.*, 2018).

Government of Tanzania and different types of development agencies such as Non-Government Organizations (NGOs), Community Based Organisations (CBOs) and Faith Based Organizations for long time has been on agenda for the reduction of rural poverty. One of the approaches in trying to improve the social welfare of the rural poor is that which has focused on the financial sector through rural or pro-poor financial services such as the VSLAs (Myers, 2011). Tanzania country in general including Iringa Region in particular, the VSLs intervention, which is an improvement on traditional saving associations such as Rotating Saving and Credit Association (ROSCA), were introduced through trainings provided by different NGOs among others is CARE international.

The VSLA comes as an improvement of the traditional saving clubs. It is a self-selected group of people (usually unregistered), who pool their money in to a fund (the saving or resource pool). The VSLA requires no external funding with its foundation, operation and strength but entirely based on the savings contributions made by its members and operates within the informal sector (Jean and Jaya, 2016). Smallholder farmers who are also members of the VLA can borrow from the saving pool and the money is paid back with interest, causing the money to grow. The regular savings contributions to the association are deposited with an end date in mind for the distribution of all or part of the total funds (including interest earnings) to the individual members, usually calculated through the formula that links payout to the amount saved by each member.

The lump sum distribution provides a large amount that the smallholder farmers VSLAs members can use for different welfare affairs and livelihood improvement (Wainyaragania, 2011; Myres, 2011). Different from ROSCAs, the VSLAs offer interest on savings and provide micro-insurance (inform of welfare fund) and loans in useful varying amounts, usually exceeding the borrowers' savings, at times that are convenient to borrower and for varying length of time (Bulke *et al*, 2018). This stimulates smallholder farmers in modern farming and also funds in the VSLAs work constantly, earn interest and not idle or being directed toward consumption. The facilitation of savings, insurance and loan allow the members who are smallholder farmers to meet their small, short-term financial needs without having to borrow from moneylenders, take an expensive supplier advance, or rely on their relatives (Wainyaragania, 2011; Jean and Jaya, 2016).

The participation of rural households in the saving scheme that focuses on SES or welfare is a policy issue that requires careful examination or analysis in order to contribute on the knowledge of poverty reduction policy measures and its debate (Kuwanenaruwa *et al*.,2015). According to Myers (2011), self-help groups' ae formed across countries is an effective strategy for poverty alleviation, human development and social empowerment. Still there are conflicting views about the impact of these informal groups (saving schemes). According to Wainyaragania (2011) observation, while the existence of informal saving services highlights the general demand for financial services to smallholder farmers, the services are usually not sufficient to seize economic opportunities in rural areas to the full. Also Jean *et al*, (2006) pointed that, people who do not have access to the formal labour market

can often benefit from pooling sources and working in groups. Therefore, this study intends to evaluate the impact of informal savings schemes on household welfare of smallholder farmers in Kilolo District, Iringa, Tanzania.

1.3 Statement of the Research Problem

Despite the rapid development of financial services, most smallholder farmers in Kilolo District have no access to loans from institutions offering financial services such as banks, credit unions, cooperatives, microfinance institutions (MFIs) or insurance companies due to precocious nature of agricultural production. Many local smallholder farmers in Kilolo District cannot put up acceptable collateral and due to bureaucratic procedure in the formal financial sectors, banks do not consider lending to this group profitable. In most cases the land owned by smallholder farmers is lacking formal tenure system. As a result, they continue to rely on the informal services which are usually scarce. This is the same situations to other parts of Tanzania and other Sub-Saharan countries where the majority of population are peasant farmers as reported by Jean and Jaya, (2016) and Hermes *et al*., (2011)

Due to that fact, the introduction of rural financing, including VSLAs aimed to bridge the gap by providing the smallholder farmers with the services that will enable them to have access to funds that they can use for various income generating activities (IGA's) (Mohamed *et al.*, 2016). VSLA is popular in supporting agricultural development to smallholder farmers in Kilolo District, however, there is no clear evidence whether VSLA contribute on improving the household welfare to

these smallholder farmers, most of whom are women. Also the cultural practice of men dominance is prevalent in the area.

Little has been documented on what is happening to smallholder farmers in Tanzania and perhaps very rare in Kilolo District. The majority of these studies dedicated to Tanzania are mainly focusing on the Microfinance institutions (MFIs) that provide micro-credits and micro-loans and mainly neglecting smallholder farmers (Satta, 2004; Temba, 2004; Ssendi and Anderson, 2009; Girabi and Mwakaje, 2013). Few take the parallel approach of saving groups as an alternative form of microfinance model (Brannen, 2010; Allen, 2012).

Therefore, this research aim to provide the empirical results on how the informal savings schemes are operating and whether they can improve the household welfare to small holder farmers in Kilolo District including women despite the cultural aspect where men control the assets in a household..

1.4 Research Objectives

1.4.1 Main research Objective

The main objective of the study is to evaluate the impact of Informal Savings Schemes (VSLA) on Household Welfare of smallholder farmers in Kilolo District, Iringa, Tanzania.

1.4.2 Specific Research Objectives

The specific objectives are to:

i) Determine the impact of rural households' participation in the informal savings schemes (VSLAs) on their farm productivity.

ii) Analyse how VSLAs is contributing on supporting in education financing expenditure amongst rural households.

iii) Analyse how VSLAs is contributing on reduction in school dropout rates amongst rural households

iv) Examine the impact of VSLAs in supporting the development and/or diversification of small holder farmers' income generating activities (IGAs).

1.5 Research Questions

1.5.1 Research questions

i) What are the impacts of rural households' participation in the informal savings schemes (VSLAs) on their farm productivity?

ii) How VSLAs is contributing on supporting in education financing expenditure amongst rural households?

iii) How is VSLA contributing towards reduction in school dropout rates amongst rural households?

iv) What is the impact of VSLAs in supporting the development and/or diversification of smallholders' farmers' income generating activities (IGAs)?

1.6 Relevance of the Research

This research is aiming to provide the empirical results on how the informal saving schemes specifically Village Saving and Loans can improve the smallholder farmers welfare in Kilolo District and other areas of Tanzania if will be adopted.

The study is in line with the government's programme that titled 'National Strategy for Growth and Reduction of Poverty (NSGRP)', which focuses on different initiatives and innovations for improving community wellbeing. NSGRP also encourage on increasing research and policy review interventions to improve the understanding of the more informal parts of the financial sector (URT, 2016).

This study acts as a tool with useful insights on the way informal saving schemes is contributing to small scale farming household income or welfare in general and creation of additional knowledge stock concerning informal saving facilities. It provides further insights on the kinds of policy issues that can be utilized to engage the informal sector for the higher contribution to economic growth and development and contributes towards policy debates on how smallholder farmers' income can be improved particularly in the rural districts (Hasan and Raza, 2012; Bulke *et al*, 2018).

Lastly, the result from that research can act as a guide to formal financial sector actors like Banks, MFIs, VICOBA and SACCOSs on creating linkages with the informal rural-based financial services clubs/associations.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Overview

This chapter provide various conceptual definitions of that research study; the meaning of Informal Savings Schemes, Household Welfare, smallholder farmers and village saving and loan. It also make critical review of different theoretical analysis and empirical analysis of relevant studies on explain the theoretical review on the Informal Savings Schemes, Household Welfare, smallholder farmers and village saving and loan, the known challenges and success of the VSLAs and the knowledge gap which was covered by that research. It is also provide the conceptual framework of the whole study.

2.2 Definitions

2.2.1 Informal Saving Scheme

Is defined as a social organisation formed to help community members save money for specific purpose (either individual or community level). These include Village Saving and Loans Associations (VSLAs), Rotating Saving and Credit Associations (ROSCAs) or Accumulated Saving and Credit Associations (ASCAs) (Bramen, 2010).

2.2.2 Small Holder Farmers

Smallholder farmers are those farmers who owning small-based plots of land on which they grow subsistence crops and one or two cash crops relying almost exclusively on family labour. Small holder farmers produce food and non-food

products on a small scale with limited external inputs, cultivating field and tree crops as well as livestock, fish and other aquatic organisms (Reardon *et al*., 1998).

Currently there is no universally accepted definition of a small farm. ‘Small’ may refer to the number of workers; capital invested or amount of land worked. Land size is the criterion most commonly employed, but given the differing potential of land in soil quality and rainfall, a single measurement hardly captures the sense of limited resources or relative powerlessness characteristic of smallholders. Overall, smallholder farmers are characterised by marginalization, in terms of accessibility, resources, information, technology, capital and assets, but there is great variation in the degree to which each of these applies (Murphy, 2010).

2.2.3 Village Saving and Loan Associations

Are community-based organizations that pool member savings into funds that members can borrow? They are also able to offer simple forms of insurance. Loans provided by VSLAs are usually of short-term (1-6 months) and re re-paid with interest (Bramen, 2010).

2.3 Theoretical Review

2.3.1 The View Point of Sustainable Livelihoods Framework

The Sustainable Livelihood Framework (SLF) helps in understanding and analysing the livelihoods of the poor. It is also useful in assessing the effectiveness of existing efforts to reduce poverty. The Sustainable Livelihood Framework (SLF) is bringing the view people as operating in a context of vulnerability whereby, they have access

to certain assets or poverty reduction factors. They gain their meaning through the prevailing social, institutional and organizational environment. The prevailing environment may also influence the livelihood strategies that are open to people in pursuit of beneficial livelihood outcomes that meet their own livelihood objectives (DFID, 1999; Kollmair and Gamper, 2002). The core ideas in SLF (DFID, 1999) are as follow:

2.3.2 Vulnerability Context

The vulnerability context comprises of trends, shocks, and seasonality (DFID, 1999; Kollmair and Gamper, 2002):

i) **Trends**: such as demographic trends, trend in government and resources trends
ii) **Shocks**: these include human, crops or livestock shocks such as natural hazards like floods or earthquakes, pests and diseases. Others include conflicts in form of civil wars or international wars and economic shocks.
iii) **Seasonality:** Such as seasonality of price, employment opportunities and products.

2.3.3 Livelihood Assets

In order to achieve their self-defined goals, people require different range of assets. No single capital endowment is sufficient to yield the desired outcomes on its own. The combination of different kind of assets to smallholder farmers can increase their capacity them to escape from poverty, starting with a particular combination of capital, and if such a combination will be transferable to other livelihood settings. Livelihood assets include (Kollmair and Gamper, 2002):

i) **Human capital**: include education, skills, ability to labour, knowledge and ability to have a good health

ii) **Natural capital**: include natural resources stocks or base such as land, forests, adequate and quality of air, erosion protection and water

iii) **Social capital**: such as networks and connectedness, memberships in associations or groups

iv) **Physical capital**: These are basic infrastructures and the producer of goods needed for supporting livelihoods includes affordable transport, secure shelter and buildings, adequate water supply and sanitation and farm equipment.

v) **Financial capital**: These includes availability of cash or equivalent regular inflows of money such as labour income, pensions, transfers and remittances, and stocks such as cash, bank deposits or savings and other liquid assets.

2.3.4 Transforming Structures and Processes

2.3.4.1 Structures

Are defined as the hardware (private and public organizations) that set and implement policy and legislation, deliver services, purchase, trade and perform all manner of other functions that affect livelihoods. In complementary to structures, processes constitute the called ‘software’ for determining the way in which structures and individuals operate and interact. These includes; policies, legislation, institutions, and culture and power relations (Frankenberger, 1996; Sahn and Stifel, 2002).

2.3.4.2 Livelihood Strategies

Livelihood strategies comprise the range and combination of activities and choices that people undertake in order to achieve their livelihood goals (Frankenberger, 1996; Sahn and Stifel, 2002).

2.3.4.3 Livelihood Outcomes

Livelihood outcomes are the achievements of five livelihood strategies, such as; more income (e.g. cash), increased well-being (e.g. non-material goods, like self-esteem, health status, access to services like education, sense of inclusion). Also includes reduced vulnerability (such as better resilience through increase in asset status), improved food security (such as increase financial capital in order to buy food) and more sustainable use of natural resources (such as appropriate property rights for accessing the common pool resources). Outcomes gives the community development practitioners and researchers the understanding on how people are likely to respond to new opportunities and which performance indicators should be used to access support activities (Frankenberger, 1996; Sahn and Stifel, 2002).

2.3.4.4 Household Livelihood Security

According to Frankenberger (1996), household livelihood security is defined, in general terms, as adequate and sustainable access to income and other resources to enable households meet basic needs (including adequate access to food, potable water, health facilities, educational opportunities, housing, time for community participation and social integration).

This research relied on Sustainable livelihood Framework (SLF) because VSLAs can be considered to be an intervention where by rural households engages or participate in with the aim of achieving the increased welfare as a livelihood outcome, indicated by improvement in income level, accumulation of assets/wealth, and improvement of education opportunities.

2.4 Household Welfare Analysis

2.4.1 Asset-Ownership/Possession Based Approach

Methods for assessing household socio-economic status position (welfare) can be categorised in two major groups as explained by Phusit (2006). These are money-metric measures and alternative approaches. Money-metric measures (income and expenditure); is a category which is traditionally used by economist due to its easiness in monetary definition measures and is widely understood by the public. Also for the alternative approaches, one of the measures is the use of household asset index. In many Sub-Saharan countries, still there are difficulties involved in measuring income (Sahn and Stifel, 2002). These include among others: seasonal variability in earnings, large share of incomes are from self-employment both in and out of agriculture, poor quality of income and expenditure data. Also include data which are collected in terms of recall memory and yet a recall data are prone to measurement errors, under-reporting of income due to fear of taxation or hope for public support and memory lapse in particular household where there are many sources of income (Gier,2006). Also include difficulty of converting household products into money terms.

Due to technical and practical difficulties of income measurement, other non-monetary indicators of household welfare like the asset-based index have been introduced and developed as an alternative tool for classifying household SES (Phusit, 2006). Several studies in recent years have advanced the use of an asset-based index as an alternative to measure household SES (Dekker, 2005; Sahn and Stifel,2002). In comparison to the income or expenditure/consumption measures, the asset-based approach is more appropriate because the data required to construct such indices are less demanding to collect and measure is more accurate (since there is little recall), simple to calculate and may capture dimensions of poverty not reflected in one-time measurement of consumption or income.

Most of the studies which are using the asset-based wealth indices have constructed the index by using standard list of assets comprising household ownership of consumer durable (such as TV, Radio, Bicycle, Motorcycle, Sewing Machine and Stove). Others are the characteristics of the household dwelling (such as toilet facilities, building material, source of drinking water), household land ownership, number of rooms for sleeping or number of household per room (Dekker, 2005, Filmer and Pritchett, 2001).

2.5 Empirical Review

Tanmoyee (2009), estimated the economic impact of self-help groups (SHGs) in India with data collected from group members as well as non-group members. On that study, it was observed that in the pre-group joining stage, the members who were unemployed became employed and this changed their family income category.

The inequality of the distribution of the family income had reduced for the group of people who had joined SHGs. It was further observed that from low income group, more people had shifted to high income levels. The increase in average family income at constant price is significant and the family average consumptions expenditure and food expenditure at constant prices had reduced significantly in pre-group and post group level of the average monthly income and expenditure comparison. Also the post-group joining monthly average family health related expenditure decreased significantly at the constant price. In alternative, the monthly average family saving increased after joining of SHG's.

On his study, Tanmoyee (2009) maintains that, this result is obvious are the SHG's promoting the saving habit among the group members. The monthly propensity to consume out of family income basically reduces after joining SHG's because members have to save compulsorily. Comparison of the monthly family income and consumption expenditure of group members with non-group members showed that there has been significant increase in the average monthly family and consumption expenditure at current prices of the group members who are gainfully employed after joining the group. The result obtained also justify that family health related expenditure is significantly lower for group members than that of the non-group members. Also group forming authorities have significant impact on reducing the medical expenditure of group members. Not only that but also the results showed that the rate of school drop-out significantly lowered in the families of group members than the families who do not belong to self-help groups.

Another experience is that from Anyango *et al*., (2007), who conducted a study on VSLAs in Zanzibar whereby 100 VSLA members and 30 past members were interviewed from 25 groups. On top of that, they also interviewed another 36 randomly selected exit members to understand the dynamics of exiting VSLAs. In their findings, women contributed 70% of the total VSLA members. In terms of profitability, VSLAs have performed well and during the last payout (action audit) for all the 25 groups, the mean rate of return was 53%, with individual group's rate ranging from 10% to 92%. The mean pay-out was Tanzanian shillings 5 million per group and Tanzanian shillings 172,535 per member. Evidence from the study suggests that the majority of the groups conduct action audit annually and pay member's dues with dividends. The socio-economic profile of the VSLA members was also compared with that of Zanzibar as a whole and the Tanzanian mainland using questions from the Tanzanian Demographic and Health Survey. Findings from the comparison suggest that the households in the VSLA had very similar profile to household in Zanzibar as a whole and the data for the Tanzanian mainland shows that the Zanzibar population on the whole does much better than the population in Tanzanian mainland in terms of household quality and access to services.

Also in term of household assets and means of transport also suggest that the VSLA members in most cases are at least as well off as the Zanzibar population and much better off than the Tanzanian mainland population. Regarding the usefulness of VSLA in the livelihood of members, the respondents indicated the main changes in their lives that they thought had risen as a result of VSLA and according to the results, 22% of the respondent named an improved living standards, 21% named

improved housing and 20% named increased income as major changes. Women respondents also showed the ability to save and improved saving habits as a positive result. Not only that but also it was noted that in spite of saving and loan sizes are relatively small, they are still useful amount to members and the main one is pay-out.

Another study is that which was conducted by Brannen (2010) to assess the VSLA impact in Tanzania, and he used samples considered by Anyango *et al.*, (2007) to ensure that only the most mature groups (VSLAs) and participants were included in the study in order to analyse the long term impacts of VSLAs. The treatment group in the study consisted of mature/veteran VSLA members who were significantly older than the control group in terms of the years in participation in VSLA and control consisted of new VSLA members (participants) under new VSLA groups that were still in the initial stages and had not begun saving in or borrowing from their new VSLAs. On his study, Brannen (2010) utilized new VSLA members as a control group in order to control for selection bias and also statistically controlled for differences in demographic characteristics including age, gender, religion, marital status and education. Household asset expenditure levels, the development of IGAs, education expenses, access to health services (health care expenditure), quality of housing and nutritional levels (meal quantity- number of meals per day and meal quality-quantity of meat or fish consumed in the past week) were compared using averages and analysed using regression (Ordinary Least Square-OLS). A probit model was used to analyse the impact of VSLA on the level of health using a dummy variable, indicating whether or not the children in the household sleep under mosquito net as a proxy for investment in health care.

Meanwhile in analysing the impact on the housing quality, a Linear Probability Model (LPM) was used with a dummy dependent variable (ownership of home). Results from this study suggest that participation in VSLA has an overall positive impact on various indicators of household and individual welfare including: asset expenditure levels, the development of IGAs, education expenses, access to health care services, nutritional levels and quality of housing.

The study concluded that, the observed positive results are particularly encouraging given the long-term sustainability of the VSLA model as it is its principle that VSLA does not rely on outside donor funding. Hence, it was noted that the VSLA model was successful and sustainable (Reboldo *et al.*, 2016).

Another research which was done by Kiran and Ansar (2017) during the evaluation of Self-Help Groups (group saving scheme) in Ethiopia considered and interviewed 117 women organized in 25 groups (each one has a member between 15 and 20 women). The findings show that the SHGs have been very successful in organizing the women and providing them with regular meetings. The women are committed to meeting and saving every week and they appreciate the access to loans and have largely used the money for Income Generating Activities (IGAs) and household consumption. Another finds was that, the combination of health and nutrition education with saving group which promote the IGAs has had the profound effect on the lives of the women who participate in SHG programme. Before the inception of the SHG programme, 2/3 of women were only engaged in some kind of IGAs and after the programme inception the number increased to ¾ (73.3%). A large number

of the existing IGA used money received from SHGs to expand their small scale trade and other kind of business to supplement the household income (Collins *et al.*, 2009).

Another study finding is from Villanger and Enes (2004). They assessed whether there are any effects on income changes and poverty reduction from being a member of community that has more democratic system o decision making or from being a member of a society, which has higher degree of participation and cooperation such as of the VSLAs. They developed empowerment and participation indices and in their full sample, they found that out of that cooperation index is positive and highly significant. Their study concluded that, societies with a higher degree of mutual-cooperation and support, experience higher income growth compared to otherwise identical societies with lower degree of cooperation. It showed that the household would have had two percentage points higher income growth from 1993 to 2000 if it had lived in a society with high degree of cooperation compared to living in a society with the lowest degree of cooperation. There was no significant coefficient from the empowerment index in the full sample however, when the richest quintile of the household is excluded, it produced similar result of the full sample, but gave a significant value for composite empowerment –cooperation index. That is indication is explaining that, household with low to moderate income, the degree of empowerment and cooperation plays important impact in increasing incomes, the pattern which supported by the descriptive statistics.

2.6 Research Gap

Due to that fact, the introduction of rural financing aimed to bridge the gap that other forms of microfinance have failed to large extent to provide to the smallholder farmers with the service that will enable them to have access to funds that they can use for various income generating activities (IGAs) (Mohamed *et al.,* 2016). It is true that the VSLAs scheme play a big impact for financial access to these smallholder farmers. Despite the apparent success and popularity of VSLAs in supporting smallholder farmers, there is no clear evidence yet exist on how the VSLAs contributes to improve their welfare (Morduch, 2005, Armendariz, 2007). While there is plethora of information on the impact of microfinancing and community saving groups in various regions within Sub-Saharan Africa, little have been documented on what is happening to smallholder farmers in Tanzania and perhaps very rare in Kilolo District. The culture of men dominance is very strong in the area and men dominate household economic activity where by women are remained as the reproductive asset. That research seek to provide the knowledge on how VSLA breaks the men economic ownership cultural dominance where by VSLA provide equal opportunity of improving the individual and household welfare to those who are participating on the VSLA program.

The majority of these studies dedicated to Tanzania are mainly focusing on the Microfinance institutions (MFIs) that provide micro-credits and micro-loans and mainly neglecting smallholder farmers.(Satta, 2004; Temba, 2004; Ssendi and Anderson, 2009; Girabi and Mwakaje 2013). Few take the parallel approach of

saving groups as an alternative form of microfinance model (Brannen, 2010; Allen, 2012).

Still there is no literature provide the empirical evidence on how participation of Kilolo District small holder farmers, on informal saving schemes such as village saving and loans help make differences on their income compare to non VSLA; what are the impact on their participation of informal savings schemes (VSLAs) on household asset accumulation compare to non VSLAs members. In addition, how VSLAs is contributing on supporting in education financing expenditure and reduction in school drop-out rates amongst rural households. In addition, it is important to have the good understanding the way and the extent VSLAs in supporting the development and/or diversification of small-scale farmers' income generating activities (IGAs) to VSLAs members in comparison to non-VSLAs members that understanding is lacking. Therefore, this research aim to provide the empirical results on how the informal savings schemes are operating and whether they can improve the household welfare to small holder farmers in Kilolo District and other areas of Tanzania if adopted.

2.7 Conceptual Framework

This conceptual framework has been adopted and modified from DAI (2010). It present two distinctive and parallel strands related to the impact of Group Savings and Loan at the household and group levels as shown in the diagram below:

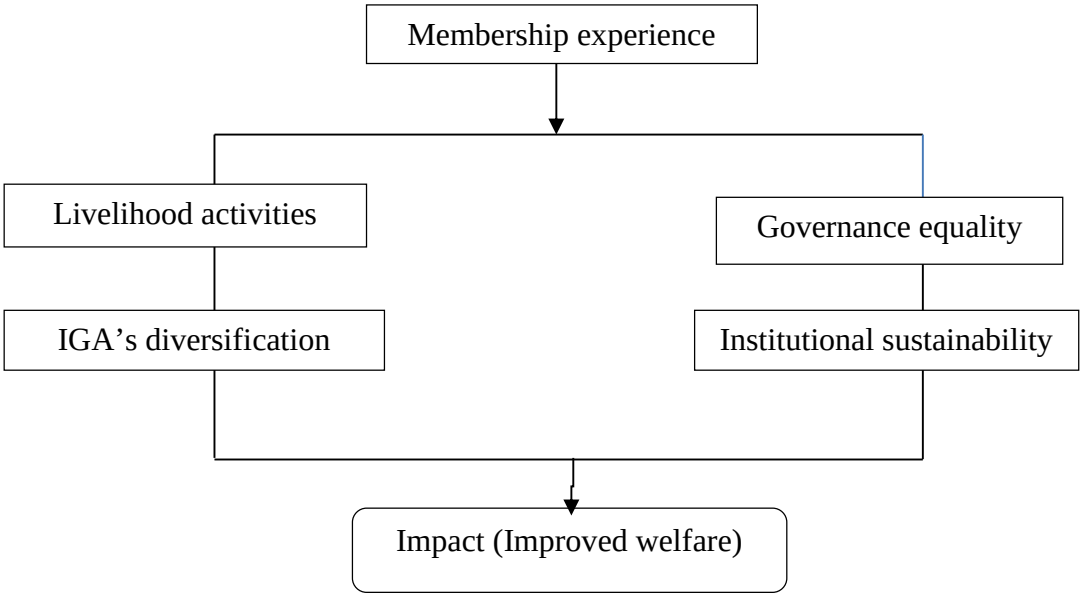

Figure 2.1: Conceptual Framework

Source: Adopted from DAI (2010)

DAI (2010), articulate that at the household level, an analysis examines the kind of livelihood activities that saving group members undertake, and their results in terms of asset accumulation. That study takes the consideration that, saving and credit together should result in asset accumulation. DAI (2010), emphasize that, the group savings support the protection of income and better household management of income and assets across time, while credit from the group support increases in income. At the group level, several case stories on impact studies focusing on varieties of issues such as institutional (VSLA's group) governance and sustainability (like indefinite functional of the VSLAs groups) can be observed. In turn of that, that can be expected to lead to repeated replication of the group or some similar group, after the annual cash out (annual cycle).

Successful good governance practices with one group might also lead the spontaneous replication of new groups that emerge in different locations of the same village or different villages without of any or minimum training or outside support. With the good success at the household and group levels, is expected to result in high impact. As large numbers of individuals gain access to wider range of quality services (financial) and as the result they are able to diversify their alternatives in controlling the future circumstances and move out of poverty.

This research therefore based on the above conceptual framework and analysed the impact of the VSLAs (group saving scheme) at the household level where by its impact will be manifested in terms of wellbeing improvement (Socio-economic Status) through using welfare indicators such as income, household asset accumulation and education.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Overview

This chapter explain the research methodology of that study, it also include the study area and justification for the choice of the study area describes the research design and the subsequent sections contain the sampling technique, data collection procedures and tool, data processing and analysis techniques, model specification and diagnosis, and finally, the operational definitions and measurement of variables.

3.2 Research Design

The research design employed in this study is cross-sectional design. This design is suitable for descriptive statistics and allows collection of data from different groups of respondents at a time (Nyamaka, 2014). Cross-sectional research is considered to be favourable since it is economical and allows comparison of the variables of interest (De Vaus, 1993).

3.2.1 Area of the Research

The study was conducted in Kilolo District and covered three (3) villages from three wards. These villages are Idete from Idete ward, Kidabaga from Dabaga ward and Ukumbi from Ukumbi ward. Kilolo District is located at the north-eastern end of Iringa Region, about 37 Kilometres from the regional headquarters. The District lies between 70 and 80 30’ south of the Equator and between 340 and 370 east of Greenwich (KDC, 2013). The reason for choosing Kilolo District is because the

VSLAs scheme were introduced for many years (since the inception and spread of VSL knowledge in Tanzania) by various VSLA stakeholders include the Government and non-government organisations (NGOs) among them are CARE International, Africare, Restless Development and Lyra in Africa. Secondly, the households in the District are associated with very poor welfare conditions.

3.2.2 Population of the Study

According to the 2012 Tanzania National Census, the population of the Kilolo District was 218,130 where females are 51.5 percent (KDC, 2013). This study covered VSLA groups allocated in three wards in Kilolo District, the primary sampling units (PSU) used are villages and ultimate sampling units were households joined VSLA and the comparison units were households that are not VSLA members. Three villages, one per each ward were purposively selected for that study. These villages are Kidabaga in Dabaga ward, Idete in Idete ward and Ukumbi in Ukumbi ward.

Table 3.1: Number of VSL groups and VSL Members in the Study Area

Village	Ward	Number of VSLA groups	Number of VSLA members sampled	Total Number of VSLA members
Kidabaga	Dabaga	16	42	356
Idete	Idete	21	26	589
Ukumbi	Ukumbi	19	36	483
Total		56	104	1428

Source: surveyed data (2018)

Table 3.1 shows that; the population for the study area was 1428 VSLA participants under fifty six (56) VSLA groups. The total population was 2856. The VSLAs studied were located in Kidabaga village (16 associations comprising of 356 participants), Idete village (21 associations comprising of 589 participants) and Ukumbi village (19 associations comprising of 483 participants). Table 3.1 indicate that the ratio of VSLA's to group member is around 1:26.

3.3 Sample and Sampling Technique

Therefore the study was utilized stratified random sampling design for clusters (villages), VSLA groups individual members. The design confidence level for the research was 95 percent (Zα/2 is 1.96), with an error margin (E) of 0.4, the true variance is 9.3 and the total population is 2856 (1428 VSLA members and 1428 Non VSLA members)

Then the sample for the finite population is given by:

$$n = \frac{Z^2 . N. \sigma^2}{(N-1)\ e^2+Z^2. e^2}$$

$$n = \frac{(1.96)^2 * 2856 * 9.3}{(2856-1)\ 0.4^2+1.96^2*9.3}$$

$$n = 207.5669 = 208$$

Where;

Z = Standard normal deviation set at 1.96 corresponding to 95% confidence level;

N= the study population equal

n = sample size;

p = Sample proportion, for maximum n,

p = 0.5; q = 1-p that is: 1-0.5 = 0.5; and e = Degree of accuracy desired set at 0.05 (5%) at each village, the VSLA participants constituting the final sample size were randomly selected

Selection of non-VSLA participants: At each village where the VSLA participants were drawn, non-VSLA participants were identified using the village register book together with other community members who helped in showing who does not participate in VSLA in such particular village. After identifying the non-VSLA participants, they were selected randomly.

Table 3.2: Summary of Sample Size Distribution, Based On Proportional Allocation

Village	Number of VSLA participants	Number of Non-VSLA Participants	Total
Idete	42	42	84
Kidabaga	26	26	52
Ukumbi	36	36	72
Total number of respondent interviewed	104	104	208

Source: Surveyed data (2018)

3.4 Methods of Data Collection

Data collection is defined as the process or system of gathering information relevant to the topic chosen by the researcher, by using methods of data collection such as interview, observation, questionnaires and documentation (Rahi, 2017). Data means the primary or secondary information, which the researcher captures during research through reading books and reports from different readers or researchers by observation and interviewing respondents, which at the end helps one to write reports (Constant and Robert, 2017).

In order the researcher to indicate in a clear way which methods can be used in collecting data and which research instruments (tools) to be employed, it is important to identify those methods for data collection .Two methods for data collection were used to get accurate data, namely the primary and secondary data collection methods. These methods of data collection differ as the primary data collection involves collection of data by researcher himself or herself from the field while secondary data collection is simply compilation from different documentations (Kothari, 2004).

Prior to actual primary data collection, two data collectors (research assistants), were trained by the principal researcher. After the training, both of us we conducted the pre-test survey at Mapanda village in order to fully understand the content of the questionnaires used and interviewing skills. That was done to 15 respondents and gave the chance for restructuring the questionnaires in order to fit the intended specific objectives and to minimize errors that could arise from the research instrument.

The actual data collection took place through a micro-level (household) survey by the data collectors (two research assistant and the principal researcher) where VSLA participants and non-VSLA participants were responded the various questions through semi-structured interview. The gathered information was triangulated with information that was obtained through key informants' method.

According to Mather's *et al.,* (1998), semi-structured interview is the technique used to collect qualitative data by setting up a situation that allows a respondent the time and scope to talk about their opinions on a particular subject. The researcher chose to use semi-structured interview because it helps to collect more and accurate data.

3.2.3 Semi-Structured Interview

Primary data were collected from individual respondents who are smallholder farmers and key informants using semi-structured questionnaire. According to Mathers' *et al.,* (1998), semi-structure interview is the technique used to collect qualitative data by setting up a situation that allows a respondent the time and scope to talk about their opinions on a particular subject, such as here on VSLA impacts. The researcher chose to use semi-structured interview because it helps to collect more and accurate data.

Those respondents who were interviewed using semi-structured interview comprised of both open and closed ended questions and enumerated to both new and old VSLA participants and non-VSLA participants. Non-VSLA participants are individuals who lived in the same villages as members and are aware of the VSLA. They were

interviewed in order to make comparison between members and non-members, as well as to gain an approximate picture of how their characteristics and views are similar or different (on dimensions of relevance to the study) from those of participants.

3.2.4 Questionnaires

Several scholars have explained the meaning and importance of questionnaires. One of them is Kothari (2004), who explained questionnaire as a tool having lists of questions intended to elicit information about what people do, have, think, know, feel or want which can be tabulated and discussed. Two types of questionnaires are used on research; these are open ended and closed ended questionnaires. Closed ended questionnaires are questions for which a researcher provide a suitable list of responses (e.g Yes or No), produces mainly quantitative data while open-ended are questions where the researchers does not provide the respondent with set of answers from which to choose, but respondents are asked to answer in their own words mainly used in qualitative data (Kothari, 2004).

3.2.5 Checklist for Focal Groups Discussions

Qualitative data were collected through Participatory Rural Appraisal (PRA) techniques in order to enable smallholder farmers (VSLA and non-VSLA members) to share and analyse their perceptions on the impacts of the VSLA on the welfare of their households. This method used focused group discussions (FDG's) that involved household heads, village leaders such as village chairperson and village executive officers, community development officers from Kilolo District and Ward Executive

Officers. A plan was to include 6-12 members per FGD, but participants ranged from 6-15. This is because in some villages members came without being invited. A total of 34 members attended on these FGD's.

3.5 Data Processing and Analysis

The collected primary data was in term of qualitative and quantitative data categories. The qualitative data were collected from key informants and focus groups discussion and were analysed using Content Analysis (CA) technique where by various key theme were identified. The identified key themes were discussed in details with some quotes from key informant interviewees and focus groups discussants (Creswell, 2014). The quotes were complemented with the statistical results from quantitative data analysis. Other data were analysed using the IBM SPSS (Version 20.0). Descriptive statistics were computed for each objective. They included frequencies, percentages and averages of individual variables.

3.2.6 Analysis of Impact of VSLAs to Smallholder Farmers School Dropout

The analysis of the impact of the VSLAs to smallholder farmers' children school dropout was done through the logit model approach. This model was used to analyse to what extent the VSLA schemes support the education of the smallholder farmers' children of those who participating on the VSLA and what is its impact on the school dropout rate.

$DRC_i = X_i' \lambda + \xi_i \qquad \tilde{V} = 1,2,3\ldots n$

DRC is a categorical dependent variable (binary) which took the value of 1 if there is the presence of at least one school dropout child in the family of respondent and 0, otherwise

ζ is the disturbance term, n = sample size and ƛ is a parameter

X is a vector of explanatory variables representing the following:

Participation in VSLAs (1 = old participant, 0 = non-participants), number of children, number of household members who are employed, number of people who have thee saving habit (1 =individual monetary saving using other mechanisms apart from VSLA, 0= otherwise), size of land under cultivation in hectares, education status)1 = at least primary education level, 0 = n schooling), age which is dummy (1 =age group of 25 -50, 0 =otherwise), market access (distance to the nearest market in kilometres), membership in other community groups (1 = a member, 0 = otherwise) and household head leadership in the community (1 = is a leader, 0 = otherwise).

3.2.7 Analysing Impact of VSLA in Developing and Diversifying Iga's

The impact of VLA in developing and diversifying smallholder farmers IGAs were analysed through that model:

$$IGAs = \delta_0 + \delta_1 NVSLAM + \delta_2 HSLVSL + \delta_3 HVSL + \delta_4 r + \delta_5 VSLAPT + \delta_6 \log_e(Savingmonth) + \delta_7 Memploy d + \delta_8 GENDER + \varepsilon_i$$

Where:

IGAs = number of income generating activities established and are operated by VSLA participants

NVSLAM = number of current VSLA members (at the time of data collection)

HSVSL = number of VSLA that participants belong to

HVSL = number of household members participating in VSLAs

r = interest rate charged on VSLA loans (varies according to each VSLA constitution, range from 5% to 10%)

VSLAPT = time/duration participated in VSLA (1 = old VSLA participant, 0 = new participant)

Savingmonth = monthly household members savings made by VSLA members into the association's savings pool

Gender = 1 if female, 0 if male

Memploy d = number of household members who are employed

$\mathcal{E}$ = is the error term δ = is a parameter

CHAPTER FOUR

4.0 RESULT AND DISCUSSION

This chapter presents the characteristics of the respondents and discusses of the findings of the study which is the impact of Informal Savings Schemes (VSLA) on Household Welfare of smallholder farmers in Kilolo District, Iringa, Tanzania. The impacts are indicated by household income, asset accumulation, education expenditure and school dropout rates. Also is indicated by the number of IGAs initiated and being operated by smallholder farmers. The various results were obtained at through comparisons of group means, use of ordinary Least Square (OLS) and logistic regression analysis.

4.1 Characteristics of Respondents

This study was conducted in Kilolo District, Iringa region at Dabaga, Ukumbi and Idete wards where one village from each ward was selected into the study. A total of 208 respondents (Table 3.1) were interviewed who were grouped into the main categories (VSLA participants, and Non-VSLA participants).

4.1.1 Respondent's Gender

The study respondents comprised by 67.3% females and 32.7% males (Table 4.1). The number of males and females seems differ owing the fact that VSLA is always preferable by women for their economic empowerment compared to men. Men prefer to have other economic activities such as farming and business. Also the result is inconsistent to that of by Nyathi *et al.*, (2018), that women constitute the greater

percentage of marginalized in society who most often do not have access to financial services. This implies that improving women's access to financial services through VSLA may improve sustainability of the association as that will be addressing the felt needs of the marginalized members of the population.

Table 4.1: Percentage Distribution of Respondent Household by Gender (VSLA Members and Non-VSLA Members)

	VSL members	Non-VSL members
Gender	**Percent**	**Percent**
Male	32.7	39.4
Female	67.3	60.6
Total	100	100

Source: Surveyed data (2018)

4.1.2 Age of the Respondent

The results from Table 4.2 show that the minimum age of the respondents was 20 years where 12.5% of the respondents fall under this age category (20-30 years) and the maximum age was 63 where only 2.6% of the respondents fall under this age category. Also Table 4.2 show that 38.5% of the respondent were between 31 -40 years of the age category and 30.7% of the respondents were 31 -50 of the age category. 31 -50 years in the study area is economically active groups and are able to participate in diversified and different varieties of income generating activities. This finding is in agreement with studies conducted in various areas in Tanzania and Kenya by Mkoma (2013) and Lawrence (2012).

The age between 30 – 55 years who make 69% of all respondents is the age group that comprised of members who had been in the Village saving and loan groups for at least three years thus the impact of VSL was expected to be more prominent.

Table 4.2: Percentage Distribution Showing the Age of the Respondents

	VSL members	Non-VSL members
Age of the respondents	**Percent (%)**	**Percent (%)**
20-30 years	12.5	15.4
31 -40 years	38.5	43.4
41 – 50 years	30.7	30.7
51 – 60 years	15.4	9.6
61and above	2.9	0.9
Total	100.0	100.0

Source: Surveyed data (2018)

4.1.3 Marital Status of the Respondents

The results from Table 4.3 show that, the number of married couples who are VSLA members is higher than those who are non-VSLA members. 84.7% of the respondents who are VSLA members are married while 73% of the respondents who are not in VSLA are married both from Ukumbi, Kidabaga and Idete villages respectively. This show that married couples they can have proper planning on investments and make a firm decision on joining VSLA. Also the results from Table 4.3 show those, 0.9% of the respondents of VSLA are divorced while 9.6% of the Non VSLA members are divorced.

The results from Table 4.3 reveal that, 10.6% of the respondents who are VSLA members are widower while 8.7% of the respondents who are non-VSLA members are widower respectively. These slightly differences show that there is no significant relationship of being widower as motivating factor of being in VSLA programs.

Table 4.3: Percentage Distribution Showing the Marital Status of the Respondents

Marital status	**VSL members Percent (%)**	**Non VSL members Percent (%)**
Married	84.7	73.0
Divorced	0.9	9.6
Widowed	10.6	8.7
Never married	3.8	8.7
Total	100.0	100.0

Source: Surveyed data (2018)

4.1.4 Education Level of the Respondents

The level of education attained is one of the important attribute of the study. By knowing the level of education one attained is significant in knowing the influential factors for joining or not joining village saving and loan groups (VSLA's). Education has also been identified by National Strategy for Growth and Reduction of Poverty (NSGRP) (URT, 2015) to be one of priority sector considered having great impact in poverty reduction. The result from Table 4.4 show that 30.2%, of the respondents who are VSLA members have completed primary education while 66.3% of the respondents who are non-VSLA members have also completed primary education while 42.3% of the respondents who are VSLA members have completed

secondary education while average of 20.4% of the respondents who are non-VSLA members have completed secondary education.

In addition, there is wide difference in attaining secondary education or higher between VSLA and Non-VSLA participants. The result from Table 4.4 show that 27.5% of the respondents who are VSLA members have completed above secondary education (high school, college and university level) while 12.3% of the respondents who are non-VSLA members have completed above secondary education (high school, college and university level).This indicates that most respondents had low level of education, which might affect their capability to adopt the VSLA models as the saving mechanism. According to the human capital theory, the educational level (years of schooling) of the agricultural labour force (smallholder farmers) has an influence on agricultural productivity and is crucial for achieving sustainable development goals (Dalmaz *et al.*, 2018).

Table 4.4: Education Level of the Respondents

	VSL members	**Non VSL members**
Level of education	**Percent (%)**	**Percent (%)**
Non formal education	0.0	0.0
Primary school	30.2	66.3
Secondary education	42.3	20.4
High school education	20.3	8.6
College education	4.4	3.7
University	2.8	0.0
Total	100	100.0

Source: Surveyed data (2018

4.1.5 Duration of Membership of Village Savings Group

The time of being into VSLA program has the direct relationship with income diversification and net benefits accrued as a result of become VSLA members. The result from Table 4.5 show that, 5.7% of the respondents have less than a years in a VSLA program, 12.5% of the respondents are in between one and two years in a VSLA program and 15.4% are in between 2-3 years, 53.9% of the respondents are in between 3 -5 years in the program while 12.5% of the respondents has more than 5 years of participating in the VSLA programs.

Table 4.5: Duration of Membership on Village Savings Group

Duration	Percent (%)
Less than a years	5.7
1 -2 years	12.5
2 -3 years	15.4
3-4 years	24.0
4-5 years	29.9
More than 5years	12.5
Total	100.0

Source: Surveyed data (2018)

4.1.6 Income per Month

The results from Table 4.6 show that 12.5% of the VSLA members their income is up to TSHS 200000 per month while non VSLA members the same level of income (of not more than TSHS 200000 per month) is for 39.4% of the respondents. Also 20.2% of the VSLA members their income is between TSHS 200001 and TSHS

400000 per month while non VSLA members the same level of income are 27.9% of the respondents.

The results from Table 4.6 show that 64.4% of the VSLA members their income is between TSHS 40000 and 1000000 per month while non VSLA members the same level of income is for 32.7% of the respondents. It is obviously the level of income household earn per month determine the rate of saving. If the household income level do not meet the daily household basic demands, will be difficult to have the income saving. The same applies to the household who have income level which cover the household basic demands, due to surplus income the household have will encourage the income saving.

Table 4.6: Income per Month

Income (TSHS)	**Villagers income per month**	
	VSL members	**Non-VSL members**
	Percent (%)	**Percent (%)**
1-200,000	12.5	39.4
200,001 – 400,000	20.2	27.9
400,001-600,000	16.3	15.4
600,001 – 800,000	35.6	12.5
800,000 – 1,000,000	12.5	4.8
More than 1,000,000	2.9	0.0
Total	100.0	100.0

Source: Surveyed data (2018)

4.1.7 Saving Per Month of the VSLA Participants in the Study Area

The results from Table 4.7 of that study show the rate of saving per month of the respondents in the study area. Among them 27.8% of the respondents they save per month between TSHS 1000 and 10000 per month. This means that they receive small portion of dividends due to the value of their shares. This has implication on livelihood security and IGA diversification due to the small amount of loan which can be available for various IGA's of the VSLA members which require to be supported by VSLA loans.

The results from Table 4.7 show that 29.8% of the respondents they save per month on their VSLA between TSHS 10000 and 20000. In additional 17.3% of the respondents they save per month on their VSLA is between TSHS 20001 and 30000 per month. Also the result from Table 4.7 show that 12.5% of the respondents they save per month on their VSLA between TSHS 30001 and 40000 per month where by a 12.6% of the respondents they save per month on their VSLA between TSHS 40000 or more per month. This means that the value of dividends at the end of the saving cycle increases due to the amount of individual member saving. Also the bulk of money available for securing loan to the VSLA members increases as the amount of saving per group member increases. This has the direct relationship and implication on livelihood security and IGA diversification to VSLA member.

Table 4.7: Saving Per Month (in %) of the VSLA Participants (n=104)

Saving per month (TSHS)	Percent (%)
1000 – 10000	27.8
10001 -20000	29.8
20001 -30000	17.3
30001- 40000	12.5
40000 – 50000	8.7
More than 50000	3.9
Total	100.0

Source: Surveyed data (2018)

4.2 Impact of Smallholder Farmers Household Participation in VSLAs on Income

4.2.1 Level of VSLA Impact on Farm Productivity

The study revealed that VSLA's have impacted farm productivity in various ways. According to the Table 4.8, More than ten percent (18.3% and 17.3%) of the VSLAs and non VSLA members have verified that VSLA has increased farmers income levels. Moreover 15.5% and 14.4% of VSLA's and non VSLA members have also verified that VSLA's has caused availability and access to food processing facilities and 13.5% and 9.6% of VSLA's and non VSLA members agreed that VSLA caused availability and access to farm-labour.

On that study, Table 4.8 show that, 8.7% and 12.5% of the VSLA's and non VSLA members have verified that VSLA has enabled most farmers to purchase improved farm inputs and 13.5% and 9.6% of the VSLA's and non VSLA members have verified that VSLA has led increases in farm size. Also the study show that, 6.7%

and 3.8% of the VSLAs and non VSLA members have verified that VSLA has led to increase cultivation of different varieties of crops. These findings agree to the findings of Allen and Panetta (2010) that many people in rural areas who accessed financial services have been able to purchase agricultural inputs, maintain infrastructures, contact labour for planting/harvesting, transporting goods to market, make/receive payments, manage peak season incomes to cover expenses, invest in education, shelter health or deal with emergencies.

Table 4.8: Level of VSLA Impact (in %) on Farm Productivity (n=208)

Impact	**Participa-nts (n=104) Percent**	**Non partici-pants(n=104) Percent**
Increased farmers income levels	18.3	17.3
Caused availability and access to food processing facilities	15.4	14.4
Caused availability and access to farm-labour	13.5	12.5
Led increase in farm size	13.5	9.6
Enabled most farmers to purchase improved farm inputs	8.7	12.5
Led to increase cultivation of different varieties of crops	6.7	3.8
Enabled most farmers to save incomes sales from their farms	6.7	4.8
Most farmers have now food storage facilities	6.7	5.8
Many farmers now afford medical facilities	5.8	3.8
Farmers now sent their children to school	5.8	9.6
Farmers now have improved their dwelling homes	3.8	4.8
Farmers acquired basic record keeping techniques	1.9	0.9
Total	100	100

On that study, Table 4.8 show that, 6.7% and 12.5% of the VSLAs and non VSLA members have verified that VSLA has led to increase cultivation of different varieties of crops, Enabled most farmers to save incomes sales from their farms and most farmers have now food storage facilities both by 6.7% on each to VSLA participants and 3.8%, 4.8% and 5.8% to non VSLA participants.

On that study, Table 4.8 still show that, VSLA increased to small holder farmers income levels in Kilolo District and in turn has caused availability and access to food processing facilities and farm labour. Ngegba *et al*., (2016) argued that when farmers have easily available source of financial services, it increase their farm income. This cause farmer to have capacity in accessing food processing facilities as they can manage to pay for the service rendered. Also as income of the smallholder farmers increases, they are able to hire labour in addition to their family labour.

4.2.2 Levels of VSLA Impact to Agricultural Production (in %) to Smallholder Farmers in the Study Area

On that study, Table 4.9 shows that, VSLAs either highly impacted, moderately or small impacted farm productivity in Kilolo District. It is very highly impacted small holder farmers saving capacity, storage facility, farm income levels and cultivation of different crop varieties. Non-VSLA participants were similarly impacted especially through good storage facilities, purchase of improved farm inputs, and affordability of medical services and increased level of farm income.

Table 4.9: Levels of VSLA Impact (in %) in Agricultural Production to Kilolo District Smallholder Farmers

Impact	Level of impacts							
	VSLA participants n =104				Non VSL participants n=104			
	S %	MI %	HI %	VHI %	S %	MI %	HI %	VI %
Increased farmers income levels	4.8	26.0	39.4	31.8	42.3	44.2	10.6	2.9
Caused availability and access to farm-labour	5.8	7.7	43.3	43.3	23.1	41.3	26.9	8.6
Most farmers purchase improved farm inputs	10.6	44.2	36.5	38.5	44.2	33.6	17.3	4.8
Encouraged farmers to increase in farm size	19.2	12.5	35.6	32.7	36.5	22.1	26.0	15.4
Increased cultivation of different crop varieties	2.9	10.6	64.4	22.1	29.8	30.8	26.0	13.5

Source: Surveyed data (2018)

Note: S = small/little impacted; MI =moderately impacted, HI= highly impacted, VI = very highly impacted

That study on Table 4.9 study show that the VSLA's impacts at different levels, affected farmers' saving capacity, storage facility and ability to plant different crop varieties. Also the study show that the VSLA encouraged farmers to increase in farm size as they have more financial capacity to buy farms and hence expanding their farms sizes. This agrees with Collins *et al.*, (2009) that the levels at which VSLA's activities affect farm productivity among smallholder farmers in rural areas vary from one farm activity, household or community to another. The different levels of

impact emphasize the importance of availability of finance in farm productivity and household livelihood of farmers.

Table 4.10: Effects of VSLA Impact (in %) on Agricultural Benefits for Kilolo District smallholder farmers

Variables	Level of impacts							
	VSLA participants n =104				Non VSL participants n=104			
	S %	MI %	HI %	VHI %	S %	MI %	HI %	VI %
Most farmers save from their farms incomes	1.9	37.5	33.7	26.9	27.9	39.4	28.8	3.8
Most farmers now have food storage facilities	19.2	22.1	30.8	27.9	35.6	32.7	20.2	11.5
Many farmers now afford medical facilities	5.8	15.4	23.1	55.8	34.6	17.3	29.8	18.3
Most farmers children now attend school	2.9	13.5	21.2	62.5	27.9	27.9	34.6	9.6
Most farmers now have improved homes	18.3	18.3	27.0	36.5	27.9	35.6	29.8	6.7
Farmers acquired basic record keeping techniques	0.0	24.0	28.8	47.1	35.6	29.8	29.8	4.8

Source: Surveyed data (2018)

Note: S = small/little impacted; MI =moderately impacted, HI= highly impacted, VI = very highly impacted

4.2.3 Effect of VSLAs' on Household Food Availability

On that study, Table 4.11 show that, to some extent in most households there is available and access to food, farmers can now eat more than two times per day, have

enough stored food, preserve food in different forms, eat properly prepared food, afford nutritious foods, and well processed foods. The result also revealed that the impact of VSLA's on farm productivity has to no extent affected household food security among non-participants. The result of that study in Table 4.11 further revealed that to some extent most smallholder farm households in Kilolo District have access to storage facilities, properly processed and well prepared nutritious food.

Table 4.11: Effect of VSLAs' Farm Productivity

	Participants (n=104)			**Non Participants (n=104)**		
Variables	**DA %**	**SHA %**	**SA %**	**DA %**	**SHA %**	**SA %**
Most households eat more than two times per day	2.8	30.7	66.3	29.8	42.3	27.9
Most households now afford nutritious food	12.5	28.8	58.6	57.7	28.8	13.5
Food available and accessed to most households	13.5	30.7	56.7	37.5	59.6	2.9
Some household have enough food stored	26.0	41.3	32.7	39.4	51.0	9.6
Many households have well processed food	27.8	43.3	28.8	51.9	37.5	10.6
Most households have preserved durable form of food	31.7	53.0	15.4	65.4	32.7	1.9

Source: surveyed data (2018)

Note: DA = Do not agree ; SHA = Somehow agree ; SA = Strongly agree

These findings support Beaman, *et al.,* (2013) observation that although credit can be an important resources for the poor smallholder farmers, other tools, particularly

savings and insurance, are also likely important for improving the household food security and welfare of poor smallholder farmers. The availability and access of the farmers may be a step toward food security. The fact that, for household to have meals more than twice per day is an indication that there is an improvement in their household food status, especially where the households have access to well-processed and properly prepared nutritious foods.

4.3 Contribution of the VSLA's To Education Expenditure and Reduction of School Drop-Out Rates

The presented results in this part address the second specific objective of the study which was 'to analyse how VSLAs is contributing on supporting in education financing expenditure and reduction in school drop-out rates amongst rural households'. The first part presented here are group comparisons of education expenditure and second part of the results on school-drop out which was obtained by using a logistic regression analysis.

4.3.1 Education Expenditure

During the group mean comparisons analysis, the comparison of the mean education expenditure were made and group compared was; VSLA participants versus non-VSLA participants. The results displayed are in Table 4.12.

In the comparison is between of VSLA participants versus non-VSLA participants, the null hypothesis tested was H_0 = Mean (0) – Mean (1) = diff = 0 and

Ha = diff < 0

Table 4.12: Equality of Means Test for Education Expenditure between Old VSLA and non-VSLA Participant Families

Comparison of the old and non VSLA participants	**1 = VSL**		**2 = NON VSL**
N	n_1 = 104		n_2 = 104
Mean asset index [possession score] (SD)	296400 (296300.1)		58670 (57820.23)
Mean difference		237670	
Df		103	
t- statistic for equality of means (p>0)		4.743 (0.027)	

Source: surveyed data (2018)

The null hypothesis was rejected and this means that the education expenditure (amount of money spent on school basic needs and necessities in the past 12 months) for VSLA participants is significantly larger than that of non-VSLA participants at 5% (t=4.743; p=0.027) level. This implies that VSLAs promote education at household level. Good example is that, members utilize the education fund which is part of the VSLA community fund which member contributes for every meeting they meet. Also members can utilize VSLA saving or accumulated pay-out, hence they can fund for education expenses. In addition, members can also access the welfare fund to pay for education expenses. That result is inconsistent with the hypothesis that, there is a difference between the mean education expenditure of old and non-VSLA participants.

The second comparison is between old VSLA participants and new participants (Table 4.13) the null hypothesis is as follow: H_0 = Mean (0) – Mean (1) = diff = 0 and Ha = diff >0

Table 4.13: Equality of Means Test for Education Expenditure between old VSLA and New VSLA Participant Families

Comparison of the old and non VSLA participants	**1 = OLD**		**3 = NEW**
N	n_1 = 52		n_3= 52
Mean asset index [possession score]	296400		121890
(SD)	(296300.1)		(120740.1)
Mean difference		174510	
DF		174.614	
t- statistic for equality of means		5.759	
(p>0)		(0.013)	

Source: surveyed data (2018)

In that analysis, the null hypothesis was accepted implying that the expenditure for old VSLA participants is significantly greater than that of the new VSLA participants at the 5% level (t =5.759, p = 0.013). this show that the long duration on participating on the VLSAs program has direct impact on parents or guardian in managing to supply or supporting education expenses.

4.3.2 Impact of VSA on School Drop-Out Rates

Impact of VSLA on school dropout rates of children from smallholder farmers' families was assessed and analysed through logistic regression analysis (Table 13). The binary dependent variables were assigned the value of one if the family has at

least one school dropout child and zero for no school dropout. The covariates of the logistic regression analysis are as follows: number of children in the families, participation of parents in the VSLA, income saving families, membership in other community groups, age of the parents, parent leadership position, size of land under cultivation, number of household members employed, market distance and parent education status.

4.3.2.1 Number of Children enrolled in Schools (2013-2017)

The results in Table 4.14 of that study shows the number of children enrolled in primary schools, secondary schools and in colleges or universities from the respondents' household both VSL and Non VSLA members from Ukumbi, Kidabaga and Idete villages respectively. From respondent's households, a total of 243 children were enrolled in primary schools where by 51% (124 students) where from households which do not have a member who participating in VSLA programs. A total of 161 children were enrolled in secondary schools where by 48.4% (78 students) where from households which do not have a member who participating in VSLA programs. Moreover the Table 4.14 of that study show that, a total of 62 children were enrolled in college/universities where by 41.9.4% where from households which do not have a member who participating in VSLA programs.

Table 4.14: Number of Children Enrolment for 5 past Years in Primary, Secondary and College Educations

Enrolment	Ukumbi		Kidabaga		Idete	
	VM %	NVM %	VM %	NVM %	VM %	NVM %
Primary school	50.0	51.80	50.82	61.2	50.52	53.1
Secondary school	33.75	37.35	34.43	26.53	36.1	35.4
College/University	17.50	10.84	14.75	12.24	13.4	11.5
Total	100.0	100.0	100.0	100.0	100.0	100.0

Source: surveyed data (2018)

Note: VM =VSLA members households; NVM = Non VSL members households

4.3.2.2 Drop-Out Rates for Students

Table 4.15 shows the number of children dropped-out from primary schools, secondary schools and in colleges or universities from the respondents household both VSL and Non VSLA members from Ukumbi, Kidabaga and Idete villages respectively. A total of 33 children were dropped-out of in primary schools whereby 81.8% were from households which do not have a member who is participating in VSLA programs. A total of 32 children were enrolled in secondary schools whereby 87.5% where from households which do not have a member who participating in VSLA programs. Also the Table show total of 13 children were enrolled in college/universities where by 84.6% where from households which do not have a member who participating in VSLA programs.

Table 4.15: Percentage Distribution on Dropout Rates of Children Enrolled in Schools/Colleges from 2013 to 2017

Dropout (2013-2017)	VSL members Percent (%)	Non VSL members Percent (%)
Primary school	7.8	34.9
Secondary school	6.07	34.3
College/University	2.7	14.2
Total drop-out student	11.5	88.5

Source: surveyed data (2018)

4.3.2.3 Reason for Dropping Out of School

Table 4.16 shows the reasons which caused the children to drop-out from primary schools, secondary schools and in colleges or universities from the respondents' household both VSL and Non VSLA members from Ukumbi, Kidabaga and Idete villages respectively. 16.7 percent of non VSLA members verified it was due to lack of school fees before 2016. In 2016 the government took the decision of abolishing school fees in government primary and secondary schools to provide equal opportunity to education for children from poor and non-poor families in Tanzania (free education for all).

Before 2016 some families in the Ukumbi, Idete and Kidabaga villages, due to high poverty rate did not manage to pay school fees for their secondary and primary education and that caused drop-out of some students. In Idete and Kidabaga the number of drop-out was supposed to be higher if the initiatives of some organizations such as NGO known as Lyra in Africa would be absent. That organization took the

initiatives for paying school fees and some school necessities to enable students from poor families to access education.

That study show that, 21.2 percent of non VSLA members verified it was due to lack of school fees when are joining in higher education (Table 4.16). Due to high cost of school fees to the students who lack loan for university fees and especially when they did not manage to acquire the loan from High Learning Students Loan Board due to the failure of meeting the required criteria's, the situation is forcing them to be dropped out of studies. Also 31.8% of students from non-VSLA dropped out due to lack of fund to cover school or college necessities such as to cover the costs for accommodation, meals, uniforms, stationeries and others unmentioned.

That study show that, other reasons which caused school dropout for VSLA and Non VSLA include pregnancy (16.7% and 6.1%), conflict between parents and guardians (8.3% and 1.5%), early marriage (0.0% and 6.1%), employment to children (25.0% and 10.6%) and peers groups (0.0% and 1.5%) of children from VSLA members and non-VSLA members households respectively (Table 4.16). Also that study show that, other reasons include indiscipline (0.0%, 4.6%), health problems (33.3% and 0.0%) and disabilities (16.7% and 0.0) of children from VSLA members and non-VSLA members households respectively (Table 4.16).

Table 4.16: Reasons for School Dropout to Students in the Study Area

Variables	VSLA participants Percent	Non-VSLA participants Percent
Lack of school fees in the past before 2016	0.0	16.7
Lack of school fees (college students)	0.0	21.2
Failing to cover school/college necessity costs	0.0	31.8
Pregnancy	16.7	6.1
Conflict between parents/guardians	8.3	1.5
Early marriage	0.0	6.1
Children attained employment opportunity while are in school	25.0	10.6
Peer group	0.0	1.5
Indiscipline	0.0	4.6
Health problems	33.3	0.0
Disabilities	16.7	0.0
Total	100.0	100.0

Source: surveyed data (2018)

4.3.2.4 Impact of the VSLA in Supporting Children Education

Table 4.18 of that study shows the impact of the VSLA in supporting the children education of the VSLA members' smallholder farmers in order to reduce the students to drop-out from primary schools, secondary schools and in colleges or universities from the respondents household both VSL from Ukumbi, Kidabaga and Idete villages respectively. 58.7% of the respondents revealed that VSLA has supported school fees to students in primary and secondary schools. This happened before 2016 where it was mandatory to pay school fees before it was abolished by the government in early 2016.

On Table 4.18 of that study show that, 26.9 percent of the respondents said that the VSLA program has enhanced them to pay university tuition fee for their students at colleges or universities where by 87.5 percent claimed that it has supported them to cover other necessary costs (stationeries, accommodation, uniforms and others unmentioned) at universities, colleges and in primary or secondary schools. These costs without the VSLA support would be impossible to cover.

From the results of that study on Table 4.17 show that, 50.9 percent of the respondents said that the VSLA program has enhanced them to cover some health costs, 75.9 percent the respondents said that the VSLA program has enhanced them to cover school meal costs, 22.1 percent the respondents said that the VSLA program has enhanced them to covered transport costs to the students from smallholder household who are in VSLA program.

Table 4.17: Impact of the VSLA in Supporting Children Education (n=104)

Variables	**VSLA participants Percent**
Has supported school fees to primary and secondary education (before school fees being eliminated in schools in 2016)	58.7
Has supported academic fees (college students)	26.9
Has covered school/college necessity costs	87.5
Has supported to cover some health costs to students	50.9
Has supported in covering some school meal costs	75.9
Has covered some transport cost (e.g purchasing bicycle)	22.1

Source: surveyed data (2018)

4.3.3 The impact of Different Impact Variables on the School Dropout Rates for Families Of Old and Non-VSLA Participants

The dummy variables used in the analysis are: VSLA (1=old VSLA participant, 0 = non VSLA participant); saving families (1= if the household head have saving from different mechanisms apart from VSLA and 0 if is otherwise); Parent education status (1 = at least primary school education, 0 = no schooling). Others are membership in other community groups (1=member, 0 =otherwise); parents age (1 = middle and active parent age group: 30-50 years, 0 = otherwise:18-29 and 51-65 years, and parent leadership (1= if parent is a leader in community, 0 = otherwise).

The results in Table 4.18 of that study show that, participation in VSLA is significant reducing the chances of school dropout for the children whose their parents or guardians are involved with VSLAs since the exponentiated coefficient (exp (b) or odd ratio is less than unity. This result is in parallel with the hypothesis that VSLAs contribute to a reduction in school dropout rate to the rural households. The participation of the community to the VSLAs has enhanced the supports education of the children from the small-farm scale households by facilitating education related costs and expenditures (children basic necessities covering). The study found that, through VSLA fund they raised the smallholder farmers can afford school related expenses imposed by schools such as uniforms, school meal, examination printing fees, stationery costs, and building funds among others through the use of the accumulated savings, education and welfare funds to finance those expenses.

The finding further shows that as the number of children within the family increase also the probability of having school drop-out of children increases (exp(b) is greater than unity). This clearly shows that the family which having the large number of children always due to large and higher demand necessities, poverty increased and hence reduces the probability that a child would receive support for school necessities funds and because of that constraint the school drop-out rates increase.

The results in Table 4.18 of that study also shows that, membership from other groups like religious/denomination groups decreases the probability of school dropout children (exp (b) is less than unity. This results show that the families which are engaging in varieties of groups which have the welfare support will have less children school drop-out. This is due to the varieties of support received from different groups' increases the chance of school necessities to be covered and hence reduces the school dropout.

The results in Table 4.18 of that study also shows that, size of land under cultivation reduces the probability of school dropout for smallholder farming household children (exp(b)<unity but is not significant. This is due to the fact that families which utilize effective their land through cultivation they have good produce at the end of each season and hence through harvest selling they manage to have the fund to cover for education necessities and hence leads to the school drop-out reduction to their children.

Table 4.18: Logistic Regression Analysis on the Impact of Different Impact Variables on the School Dropout Rates for Families of Old and Non-VSLA Participants

Co-variates	Coefficient (b)	Z	p>z	Odds Ratio[exp (b)]
Number of children	0.5367109**	3.79	0.004	1.74169
Participation on VSLA	-2.969594**	6.25	0.000	0.034738
Primary education and above	-0.2662596	-0.38	0.786	0.864574
No of household members employed	-0.4387728	0.89	0.448	0.8574
Membership of other community group	2.835322*	3.31	0.046	0.96085
Size of land under cultivation	-0.2596535	-1.87	0.088	0.827924
Saving amount per month	-2.944444	-2.33	0.092	0.836618
Age of the parent	-3.268346	-2.66	0.085	0.470756
Market distance	0.1489654	1.92	0.336	2.376168
Leadership	0.0664203	0.23	0.894	1.376722
Constant	1.265647	1.39	0.372	

Source: surveyed data (2018) analysis

Note: n=104; Pseudo R^2=0.4683; Chi^2(d.f =10) =68.79; Prob>Chi^2= 0.0000; Log likelihood =-40.840625; Chi^2 test (d.f =8) = 5.99; p-value = 0.6888, *significant at 10% level; ***significant at 1% level

The results in Table 4.18 of that study further show that, small holder farmers who have the habit of saving also reduces the probability of school drop-out children in the family (exp(b) < unity) but is not significant. This is due to the fact that, the smallholder farmers who have the saving habit they can accommodate through their saved fund, the planned utilization of fund into school necessities and school transport costs and hence leads to the reduction of school drop-outs. That is opposite to the smallholder farmers households who have no saving habit and they are non-

VSLA they frequently cannot afford to fund the school necessities costs for their children and hence increase the school dropout rate.

The results in Table 4.18 of that study also shows that, the age of the respondent is negatively related to the probability of having school dropout children in the smallholder farmers (exp(b)<unity) but the relationship is not significant. This is due to the fact that, the youngest parents (below 30 years), many of them they do not have the capacity to afford the school necessities costs of their children and many of them are still dependent to their parents. This is because many of them they go the children out of their plans and the mental maturity age were not full reached. In addition, the age above 50 years many of them responded, their children has high school dropout rate. One of the reasons is due to have many dependants at that age and hence they fail to support every need for their children or the children under their guardian. That leads to the high school dropout rate. In this case, age was a dummy variable that took the value of 1 if an individual was aged 30 – 50 (active age group) years and 0 if otherwise.

Moreover the results in Table 4.19 of that study also shows that, household members who are employed has negative impact on the probability of having school dropout children to the households on the study area (exp. (b)< unity) but the relationship is not significant. This is due to the fact that, employed households heads and members (include casual labours, farm labours) they use most of the time in their employment activities and they do not have enough time for their children school assessment.

Not only that but also the results in Table 4.19 of that study reveal that, education status of smallholder farmers households (at least primary education or above), has positive impact on reduction of school dropouts in the household and is vice versa to the families with no schooling but not significantly.

The household head to hold leadership position in the community (including becoming village chairperson, village executive officer or member of the village government or leader of any development group within the community) has no impact and have no significant effect on the probabilities on having school dropout. This is the same to the market access (distance from household home to the accessible market) factor.

4.4 The Impact of VSLA's In Supporting the Development and Diversification of IGA's

Income generating activities are crucial to small holder farmer's economy in Kilolo District, as they have the potential to contribute to the overall development of their household livelihoods and play a vital socio-economic development to VSLA's members in Kilolo District. They play the impact of a social safety net by providing incomes and employment, particularly to the under-employed or those who cannot find jobs in formal sector. This agrees with the study by Haga (2017), which finds that small businesses are an efficient vehicle. They are probably the most effective way to lower unemployment and improve the health of an economy.

4.4.1 Types of IGA's

The results in Table 4.19 of that study show that there is big diverse of type of income generating activities which are being implemented by the VSLA members in Kilolo District. Also it further show that, 29.8% of the VSLA members are doing retail (small shop) trade, 20.2% are doing market vending, 87.4% are doing cash crops farming and 17.3% are doing poultry farming. Same as other IGAs in the study area, cash crops production (Sunflower, Peas and Avocado production) enabled farmers to increase their living standards thus contributing to food security. Also production of cash crops has offered farmers opportunities for investment and improved management of their farms, stimulated agriculture innovation through good agriculture practices (GAP) and in-return enhanced farm production to increase.

Moreover the results in Table 4.19 of that study further reveal that, 12.5%, 3.8% are doing beekeeping, and tailoring while for cattle and goat keeping, handcrafting both are 6.7%. the number of VSLA who are doing tree farming in the study area is higher (69.2%) as the trees is most preferable attractive and less tedious IGA's and has been taken as a bank account for smallholder farmers. The benefit of tree farming (silviculture) to communities in the study area cannot be neglected. During Focus Group Discussions (FGDs) in all villages they witnessed that tree farming improved their livelihood as it is the source of timber, charcoal and firewood to their families. Also through its business it provide income which ensure their food security, health and wellbeing. These findings are similar to the findings of Ndayambanje *et al.,* (2013) and Richard et al., (2014*)* on the benefit of tree farming to the farming

communities. Other income generating activities performed by the VSLA members are such as shown in Table 4.19 of that study.

Table 4.19: Types of IGA's which are implemented by VSLA members (n=104)

IGA's	Percentage
Retail trade/small shop	29.8
Wholesale	2.9
Market vending	20.2
Manufacturing	4.8
Cash crops farming	87.5
Crafts	1.9
Poultry	17.3
Vegetable cultivation	5.8
Tree farming	69.2
Cattle and goat keeping	6.7
Beekeeping	12.5
Tailoring	3.8
Handcrafting	6.7

Source: surveyed data (2018)

4.4.2 The Support of VSLA to IGA's

That results of that study in Table 4.20 reveal that that more than three quarters (75.9%) of the VSLA members have been supported by the VSLA in receiving sufficient credit at low interest rates, while more than sixty percent (65.4%) of the respondents verified that VSLA has coordinated adequate supply of agriculture inputs such as fertilizer, seeds, pesticides and vaccines. Also the VSLA has coordinated adequate supply of non-agriculture inputs of time. These include planting time knowledge and implementations.

This study also shows that more than sixty percent (65.4%) of the respondents who are VSLA participants agree that the VSLA has facilitated in developing cooperation among members to resolve the market problems. These resolutions which are being facilitated include agriculture marketing transport costs, lack of market information and storage facilities.

Table 4.20: The Support of VSLA to IGA's (n =104)

VSLA support	**Percent (%)**
Provided sufficient credit at low interest rates	75.9
Has coordinated adequate supply of agriculture inputs (fertilizer, seeds, pesticides, vaccines) and non-agriculture inputs in time	65.4
Has facilitated in developing cooperation among members to resolve the market problems	49.0
Provided sufficient need-based training facilities on IGA's from LGAs and NGOs	70.2
Provided adequate extension services from LGA and NGOs	83.7
Adequate supply of technologies and information by skilled personnel	50.9

Source: surveyed data (2018)

This study also shows that 70.2% of the respondents who are VSLA participants agree that the VSLA has provided sufficient need-based training facilities on IGA's from LGAs and NGOs while 49.0% agree that VSLA has facilitated in developing cooperation among members to resolve the market problems. Also 50.9% of the respondents has agreed that VSLA has provided adequate extension services from LGA and NGO's and 83.6% of the respondents has agreed that VSLA has facilitated

the supply of technologies and information by skilled personnel to the VSLAs who implementing the IGA's.

4.4.3 VSLA Loans Support to IGA's

That study shows different loans supports amounts to the VSLA members who have the IGA's. Table 4.21 shows that, 10.6% of the VSLA members have received the loan less than TSHS 100000 in 2017. These loans were used as a start-up of small petty business and for farm input procurement. Not only that but also 25% of the VSLA members have received the loan between TSHS 100001 -250000 in 2017. In addition 13.5% of the VSLA members have received the loans between TSHS 250000 – 500000 and 19.2% of the VSLA members have received the loan between TSHS 500001 – 750000 in 2017. Moreover 18.3% of the VSLA members have received the loan between TSHS 750001 – 1000000 while 13.5% of the VSLA members have received the loan beyond TSHS 1000000 in 2017.

Table 4.21: VSLA Loans Support to IGA's (n=104)

Variables	Percent
Received loan less than TSHS 100000	10.6
Received loan between TSHS 100001 -250000	25.0
Received loan between TSHS 250000 – 500000	13.5
Received loan between TSHS 500001 – 750000	19.2
Received loan between TSHS 750001 – 1000000	18.3
Received loan beyond TSHS 1000000	13.5

Source: surveyed data (2018)

4.4.4 Management of IGA's and Women Empowerment on Improving the Household Welfare

For any IGA's to grow and sustain, it is essential to demonstrate adequate management skills for those who are managing these IGA's. This includes type of people who are implementing day to day IGA's operations and has an impact in sustenance of the business venture. The results of that study in Table 4.22 show that, 5.5% of the IGA's are managed by the paid employees, 85.7% the IGA's are managed by the unpaid family labour and 8.8% of the IGA's are managed by the IGA's owners. However on these IGA's, new business entrepreneurs demonstrated lack of relevant business and management expertise in some critical areas such as finance, marketing, production and people management in comparison of long time entrepreneurs. This study found that as these new entrepreneurs who are VSLA's members attending on the business management trainings which are offered as packages of VSLA's trainings, their skills on relevant business and management expertise in some critical areas such as finance, marketing, production and people management grows.

The result of that study in Table 4.22 of that; study show that, a total of 70.2% of IGA's are managed by women, while 29.8% of IGA's are managed by men who are also VSLA's members. The dominance of women of the IGA's management is due to their commitment and dedication of moving out of poverty and male based economy dependency. The dominance of women on IGA's has also positive impacts to the families as they assume the overall responsibility on the family welfare and management. This study has confirmed that VSLA approach is paramount in

boosting women's economic status in Kilolo District by saving microloans. Through VSLA, women were able to invest in small business and farming, which results in improving their children's education, health and the livelihood of the entire family. The findings of study is in line with what was reported by Zaman, (2001) who reported that microcredit played valuable impacts in reducing the vulnerability of the poor through assets creation, income and consumption smoothing, provision of emerging assistance and empowering and emboldening women by giving them the control over assets and increase self-esteem and knowledge. The VSLA programme has significantly contributed to women to in establishing and managing the IGA's which in turn has enhanced their economic status, which enables them to earn extra income through which they can gain greater financial autonomy.

Table 4.22: Percentage Distribution on the Management of IGA's in the Study Area (N=91)

Management of IGAs	**VSLA's members who own IGA's Percent (%)**
Paid employees	5.5
Unpaid family labour	85.7
IGA's owners	8.8
IGA's managed by men	29.8
IGA's managed by women	70.2

Source: surveyed data (2018)

4.4.5 Training for Operating IGA's

The results in Table 23 of this study show that 84.6 of the respondents have agreed that they have received training on operating IGA's from VSLA's programs. These are business management trainings which are offered as packages of VSLA's

trainings. These include developing skills on relevant business and management expertise in some critical areas such as finance, marketing, production and people management. Moreover the study show that, 8.8% of the respondents was also received the IGA's management training but not from VSLA's groups. They have received these trainings from microfinance institutions and through leading various business management books and pamphlets. Also the study shows that, 6.6% of the respondents who operating IGA's had not received the trainings for operating IGA's but they are just using their own skills.

Table 4. 23: Training for operating IGA's to VSLA member (n =91)

Management of IGAs	**Percent (%)**
Respondents who had received training from VSLA's	84.6
Respondents who had received training not from VSLA's	8.8
Respondents who had not received training	6.6

Source: surveyed data (2018)

4.4.6 The Use of Income from IGA's

The results in Table 4.24, of that study show that 58.2% of the respondents agree that income they earned from IGA's have covered all of their basic needs while 41.8% said all of their basic needs were not covered by that income they earned from IGA's. However 96.7% of the respondents agree that income earned from VSLA has covered the food cost and 83.5% of the respondents agree that income earned from VSLA has covered the medical cost. Moreover 78.0% of the respondents agree that income earned from VSLA has covered the clothes cost. The study further show that,

26.4% and 24.2% of the respondents agree that income earned from VSLA has covered the school fees and shelter cost.

Table 4.24: The use of Income from IGA's (n=91)

Variables	Percent
Basic needs covered by IGAs	
Food	96.7
Medical	83.5
Clothes	78.0
School fees	26.4
Shelter	24.2
Respondents whose IGA's income covered necessary all basic needs	58.2
Respondents whose IGA's income did not covered necessary all basic needs	41.8

Source: Surveyed data (2018)

4.4.7 Performance Determinant' of the IGAs Supported by VSLA

That sub-section address the analysis on the impact of VSLA's in supporting the development and/or diversification of smallholder farmers' income generating activities (IGA's) to VSLA's members in comparison to non-VSLA's member on the study area. In order to get the impact of participation in VSLA's on the number of IGA's initiated and being operated as an impact of smallholder farmers' involvement in VSLA activities, the linear regression analysis was done. That analysis was assisted to get the deep understanding on the impact of VSLA's in the diversification and development of IGA's, which are result of VSLA initiatives operated by VSLA's participants (Table 4.25).

Table 4.25: Regression on the Impact of VSLA in Diversification and Development of IGAs

Dependant variable: Number of IGA	**Robust standard errors**	
	Coefficient	**SE**
Number of current group members	0.0218711	0.0222631
Number of VSLAs an individual belong	0.2904814**	0.2183241
Number of HH members belong to VSLA	0.00218	0.0217345
Participation on VSLA	0.3937518***	0.117412
Number of HH members employed	0.6277128	0.073851
Interest rate on loans	-0.0031604	0.005142
Log $_e$ (Member monthly average saving)	0.3693411**	0.073769
Gender	0.2186321	0.319548
Constant	-3.106927	0.873814

n = 190R^2=0.3683 Overall F-statistic (8.181), Prob > =0.0000

** significant at 5% level ***significant at 1% level

The number of VSLAs that a participants belongs to the VSLA's, is also positively and significantly related to the number of IGA's initiated and being operated by the households of smallholder farmers as a result of their participation in the VSLA's. This may be due to the opportunities for doing business that VSLA's present to the participants (Table 4.25). From that result, and the one derived through group mean comparison describe that, the old VSLA participants have realized the impact on participation of the saving scheme (VSLA's) and it has enhanced them in diversification of the resources (received income from VSLA's) to create varieties of IGA's and hence leads to wealth accumulation. This is different from the new VSLAs participants who have not in a full position to diversify or establish and operate more IGA's and are still accumulating the capital.

This implies that the monthly saving made by VSLA members into the association's saving pool impact positively and significantly on the number of IGA's initiated and being operated due to participation in VSLAs. From that analysis, the results reveal that, a unit increase in members' saving in a month leads to a rise in the number of IGAs initiated by 0.36 (Table 4.25). That illustrates more the importance of the regular savings contributions that are made by the VSLA participants. The number of VSLA's that a participants belongs to the VSLA's, is also positively and significantly related to the number of IGA's initiated and being operated by the households of smallholder farmers as a result of their participation in the VSLA's. This may be due to the opportunities for doing business that VSLA's present to the participants (Table 4.25).

There is a positive and significant relationship between the log of monthly savings made by VSLA members and the number of IGA's initiated and being operated. This implies that the monthly saving made by VSLA members into the association's saving pool impact positively and significantly on the number of IGA's initiated and being operated due to participation in VSLAs. From that analysis, the results reveal that, a unit increase in members' saving in a month leads to a rise in the number of IGAs initiated by 0.36 (Table 4.26). That illustrates more the importance of the regular savings contributions that are made by the VSLA participants.

Due to that results presented in Table 4.25 above, confirm the hypothesis that VSLAs fuels the development, stabilize and contribute significantly in the diversification of IGA's to the VSLA's participants and are small holder farmers

households. This has been possible due to the fact that, VSLA's services such as payout and loans have being instrument in supporting and facilitation on diversification and development of IGA's to households of small holder farmers. This can be supported by the number of VSLA participants reported to have borrowed from the association's saving fund (pool) for the purpose of either starting or stabilizing IGA's or its diversification. The number reported is 87 percent. In addition female VSLA member (sex = 1) established and operate more IGAs which sourced fund from VSLA pool than females counterpart (Sex =0) but this relationship is not significant. The rate of interest charged by VSLA's groups on VSLA loans is negatively affect the number of IGA's established and operated but its relationship is not significant.

Also the results from Table 4.26 show that, there is a positive and significant relationship between number of children from the household of VSLA members and the number of IGA's initiated and being operated. This is supported by 77.4% (Table 4.27) of the respondents who are strong agree that the number of children affect the performance of IGA's supported by VSLA. Also 11.4% of the respondents they somewhat agree that the number of children affect the performance of IGA's. If the household has large number of children who are in school age and are supported by the same household member or head and is also the VSLA member, large portion of earning from the VSLA and other sources will be used to cover the children school necessities and hence will reduce the capacity of making IGA's to grow or expand. That is different and vice versa to the household which have few in number of children who are in school age.

Table 4. 26: Performance Determinants of the IGAs supported by VSLA

Co-varieties	Coefficient (b)	Z	p>z	Odds Ratio[exp (b)]
Number of children	0.5367109**	3.79	0.004	1.741697
Participation on VSLA	-2.969594**	6.25	0.000	0.0347383
secondary education and above	-0.2662596	-0.38	0.786	0.8645740
No. of household members employed	-0.4387728	0.89	0.448	0.8574
Membership of other community group	2.835322*	3.31	0.046	0.960857
Size of land under cultivation	-0.2596535	-1.87	0.088	0.827924
Saving amount per month	-2.944444	-2.33	0.092	0.836618
Age of the parent	-3.268346	-2.66	0.085	0.470756
Market distance	0.1489654	1.92	0.336	2.376168
Leadership	0.0664203	0.23	0.894	1.376722
Constant	1.265647	1.39	0.372	

N=208, Pseudo R^2=0.4683, Chi^2(d.f =10) =68.79, Prob>Chi^2= 0.0000
Log likelihood =-40.840625, Chi^2 test (d.f =8) = 5.99, p-value = 0.6888
*significant at 10% level, **significant at 1% level

The results in Table 4.26 of that study show that, there is a significant relationship between participation on VSLA programs and the number of IGA's initiated and being operated. This is supported by 53.4% and 11.1% of the respondents (Table 4:26) who are strong agree and somewhat agree that the participation on VSLA programs on one way or another affect the performance of IGA's supported by VSLA. On the VSLA programs every member is required to set the goal which she/he will be required to reach to that goal at the end of the revolving cycle. That

has encouraged many VSLA members who have established various IGA's also to set high performance goals and they make various plans to achieve these goals.

Table 4.27: Likert scale- Performance Determinant' of the IGAs Supported by VSLA

Factor	Respondent responses (N=208)				
	SA %	SHA %	N %	SHD %	SD %
Number of children	77.4	11.5	3.8	2.4	4.8
Participation on VSLA	53.4	11.1	6.7	17.3	11.5
Primary education and above	49.0	13.9	17.8	15.9	3.4
Number of household members employed	71.2	4.8	8.7	4.8	5.8
Membership of other community group	41.8	14.4	9.6	22.6	15.4
Size of land under cultivation	53.4	21.1	10.8	2.9	13.7
Saving amount per month	43.1	16.2	10.3	14.2	18.1
Age of the parent	39.7	21.1	8.4	13.7	19.1
Market distance	45.6	21.1	29.9	20.1	21.1
Leadership	47.1	17.2	9.3	9.3	25.0

Source: Surveyed data (2018)

Note: SA =Strong agree, SWA = Somewhat Agree, N= Neutral,

SWD = Somewhat Disagree, S =Strong Disagree

Also that study show that, on the VSLA programs at the study area, many VSLA members are attending entrepreneurship and business leadership trainings, which are organized by the networks of the VSLA program and the NGO's which are supporting these VSLA programs. In additional, Kilolo District is also frequently providing the business leadership and entrepreneurship trainings to these established VSLA. These trainings which are offered to those who are participating on the

VSLA programs have a great contribution on positive impacts of the IGA's performance. These trainings is rarely to be available to those IGA's owners who are non VSLA members and due to that situation can affect the performance of their IGA's as many lack business leadership and entrepreneurship skills.

The results in Table 4.27 of that study show that, there is a significant relationship between having the primary education and above and the performance of number of IGA's initiated and being operated. This is supported by 49% and 13.9% of the respondents who are strong agree and somewhat agree that having the primary education and above on one way or another affect the performance of IGA's supported by VSLA. This is due to what respondents agree that by having education increases formal entrepreneurship as consequence of higher self-confidence, lower perceived risks and enhance human capital. This is supported by Alfredo *et al.*, (2015) who support that by having secondary education and above provide to individuals with skills to detect and access business opportunities, and play a crucial impact on the attitude, behaviour dispositions. While the importance of education starts from the very beginning, all the education stages play a significance impact on entrepreneurships of IGA's (WEF, 2009; Coduras *et al.*, 2010).

CHAPTER FIVE

5.0 CONCLUSION AND RECOMMENDATION

This chapter provides the conclusion and recommendation of the study.

5.1 Conclusion

This study sets out to analyse the impact of the Village Saving and Loan Associations (VSLAs-an informal saving scheme) in enhancing welfare (Social economic Status of smallholder farmers households in Kilolo District, Iringa region. The result shows that the participation in the saving scheme has been found to have created positive impact on the smallholder farmers' household welfare in four aspects which are household income, education support (education expenditure and school dropout rates) and establishment, development and diversification of IGA's.

5.1.1 Impact of Rural Households' Participation in the Informal Savings Schemes (VSLAs) on Their Farm Productivity

Farmers experienced VSLA's impacts on farm productivity at different levels. The majority of the households who are in VSLA's scheme have, on average better nutrition and health statues compared to non-VSLA participants households. VSLA participation has a substantial positive impact on meal quality, evident through an increase in consumption of both well processed and prepared nutritious food, eaten more than twice per day. The VSLA program also appears to improve access to health services for member household, by facilitating a higher level of spending on healthcare.

5.1.2 VSLAs Contribution on Supporting in Education Financing Expenditure and Reduction in School Dropout Rates amongst Rural Households

Smallholder farmers experienced that, participation in VSLA significantly has an impact in school-drop out reduction to the children belong to smallholder famers' households participating in the VSLA. This is good and positive indicator of the impact of the VSLA's in supporting the education of smallholder farmer's household children. Also the mean education expenditure of the households VSLA participants is statistically significantly different from and larger than those of the non-VSLA.

5.1.3 VSLAs in Supporting the Development and/or Diversification of Small Holder Farmers' Income Generating Activities (IGAs) to VSLAs Members in Comparison To Non-VSLAs Member on the Study Area

Smallholders farmers experienced that, the participation in VSLA and weekly savings made by VSLA members into the association's saving pool have a positive and significant impact on the development, diversification and management of various IGA's initiatives on the study area and are being operated within and outside the studied villages by the VSLA participants under study in comparison to non VSLA participants. The number of VSLA's that an individual belongs to also positively and significantly tends to influence the number of IGA's initiated and being operated has increased. There is positive but insignificant relationship between the VSLA member and employment and with the number of IGA's initiated and being operated. Also the dominance of women of the IGA's management is due to their commitment and dedication of moving out of poverty and male based economy dependency. The dominance of women on IGA's has also positive impacts to the

families as they assume the overall responsibility on the family welfare and management.

5.2 Recommendations

Basing on the above conclusion of the study, the following are recommendations advised:

i) It is recommended that the Ministry of Agriculture, food security and Irrigation and other stakeholders who are dealing with smallholder farmer welfare support VSLA in their pursuit on smallholder farm products increases and food security.

ii) There is a need of local government authorities especially dealing with children development, community development and primary and secondary education to set initiatives to households who have the children's at the age of attending schools to form, join and implementing VSLA programs in all Districts in Tanzania. This will assist the capacity of households to have the capacity to provide the school necessities to their children which will also reduce the children school-drop out.

iii) There is a need of replicating and enhancing VSLA program to smallholder farmers and women in the communities which have the characteristics of male based household economy decisions in other areas/District within Tanzania to enable them to have planned saving mobilization. Through the VSLA saving, those who will be joined VSLA program will have capacity to build and support the development and diversification of Income Generating Activities (IGAs). Those will be joined members of VSLAs should be encouraged to save more and taking loans for establishing different IGA's

iv) Sensitization of the village community is necessary about the importance of savings since the savings are significantly influencing welfare indicators in the positive direction. The sensitization can be one by various financial and community development experts from government and development practitioners who works with smallholder farmers.

5.3 Way Forward

This research provides the understanding of the way VSLA promote household welfare. Still there is a need of conducting research on the way VSLA can be successful implemented with aim of reducing climate risks of marginalized groups where the household economy is controlled only by male households' members in different ethnic and cultural diversity.

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APPENDICES

APPENDIX 1: QUESTIONNAIRES

TITLE OF STUDY: Informal Savings Schemes (VSLAS) And Household Socio-Economic Status to Smallholder Farmers in Kilolo District

SECTION A: Background Information

Questionnaire number/code.....Interview's date……

Name of Respondent …… Name of Interviewer……..

Age of Respondent……. Village……..

VSLAs member/Non VSLA member …….

SECTION B: Socio-Demographic Characteristics

1. Sex (Tick option) 1. Male 2: Female
2. Age
3. Marital status (Tick option) (i).Married (ii). Divorced (iii). Widowed (iv). Never married (v). Others (Specify)
4. Education level of the respondent
   (a) Do not have the formal education [ ]
   (b) Primary education
   (c) Secondary education
   (d) High school education
   (e) College education
   (f) University

5. Duration of Membership of Village Savings Group

   (a) Less than a year (b) 1 -2 years

   (c) 2 -3 years (d) 3-4 years

   (e) 4-5 years [ ]

6. Saving per month

   (a) 1000 – 10,000 TSHS (b) 10001 -20000 TSHS

   (c) 20001 -30000 TSHS (d) 30001- 4000000TSHS [ ]

   (d) 40001 – 50000 TSHS (e) More than 50000 TSHS

Objective one: Impact of Smallholder Farmers Household Participation in VSLAs on Income

1. **Level of VSLA Impact On Farm Productivity**

Impact	VSLA /Non VSLA participants			
	High	Medium	No	Low
Increased farmers income levels				
Caused availability and access to food processing facilities				
Caused availability and access to farm-labour				
Led increase in farm size				
Enabled most farmers to purchase improved farm inputs				
Led to increase cultivation of different varieties of crops				
Enabled most farmers to save incomes sales from their farms				
Most farmers have now food storage facilities				
Many farmers now afford medical facilities				
Many farmers now sent their children to school				
Most farmers now have improved their dwelling homes				
Most farmers acquired basic record keeping techniques				

2. **Levels of VSLA impact to agricultural production to Kilolo District smallholder farmers**

Impact	Level of impacts				
	VSLA/non-VSLA participants				
	Strong agree	Somehow agree	Neutral	Somehow disagree	Strong dis-
Increased farmers income levels					
Caused availability and access to farm-labour					
Most farmers purchase improved farm inputs					
Encouraged farmers to increase in farm size					
Increased cultivation of different crop varieties					

3. **Effects of VSLA impact on agricultural benefits for Kilolo District smallholder farmers**

Effects	Level of impacts				
	Strong agree	Somehow agree	Neutral	Somehow	Strong
Most farmers save from their farms incomes					
Most farmers now have food storage facilities					
Many farmers now afford medical facilities					
Most farmers children now attend school					
Most farmers now have improved homes					
Farmers acquired basic record keeping techniques					

4. **Effect of VSLAs' Farm Productivity**

Effect of VSLA farm productivity-Impact	Extent of Household food security					
	VSLA participants			Non-VSL participants		
	No extent	Some extent	Great extent	No extent	Some extent	Great extent
Most households eat more than two times per day						
Most households now afford nutritious food						
Food available and accessed to most households						
Some household have enough food stored						
Many households have well processed food						
Most households have preserved durable form of food						

Objective Two: Contribution of the VSLAs to Education Expenditure and Reduction of School Drop-Out Rates

1. On average, how much money you spend on covering education cost of your child? (Uniform, school fees, food).....
2. Number of children enrolment for 5 past years in primary, secondary and college educations

Enrolment	Village name:			
	VSL members		Non VSL members	
	Yes/No	Number	Yes/No	Number
Primary school				
Secondary school				
College/University				
Total				

3. Dropout rates of children enrolled in primary and secondary schools from 2013 to 2017

Dropout (2013-2017)	Village name:			
	VSL members		Non VSL members	
	Do you have child dropped out of school(Yes/No)	Number of child dropped out of school	Do you have child dropped out of school(Yes/No)	Number of child dropped out of school
Primary school				
Secondary school				
College/University				
Total drop-out student				

4. Reasons for school dropout to students in the study area

Reason for students dropping out of the school	Response	
	Yes	No
Lack of school fees in the past before 2016		
Lack of school fees (college students)		
Failing to cover school/college necessity costs		
Pregnancy		
Conflict between parents/guardians		
Early marriage		
Children attained employment opportunity while are in school		
Peer group		
Indiscipline		
Health problems		
Disabilities		
Total		

5. Impact of the VSLA in supporting children education

VSLA fund support	Respondent Response	
	Yes	No
Has supported school fees to primary and secondary education (before school fees being eliminated in schools in 2016)		
Has supported academic fees (college students)		
Has covered school/college necessity costs		
Has supported to cover some health costs to students		
Has supported in covering some school meal costs		
Has covered some transport cost (e.g purchasing bicycle)		

3. Do you think the following has an impact on encouraging or discouraging on the children school dropout?

Contribution factor for children school drop out	Agree	Disagree
Number (many or few) of children within the household		
Participation on VSLA		
Household head having secondary education and above		
No. of household members employed		
Membership of other community group		
Size of land under cultivation		
Saving amount per month		
Age of the parent		
Market distance		
Leadership		

Objective 3: The Impact of VSLAs in Supporting the Development and Diversification of IGAs

1. What is the support you received from VSLA to your IGA's?

VSLA support	Respondent response	
	Agree	Disagree
Provided sufficient credit at low interest rates		
Has coordinated adequate supply of agriculture (fertilizer, seeds, pesticides) and non-agriculture inputs in time		
Has facilitated in developing cooperation among members to resolve the market problems		
Provided sufficient need-based training facilities on IGA's from LGAs and NGOs		
Provided adequate extension services from LGA and NGOs Adequate supply of technologies and information by skilled personnel		

2. A type of IGA's which are implemented by VSLA members (which of the IGA you operate?)

IGA's	Respondent response	
	Yes	No
Retail trade/small shop		
Wholesale		
Market vending		
Manufacturing		
Cash crops farming		
Crafts		
Poultry		
Vegetable cultivation		
Tree farming		
Cattle and goat keeping		
Beekeeping		
Tailoring		
Handcrafting		

3. How much the VSLA facilitated you a VSLA Loans to support to your IGA's on last year (2017)?

VSLA fund support in 2017	Respondent response	
Received loan less than 100,000 TSHS		
Received loan between 100,001 -250,000 TSHS		
Received loan between 250,000 – 500,000 TSHS		
Received loan between 500,001 – 750,000 TSHS		
Received loan between 750,001 – 1,000,000TSHS		
Received loan beyond 1,000,000 TSHS		

4. Who is managing your IGA's?

Management of IGAs	Respondent response	
	Yes	No
Paid employees		
Unpaid family labour		
IGA's owners		

5. Who facilitated the trainings to you on IGA's management?

   a. VSLA program

   b. Other programs/initiatives [ ]

   c. I did not trained at all

6. What is the uses of income you earned from IGA's

Category	Respondent response	
	Agree	Disagree
To cover basic needs costs such as:		
Food		
Medical		
Clothes		
School fees		
Shelter		
Is IGA's income covered all of your necessary basic needs?		
Other needs covered by IGA's income		

7. On your views do you think the following below are the performance determinant' of the IGAs supported by VSLA?

Factor	Agree	Disagree
No. of children the household have		
Participation on VSLA		
Primary education and above		
No. of household members employed		
Membership of other community group		
Size of land under cultivation		
Saving amount per month		
Age of the parent		
Market distance		
Leadership		

APPENDIX 2: CHECKLIST TO KEY INFORMANTS (VSL group leaders, village leaders, Community development officers, ward executive officers, NGO's representatives)

1. What the VSLA is doing in supporting on the farm productivity improvement within the village/District?
2. Do you think the VSLA fund special for loans is supporting the performance of IGA's? How?
3. What do you recommend on how smallholder farmers income or socio-economic status (welfare) in general can be improved?
4. What is the real contribution of the VSLA on supporting children education within the village? Does it bring the difference in comparison to the children from non VSLA membership household?
5. What kind of benefit the VSLA's participants are receiving from the VSLA that they do not get else where else?
6. How does the welfare fund help smallholder farmers during emergencies?
7. What is your recommendation for that VSLA's programs to perform well.