

**THE ROLE OF VILLAGE COMMUNITY BANKS (VICOBA<sub>s</sub>) ON ECONOMIC  
EMPOWERMENT TO WOMEN SMALLHOLDER FARMERS IN KILOSA  
DISTRICT, TANZANIA**

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF THE  
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## **ABSTRACT**

Village Community Banks (VICOBA) have been working in Kilosa District to empower farmers; in particular women farmers since 2015. Some of these VICOBA are those which work under Rice Post-harvest Management (RIPOMA) and Norwegian Church Aid (NCA). Some VICOBA female members benefit from the services provided. Although the services are crucial in increasing incomes of some female members through agricultural production, a few male members disproportionately benefit from the services provided. Despite the fact that, some studies have explored the contribution of VICOBA on women's empowerment, studies that focus on the role of VICOBA to empower women farmers in inputs access, agribusiness training and agricultural technologies are limited. Therefore, the study on which this dissertation is based was done with the main objective to determine the role of VICOBA, specifically Inter-religious VICOBA (IR-VICOBA), on economic empowerment of women farmers in the District. Probability and non-probability sampling methods were used to select villages, respondents and key informants from VICOBA groups that engage in agricultural activities. The sample size was 100 women VICOBA members who are also smallholder farmers. In a primary data collection, a questionnaire-based survey, FGDs and key informant interviews were employed. The quantitative data were analysed using Statistics Package for Social Sciences (SPSS) Statistics Version 20 whereby descriptive analysis was done. Qualitative data was analysed using content analysis. The study revealed that, more than 80 percent of respondents received services (input access, agribusiness training and agricultural technologies) that lead to their economic empowerment from farming business. This study recommends that, agricultural actors and other faith based organisations should be employing VICOBA as platforms to empower women farmers.

**DECLARATION**

I, **ERNEST WILLIAM DYANKA**, do hereby declare to the Senate of Sokoine University of Agriculture that this dissertation is my own original work done within the period of registration and that it has neither been submitted nor being concurrently submitted at any other institution.

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**DEDICATION**

I dedicate this dissertation to my late father Mr. William Kitumo and My mother Ms. Veronica Charles for their enduring love, encouragement and support to me all the time.

## TABLE OF CONTENTS

<b>ABSTRACT.....</b>	<b>ii</b>
<b>DECLARATION.....</b>	<b>iii</b>
<b>COPYRIGHT.....</b>	<b>iv</b>
<b>ACKNOWLEDGMENTS.....</b>	<b>v</b>
<b>DEDICATION.....</b>	<b>vi</b>
<b>TABLE OF CONTENTS.....</b>	<b>vii</b>
<b>LIST OF TABLES.....</b>	<b>xii</b>
<b>LIST OF FIGURES.....</b>	<b>xiii</b>
<b>LIST OF APPENDICES.....</b>	<b>xiv</b>
<b>LIST OF ABBREVIATIONS AND ACRONYMS.....</b>	<b>xv</b>
<b>CHAPTER ONE.....</b>	<b>1</b>
<b>1.0 INTRODUCTION.....</b>	<b>1</b>
1.1 Background to the Problem.....	1
1.2 Problem Statement.....	5
1.3 Justification of the Study.....	6
1.4 Objectives.....	7
1.4.1 Overall objective.....	7
1.4.2 Specific Objectives.....	7
1.5 Research Questions.....	7
1.6 Scope of the Study.....	7
<b>CHAPTER TWO.....</b>	<b>8</b>
<b>2.0 LITERATURE REVIEW.....</b>	<b>8</b>

2.1	Introduction.....	8
2.2	Definitions, Concepts and the Origin of Key Terms.....	8
2.2.1	VICOBAs.....	8
2.2.2	Women economic empowerment.....	10
2.3	Empirical Review.....	11
2.3.1	VICOBA's contribution on women access to agricultural inputs.....	11
2.3.2	Participation of women farmers in decision making.....	13
2.3.3	Contribution of VICOBAs in agricultural technology and productivity.....	14
2.4	Theoretical Framework.....	16
2.4.1	Theory of Microfinance.....	16
2.4.2	Social capital theory.....	18
2.4.3	Women empowerment theory.....	19
2.5	Knowledge Gap.....	20
2.6	Conceptual Framework.....	21
	<b>CHAPTER THREE.....</b>	<b>22</b>
	<b>3.0 RESEARCH METHODOLOGY.....</b>	<b>22</b>
3.1	Description of the Study Area.....	22
3.1.1	Demographic characteristics of study area.....	22
3.1.2	Agro ecological characteristics.....	22
3.1.3	Economic activities.....	22
3.2	Research Design.....	23
3.3	Study Population, Sampling Frame and Sampling Procedures.....	23
3.3.1	Study population and sampling frame.....	23
3.3.2	Sampling procedures and sample size.....	23



3.4	Data Source and Collection Methods.....	24
3.4.1	Secondary data collection.....	24
3.4.2	Primary data collection.....	25
3.5	Data Reliability and Validity.....	25
3.6	Data Processing and Analysis.....	26
3.6.1	Quantitative analysis.....	26
3.6.2	Qualitative analysis.....	26
<b>CHAPTER FOUR.....</b>		<b>27</b>
<b>4.0</b>	<b>RESULTS AND DISCUSSIONS.....</b>	<b>27</b>
4.1	Introduction.....	27
4.2	Socio-demographic Characteristics of the IR-VICOBA Women Farmers.....	27
4.2.1	Age of respondents.....	28
4.2.2	Education level of respondents.....	28
4.2.3	Marital status of the respondents.....	29
4.2.4	Source of income, size of farm and main crop.....	29
4.3	Services Provided by IR-VICOBA to Facilitate Inputs Access.....	31
4.3.1	Provision of credits.....	31
4.3.2	Roles that NGOs play in IR-VICOBA to facilitate input access.....	34
4.3.3	Linking members to the Agro input companies and dealers.....	36
4.3.4	IR-VICOBA's contribution to collective purchase of inputs.....	37
4.3.5	Members attending training from Agro companies.....	38
4.4	Agribusiness Training to the Members for their Decision Making on Agriculture.....	38
4.4.1	Trainings on agri-business.....	39
4.4.2	Benefits of agribusiness training to women farmers.....	40

4.4.3	Impact of training to the agribusiness.....	41
4.4.4	Agribusiness training for collective market and joint purchase to attain economies of scale.....	43
4.4.5	Agribusiness training for value addition of produce.....	44
4.5	Introduction of Farming Technology to IR-VICOBA Women Farmers.....	47
4.5.1	Contribution of IR-VICOBAs on facilitating member’s selection to the suitable agricultural technologies.....	49
4.5.1.1	Training on irrigation farming.....	52
4.5.1.2	Application of information technology to agriculture.....	53
4.5.1.3	Training on improved farming methods.....	54
4.5.2	Adoption of good agronomic techniques.....	55
<b>CHAPTER FIVE.....</b>		<b>59</b>
<b>5.0</b>	<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS.....</b>	<b>59</b>
5.1	Summary of the Study.....	59
5.2	Conclusions.....	59
5.2.1	Contribution of VICOBAs on increasing Women’s Access to Agricultural Inputs.....	59
5.2.2	Contribution of VICOBAs in facilitating Agribusiness Training.....	60
5.2.3	Contribution of VICOBAs in Farming Technology to Women Farmers.....	61
5.3	Recommendations.....	61
5.3.1	VICOBAs and Women’s Access to Agricultural Inputs.....	61
5.3.2	VICOBAs and Agribusiness Training.....	62
5.3.3	VICOBAs and Agricultural Productivity.....	62

**REFERENCES.....64**  
**APPENDICES.....78**

**LIST OF TABLES**

Table 1:	Respondents' background characteristics.....	27
Table 2:	Source of income, size of farm and main crop VICOBA.....	30
Table 3:	VICOBA services for input access.....	31
Table 4:	Contributions of NGOs to input access through IR-VICOBA.....	36
Table 5:	VICOBA trainings and their contributions to the farming outputs.....	39
Table 6:	Respondent perceptions of agribusiness training to women skills.....	46
Table 7:	Number of agricultural trainings that members attended to learn new agricultural technologies introduced in IR-VICOBA.....	48
Table 8:	Farmers' adoption of good agronomic practices introduced.....	56

**LIST OF FIGURES**

Figure 1: Conceptual framework adopted from Yount (2017).....	21
Figure 2: Application of improved inputs before joining VICOBA.....	33
Figure 3: Farmers engaged in collective market and joint purchase of inputs.....	43
Figure 4: Members engaged in value addition after receiving agribusiness training.....	45

**LIST OF APPENDICES**

Appendix 1: Questionnaire for Village Community Bank women farmers.....78

Appendix 2: Check-list for key informant interview.....87

Appendix 3: Checklist for Focus Group Discussion.....88

Appendix 4: Sample Size determination for a Finite Population.....89

Appendix 5: List of Kilosa Inter-Religious VICOBAs.....90

## LIST OF ABBREVIATIONS AND ACRONYMS

ASDP II	Agricultural Sector Development Programme (second phase)
CCT	Christian Council of Tanzania
CDI	Clinton Development Initiative
FGD	Focus Group Discussion
IBM	International Business Machine Corporation
IR-VICOBA	Inter-religious VICOBA
ICT	Information Technology and Communication
IFAD	International Fund for Agricultural Development
IGA	Income Generating Activities
KIRVICA	Kilosa Inter-Religious VICOBA Association
MEDA	Mennonite Economic Development Associates
MFI	Microfinance Institutions
MMD	Mata MasoDumbara
NCA	Norwegian Church Aid
NGOs	Non-Government Organisations
RIPOMA	Rice Post-harvest Management
SEDIT	Social and Economic Development Initiation of Tanzania
SMS	Short Message Systems
SPSS	Statistics Package for Social Sciences
TARI	Tanzania Agricultural Research Institute
UNDP	United Nations Development Programme
UNIFEM	United Nations Fund for Women
URT	United Republic of Tanzania

VEO	Village Executive Officer
VICOBA	Village Community Bank
VSLAs	Village Savings and loans Associations
WEO	Ward Executive Officer
WFP	World Food Programme
URT	United Republic of Tanzania
SAGCOT	Southern Agricultural Growth Corridor of Tanzania



## CHAPTER ONE

### 1.0 INTRODUCTION

#### 1.1 Background to the Problem

Rural women play a vital role in agricultural development. They engage much on food security, horticulture, processing, nutrition, and other allied sectors (Banerjee, 2016). Women's contributions to agriculture in developing countries is almost 43 per cent of the agricultural work force (Sofa and Doss, 2011; World Bank, 2013). Over 90.4 per cent of Tanzanian women are smallholder farmers producing about 70 per cent of the country's food requirements (URT, 2013). Although women contribute at large in the active farming population, their productivity is still less compared to that of men (Okwaro, 2018).

The agricultural sector is underperforming in many countries because women, who are often a crucial resource in agriculture and the rural economy, face constraints that reduce their productivity. Some of the challenges that women face in farming are poor access to production resources including inputs, land and extension services (World Bank, 2013; URT, 2013). ASDP II highlights that gender imbalances need to be addressed at all levels of the institutional framework to ensure that women have access to agricultural resources (URT, 2016).

The empowerment of women farmers demands active participation of various stakeholders in a developing nation (World Bank, 2013; URT, 2013). The ASDP II (URT 2016) argues that women's empowerment is achieved when women acquire the power to act freely, exercise their rights, and fulfil their potential. Access to resources, agency and achievements are key indicators of empowerment while institutions are important actors in enhancing access (Kabeer, 1999; Markel, 2014).

Charlie *et al.* (2007) points out that micro-finance institution is one of the sources from which women farmers may access farm inputs. This is due to reason that they generally have smaller farm plots that can be financed by microfinance. In that, micro-credits from VICOBAAs also are in favour of small holder women farmers.

Mwapamba (2012) found that Kilosa women farmers are lacking access, knowledge and decision making. In order to address this challenge, different actors have been taking measures. Pelleberg (2012) argued that VICOBAAs as among of the institutions aiming to support disadvantaged people must be providing micro-credit loans and coordinating training to empower women.

In Tanzania, VICOBAAs were originally adopted from Niger, in the West Africa. They focused on women access to financial services (savings, credit, micro-insurance). Financial service from VICOBAAs aimed at supporting Income-Generating Activities (IGAs). Mostly, women excluded from the formal sector (Kessy *et al.*, 2017; Magesa *et al.*, 2014). Government of Tanzania in its strategic plan ASDP II pointed out VICOBAAs as first line financial services for small-scale commercial farmers in rural finance access (URT, 2016).

Magesa *et al.* (2014) states that, VICOBA is microfinance institution established by a maximum of 30 people that meet regularly, usually once per week, to save shares and give loans to the members. Among the 30 people there is one chairperson, one secretary and one accountant. VICOBAAs' model is based on savings & credit services together with appropriate IGAs. The loans given by VICOBAAs are affordable to the poor because they do not follow formal procedures and are utilized to support IGA selected based on the market opportunities, appropriate technology and locally available resources.

Southern Agricultural Growth Corridor of Tanzania (SAGCOT) (2019) reported that VICOBAAs in Kilolo and Iringa District Councils, Tanzania, under Clinton Development Initiative (CDI) empowered farmers with an approach known as Community Agribusiness (CAB). To make sure that VICOBAAs benefit disadvantaged people, the program included 66% of women. The empowerment process was based at providing farmers with certified seeds, through in-kind loans, to produce, sell and then use their revenue as a start-up investment into buying inputs, especially seeds.

According to SAGCOT (2019), introduction of agricultural technologies facilitated by CDI in collaboration with Tanzania Agricultural Research Institute (TARI) -Uyole has been conducting on-farm trials for testing new varieties. In order to improve agriculture sector, TARI released new varieties through VICOBAAs to provide Tanzanians with reliable scientific data on the yield performance. Introduction of agricultural technology with new varieties was for commercial production.

Also the study by Madaha (2018) on challenges and opportunities of village community networks within the neoliberal context: a case study of women's networks in Africa exposed that VICOBAAs incorporated technology in business in order to attain high productivity. The author found that rural women who are VICOBA members used mobile phone to coordinate marketing of agricultural products that minimized costs in running business.

Likewise, Haule (2015) study on Contribution of Village Community Banks in household rice production: A case of Morogoro district recommends that District Councils through Agricultural Departments in collaboration with SEDIT should provide full training to

VICOBA groups on how to use modern technology of farming, such as seeds and fertilizers

VICOBA in Tanzania are different in their operations due to their origin. Some were originated by SEDDIT, CARE and WCRP (Magesa *et al.*, 2014). Operations like lending model, IGAs and lifetime are normally different. For instance, some of them are operating sustainably and others do phase out yearly. The focus of the study is on the sustainable Inter Religious-VICOBA (IR-VICOBA) established by NCA which are designed to address women challenges through agriculture.

According to NCA (2018), NCA introduced IR-VICOBA in 2007 as a vehicle for disadvantaged people development. IR-VICOBA is a community based economic empowerment model that addresses economic deficits faced by disadvantaged people including women. In addition to other features of VICOBA, IR-VICOBA are solidarity groups in which poor and marginalized people from various religions and denominations empower themselves economically and socially through organizing, saving and loaning among themselves. IR VICOBA are interreligious and devoted to developing social cohesion and mutual trust among communities where they coexist and in so doing, they stand for peace building and creation of peaceful coexistence of communities.

The NCA report disposed that, it intended to empower women members through agribusinesses. Under Small holder Economic (SHE) project, NCA aimed to assist poor women in farming. The intervention was set to assist women farmers from production stage to value addition.

NCA aimed at reaching many beneficiaries starting at district level to the national level. The NCA report explained that, NCA in collaboration with other faith based organization partners had an idea to form a national umbrella for IR-VICOBAs. This was for expanding services so that it reaches as many beneficiaries as possible.

Kilosa is among the districts in which IR-VICOBAs engage in agricultural activities. The district hosts a number of NGOs that collaborate with VICOBAs in farming activities through projects. For instance, Rice Post-harvest Management (RIPOMA), the project by Helvetas and Smallholder Economic Empowerment (SHE) by NCA. These are just projects implemented by following official procedures in their implementation. As such, this study is looking at the roles of IR-VICOBAs established by NCA to empower women farmers.

## **1.2 Problem Statement**

The role of VICOBAs to support women farmers is contradicting in such that different studies came up with contrasting ideas. For instance, Ollutu (2017) found that VICOBAs help rural women in establishing small businesses, which enable them to increase income. Women farmers have relatively higher chance of accessing loans from VICOBAs compared to other informal credit sources. Loans from VICOBAs have enabled women to own including farms (Chipindula and Mwanga, 2015). According to Mmasa (2017), VICOBAs empower women through improving business skills, improving life standard and increasing access to credits. Similar views are share by Haule (2015) that, VICOBAs improved rice productivity of its members through providing training and soft loans. Haule goes further on recommending that introduction of modern agricultural technologies would add more production among VICOBA members.

Contrary to the above, the opponents have different views about VICOBA on empowerment of farmers. Studies by Ahl'en (2012) and Merrey and Lefore (2018) have arrived at a conclusion that VICOBA do not enable farmers to address some of their pertinent challenges. For instance, VICOBA loans are not useful in agricultural production because the repayment time is too short. That is, farmers do not have time to harvest and to repay the loans in time. Likewise, Kitomari and Abwe (2016) are of opinion that VICOBA are not sustainable in supporting livelihood.

Henceforth, despite the possible capabilities of VICOBA on Women Empowerment, there is lack of similar understanding of the roles played by VICOBA in agricultural production. For that reason, this study aims to further explore the possible roles of VICOBA, in particular IR-VICOBA on empowerment of women farmers beyond the microcredit role that has been adequately explained by some studies.

### **1.3 Justification of the Study**

The National Agricultural Policy of Tanzania states that the government shall strengthen financial institutions including rural banks to make them responsive to agricultural development financial needs (URT, 2013). As such, this study was aimed at exploring the contribution of VICOBA to the economic empowerment of women farmers. The knowledge obtained assists decision makers whether to incorporate agricultural programme in VICOBA and/or other related groups or not. Also, the study generated more information which is useful to the development organisations, both donors and those who implement projects including faith based organisations.

## **1.4 Objectives**

### **1.4.1 Overall objective**

To assess the role of VICOBAAs on economic empowerment of women smallholder farmers.

### **1.4.2 Specific Objectives**

- i. To determine contribution of VICOBAAs to women farmers in accessing improved agricultural inputs.
- ii. To examine the contribution of VICOBAAs in facilitating agribusiness training to women smallholder farmers to enhance their decision making.
- iii. To determine contribution of VICOBAAs in organizing technology adoption for increasing agricultural productivity among women smallholder farmers.

## **1.5 Research Questions**

1. How are VICOBAAs enabling women farmers' access agricultural inputs?
2. How are VICOBAAs used as forum to train women farmers for increasing their decision making?
3. What are the technologies that women farmers learn and adopt from VICOBAAs to increase their agricultural productivity?

## **1.6 Scope of the Study**

The study focuses on the role of IR-VICOBAAs to empower women farmers economically, specifically to inputs access, decision making and technology adoption.

## CHAPTER TWO

### 2.0 LITERATURE REVIEW

#### 2.1 Introduction

Literature review as a foundation, it serves as a basis for knowledge development that creates guidelines for policy and practice. Therefore, it provides evidence of an effect. It can also give rise to new ideas and directions for a particular study if well conducted. As such, it serves as the ground on which future research and theory can be developed. So, literature review identifies actual research gaps to avoid repetition of study in research (Snyder, 2019). APU Writing Centre (2015), points out conclusions, strengths and weakness as major parts of the study to be considered when conducting literature review in order to develop gap that will contribute on the better research.

The chapter focuses on literature review. The chapter has been organized in three sections, section 2.1 presents introduction, section 2.2 comprises of definitions, concepts and origin of the key terminologies. Section 2.3 discusses empirical review of related works. Section 2.4 presents theoretical review of the related literature. Section 2.5 is knowledge gap of the study. Section 2.6 is a conceptual framework.

#### 2.2 Definitions, Concepts and the Origin of Key Terms

##### 2.2.1 VICOBA

VICOBA are groups of maximum 30 people that meet regularly, usually once per week, to save shares and give loans to the members. Among the 30 people there is one chairperson, one secretary and one treasurer. In Tanzania, VICOBA were originally



adopted from Niger, in West Africa, where they were popularly known as “*Mata MasoDubara*” (MMD) (Magesa *et al.*, 2014).

The model was introduced in Tanzania as VICOBAAs by SEDIT, CARE and WCRP in 2002. However, apart from Tanzania, the model is in use in various countries with different names. For instance, in Mozambique VICOBAAs are known as OPHIVELLA, JENGA for Uganda and JOSACA for Zanzibar. Different acronyms were provided by CARE International with modifications suiting local demands (Ngalemwa, 2013). According to Ahl'en (2012), the VICOBAAs concept was introduced in Zanzibar before spreading to other parts of the United Republic of Tanzania. Specifically, it aimed at fostering members' ability to innovate and manage income generating activities. VICOBAAs do employ joint liability lending (JL), whereby the borrower and one or more group members assume liability for one another's debts (Quidt *et al.*, 2018). This lending model provides chances for everyone to qualify accessing loan.

Rutenge (2016) reveals that members of VICOBAAs have been able to create opportunities for entrepreneurship activities. However, Kitomari and Abwe (2016) argued that VICOBAAs are not sustainable sources of livelihood strategies because they fail to empower members to cope with and recover from the hardship. Provision of micro-credit alone without business skills and supervision will not make members improve life standard (Lushakuzi *et al.*, 2017).

This study has focused on IR-VICOBA. An IR-VICOBA is a tailored micro-finance program designed to provide credit to low-income people who need capital to start their own businesses that brings together groups of 30 people. It provides mutual support and encouragement to empower community members to work together to create sustainable development. Apart from microfinance role, VICOBAAs increases the ability to utilize

resources, off-farm employment, accounting and business management skills (Kitenga Community Centre, 2020). NCA introduced IR-VICOBA in 2007 as a vehicle for disadvantaged people development. IR-VICOBA is a community based economic empowerment model that addresses economic deficits faced by disadvantaged people including women. In addition to other features of VICOBA shared earlier (Ahl'en, 2012; Ngalemwa, 2013; Rutenge, 2016; Quidt *et al.*, 2018), IR-VICOBA are solidarity groups in which poor and marginalized people from various religions and denominations empower themselves economically and socially through organizing, saving and loaning among themselves. IR-VICOBA are interreligious and devoted to developing social cohesion and mutual trust among communities where they coexist and in so doing, they stand for peace building and creation of peaceful coexistence of communities (NCA, 2018)

### **2.2.2 Women economic empowerment**

Rural women farmers face many challenges compared to men. According to FAO (2017) women are more likely to be food insecure than men in the world. There are key challenges in accessing essential productive resources, technology, market information and financial assets. The agricultural sector underperforms in developing countries because women do not have equal access to the resources and opportunities that they need for increasing agricultural productivity.

Empowerment is the measure designed to increase capacity to make decisions about one's own life and act on them to achieve a desired outcome, free of violence, retribution, or fear (World Bank, 2017). Women's empowerment is a socio-political concept that involves cognitive, psychological, economic and political dimensions (Logeswari *et al.*, 2016). In

order to operationalize women's economic empowerment, this study adopts the definition of Kabeer (2009), which defines women's economic empowerment as a process of change through which women expand their ability to participate on equal terms with men in bringing about desired changes in the society in which they live. As such, the study employs three aspects of economic empowerment namely access, agency and achievement as mentioned by Kabeer. According to Kabeer (1999), three dimensions were considered in measuring women economic empowerment; namely access to resource, agency (ability to define one's goal and act upon them) and achievements.

Different institutions are grounded to empower women especially those who live under poverty line. Most of these are smallholder farmers, specifically rural women. This study explores information about how VICOBA's functions can empower women farmers to access, agency and achievements as far as agricultural sector is concerned. Yount (2017) is of opinion that, measuring women's empowerment is important in order to provide a regular reminder of its importance to staff and programmes. According to Mosedale (2003) empowerment is a process and not a product. There are fore this study looks on the activities comprised in the process of empowerment through training and increasing access.

## **2.3 Empirical Review**

### **2.3.1 VICOBA's contribution on women access to agricultural inputs.**

Women, especially those living in rural area are among the disadvantaged groups who face challenges in accessing improved inputs. VICOBA groups are among the microfinance which finance disadvantaged people especially women. In finding out solutions to access improved inputs, women famers take loans from VICOBA's and other related microfinance

institutions. For instance, Majenga *et al.* (2014) came out with an argument that women should join VICOBA to access micro-credit and support their businesses easily.

It is important to join forces by joining VICOBAs because the majority of marginalized women do not meet criteria to access loans from formal macro-finance institutions. Besides, the macro-finance institutions charge high interest rates for disbursements. For that reason, women farmers can address challenges pertaining with their income generating activities, particularly buying inputs.

Presence of VICOBAs gives chances to women and other farmers living in rural areas to adopt usage of improved inputs by providing reliable capital. Since VICOBAs are there to support income generating activities they satisfy the need of farmers in rural areas. Nkuba *et al.* (2016) on rice value chain analysis in Tanzania; indicate that about 78% of rice farmers use VICOBA as a source and means of acquisition of farm input. Likewise, Yemis *et al.* (2009) argue that farmer groups facilitate the dissemination of agricultural innovations. As such, women farmers are likely to benefit with better access to farm inputs and credit than they would have been as individuals. This implies that individual farmers can lead to the success on joining forces. So based on the finding by Yemis *et al.* (2009), VICOBAs have the potential to support women farmers in accessing farming resources.

Similar views are shared by Okunade (2007), who found that source of credit and input available to women farmers were from the cooperative societies. The same was acknowledged by Chipindula *et al.* (2015) who had an opinion that VICOBAs increase members' access to inputs. Being in position to make women farmers access inputs VICOBAs is considered as the institution that fits in empowering rural women. Additional arguments are presented by Kensata *et al.* (2015) and Malamsha *et al.* (2016), acknowledging that, women who accessed micro-credits were able to invest in farming.

From the findings of other studies as explained, the presented reviews have assessed mostly the impact of micro-credit to woman livelihood. Contribution of VICOBA in accessing agricultural input was just projected without detailing how it would happen. As such, this study aims to find out how VICOBA can finance and facilitate poor women to the access of agricultural inputs.

### **2.3.2 Participation of women farmers in decision making**

Women's decision-making power, in particular, to business decisions, rights and resources in the household is still down. However, this is not a uniform global trend. Women's decision power differs between regions and countries. For example, Far East countries may differ significantly from western countries. Different factors such as culture, economic status and religion belief can enable or constrain women's decision-making. Women decision making is essential attribute to make women achieve in their business. Therefore, it is important to support and examine women decision. In order to enhance women decision making in farming business different actors should join forces to address an issue. Governmental and non-government organisations have tried to come up with ways to address this. Together with that, women themselves have collectively come up to empower themselves through groups. It can be witnessed from different studies that VICOBA have substantially contributed to women agency since they can now run business without depending on their husbands. For instance, as divulged by Jeckoniah *et al.* (2012), that women who join groups like VICOBA acquire decision making power than those who do not participate in such groups.

Similarly, the views shared by Pelleberg (2012) and Kato and Kratzer (2013) have found that, women joining groups increase their ability to decision-making in business and

household. According to the Pelleberg (2012) “Most of the women showed signs of active agency; they were taking decisions with a clear purpose to affect the well-being of the family”. Also, Chipindula *et al.* (2015) who conducted a research on assessing the role of VICOBAAs in Social Empowerment of Women in Mtwara District, Tanzania and arrived at a conclusion that, women improved confidence and ability to initiate their own plans, set up budgets. Chipindula *et al.* (2015) explain further that, women did implement in the absence of their husbands or male members in the household.

The reviews have highlighted much on contribution of micro-credit to women decision making. The mentioned studies have not divulged on how VICOBAAs have impacted knowledge, particularly on the business to empower women decision making. In order to come up with that, this study aims to highlight, to what extent VICOBAAs trainings can empower women decision making.

### **2.3.3 Contribution of VICOBAAs in agricultural technology and productivity**

VICOBAAs as microfinance have been addressing members with capital problems. Providing capital cannot solve members’ challenges if there are no strategies on how to utilize such capital. Hence, provision of financial capita in VICOBAAs and microfinance trigger members on adopting modern technologies. Different authors have found that women farmers in VICOBAAs are now engaging in agricultural technologies to increase productivity. Financial support make women engage in a range of productive activities including agricultural business (Okunade, 2007; Bwire, 2013). Increase in productivity by women farmers in VICOBAAs is a result of potentials that have been made available to them.

VICOBAs have potentials that other individual women do not possess. Women in groups have increased access to credit, knowledge and use of technology required to improve their production (Hammawa *et al.*, 2016; Jeckoniah, 2017). Due to the presence of potentials and their utilization, VICOBA, with its model as a microfinance and a platform for women group to implement project that, can lead to increase productivity.

According to Ogunlela *et al.* (2009), women farmers in groups contribute significantly to agricultural production as compared to their counterpart, in individual women farmers. Some studies (Awotide *et al.*, 2015; Mananga, 2018) highlight that, accessing to micro-credit improved agricultural productivity of smallholder farmers. The findings in the above literature assume that there is an association between women's empowerment and increase in crop production on researching women empowerment in agriculture.

A study by Sultana and Hasan (2011) on the Impact of Micro-Credit on Economic Empowerment of Rural Women concluded that women involving in microfinance acquired more knowledge about agriculture, nutrition and got loan to utilize in various income generating activities for earning more income.

In particular to the rural areas, microfinance institutions have improved farming technologies. Application of farming machinery and improved inputs are some of technologies adopted with the help of microfinance institution (Girabi, 2013). Similarly, Alam *et al.* (2008) found that, women members of MFI adopted new technology for duck rearing and increased farm outputs as compared to non-members.

Generally speaking, the reviewed studies have not considered agricultural innovations as roles that can be organised by VICOBAs. Therefore, most of studies have highlighted how

women farmers have practised new techniques as a result acquiring loan and not otherwise. Now, this study aims to find out how introduction of agricultural technologies in VICOBAAs can lead to increase farm out of women farmers.

## **2.4 Theoretical Framework**

The study has been informed by a combination of three theories which are microfinance, social capital and women empowerment theories.

### **2.4.1 Theory of Microfinance**

According to Mecha (2017), microfinance refers to the provision of financial services to low income earners and the poor in general to raise their income levels thus promoting their standard of life. Poverty lending approach of theoretical perspective analysis on microfinance mentions VICOBA services that lead to poverty alleviation. The services provided which are independent variables include micro-credit, savings, insurance in any risk to business, training and skills which produce outcomes, the dependent variables comprise income levels, creation of employment opportunities, higher living standard and self-confidence.

According to Mecha (2017), the provision of micro-credit to the poor, more especially to the youth and women in the rural poor is an important for poverty reduction as it supports IGAs. However, the poorest of the poor are not benefiting because the majority of these people are not able to repay their loans making them even loose the little they possess. Hence, members should not consider micro-credit as solution to the poverty.

Hearth (2018), argues that microfinance empowerment on decision making appears in four domains, namely agricultural activities, domestic affairs, business, and social affairs.



Agriculture domain includes selection of crops for cultivation, management of farm/crops, purchase of inputs such as fertilizer and seeds, livestock/poultry management.

Microfinance theory of change is one of the major theories which have informed this study. The theory is adopted to address all unclear contributions of VICOBA to women's empowerment as far as the agricultural activities are concerned. The theory fits to this study since it accommodates all other services provided by MFIs.

Dunford (2012) mentions microfinance theory of change as one of microfinance theories. The theory explains that, a poor person goes to a microfinance provider and takes or saves a loan to start or expand a microenterprise. In return, a microenterprise yields enough net revenue to repay the loan and remains with profit to re-invest. Further, Dunford mentions three key steps that poor person must take to make this theory true. The steps are; take a loan from a microfinance institution (or similar entity), invest the money in a viable business, manage the business to yield major return on the investment.

Microfinance theory of change explains how non-financial services can support a borrower to achieve in the business. Noteworthy, it points out skill development, training, educational activities, marketing assistance, supply of inputs and business development services as important services in microfinance. Moreover, the theory insists that provision of credit alone does not guarantee credit use on scarce resource to attain achievement (Hearth, 2018). But the theory is quite useful in planning, participation, and engaging in business by MFI members. Equally, Hearth (2018) provides important insights on microfinance theory by viewing microfinance as programs with women greater empowering potential. Based on the theory, women are usually marginalized economically

as well as socially, in society. According to Hearth, microfinance services enable women to develop their own income-generating activities.

From microfinance services, women foster internal attitudes (self-reliance, self-confidence and self-worth). The theory is adopted by this study to inform women's self-reliance/agency that may be brought by microfinance from VICOBA's.

#### **2.4.2 Social capital theory**

Andriani (2013) argues that, trust, cooperation, and reciprocity in social capital can have a positive impact on the wealth of the society by reducing transaction costs, facilitating collective actions and lowering opportunistic behavior. Bhandari and Yasunobu (2009) defined social capital as a collective asset in the form of shared norms, trust, networks, social relations, and institution that facilitate cooperation and collective action for mutual benefit.

Woolcock (2001) mentions three main dimensions of Social capital theory: bonding, bridging and linking social capital. Firstly, bonding social capital which indicates strong family ties where social relationships are characterised by trust and reciprocity. Secondly, it is the bridging social capital that consists of network of friends, neighbours and acquaintance. Thirdly, it mentions linking social capital that indicates ties connecting individuals or groups to people and groups in position of different political or financial power. Social capital gives an alternative source of credit to society (Blackwell, 2018). Thus, for all individual who cannot access formal macro finance institutions can now access loan from the social capital.

According to Woolcock (2001), bridging social capital allows different groups to share and exchange information, ideas and innovation and builds consensus among the groups representing diverse interests. Therefore, resources and opportunities which exist in the society can be available to everyone. However, social capital can facilitate industrial strikes that may allow workers to receive improved conditions. Although it may improve innovation but it may also enable collusion, price fixing, or corruption. Likewise, Hassan (2009) views that, a single or multiple members of a network, social capital can be a source of solidarity, information, cooperation, collaboration and influence.

The study adopts this theory as it allows different groups to share and exchange information, ideas and innovation and builds consensus among the groups representing diverse interests. Hence, the theory has informed more about benefits associated with unity developed in VICOBAAs.

### **2.4.3 Women empowerment theory**

Women empowerment theory points out three dimensions; resource access, agency and achievement as indicators of women empowerment (Kabeer, 1999). As such, this study employed women empowerment theory. From the theory, VICOBAAs have potential to facilitate inputs access, empower members' ability to decide in farming business and achieve high productivity. UNDP theory of changes (2017) is arguing that, sustainable human development requires women and girls being able to contribute to their societies on an equal basis with men and boys whereby empowering women reduce gender gaps in education, labour markets, and other areas that have impacts to lower poverty.

In order to empower women, Fabiyi *et al.* (2015), Maalaj (2017) and Diira (2018), argue that actors for empowerment should provide education and vocational training, enterprise

development training, financial empowerment (micro-credit), improved extension services and special agricultural technologies for rural women farmers in order to improve their standard of living and improved economic status. International Centre for Research on Women (2016) recommends a holistic approach, and integrated approach. A holistic approach focuses on the broader systemic with structural factors hindering women progress. The integrated approach embeds gender throughout institution while leveraging the full set of business assets at their disposal should be employed to empower women.

Huis *et al.* (2017) proposed three-Dimensional Model of Women's Empowerment: (1) the micro-level, referring to an individuals' personal beliefs as well as actions, where personal empowerment can be observed (2) the meso-level, referring to beliefs as well as actions in relation to relevant others, where relational empowerment can be observed and (3) the macro-level, referring to outcomes in the broader, societal context where societal empowerment can be observed. Women's economic empowerment theory argues that increase in human choice is a direct outcome of economic development (Alexander and Welzel, 2005). From the theory, making women decide on their matters is to empower them. In this regards, this study aimed to find out how women decision would contribute to the economic empowerment of IR-VIICOBA women members through farming.

Women empowerment theory is adopted due to the reason that, the study focuses on women empowerment. Moreover, empowerment theory comprises of some of the attributes that IR-VICOBA address to women. These attributes include access, trainings and achievement to nutrition.

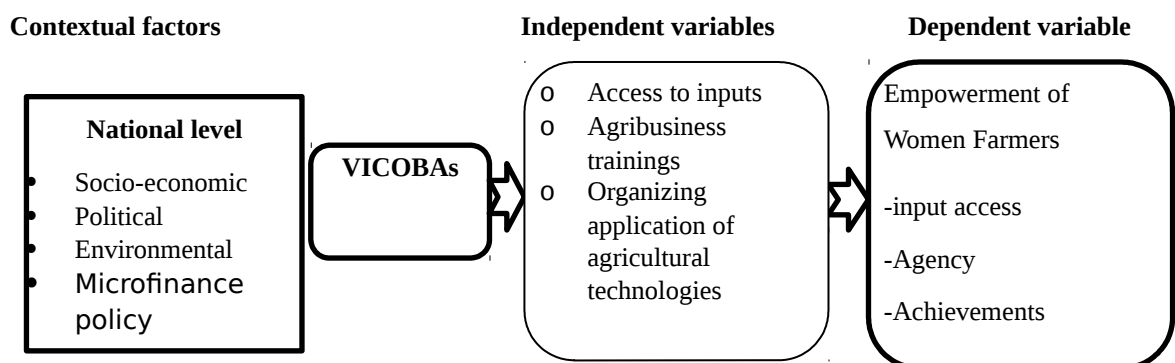
## **2.5 Knowledge Gap**

VICOBA's contributions to women farmers mentioned in the literature have not been adequately detailed as far as women empowerment theory, microfinance theory of change

and social capital theory are concerned. The literature has at large focused on microcredit role. However, VICOBAs are comprised of both financial and non-financial roles. Further, the literature has largely focused on the VICOBA model working in the different contexts apart from Tanzania. For that reason, some potential roles that VICOBAs play on women farmers’ empowerment based on the study context are missing.

**2.6 Conceptual Framework**

As explained in 2.4.1 on the Microfinance theory, skill development leads to agency. Meanwhile, access to soft loans through VICOBAs is perceived as services that lead to the achievements. On the same vein, women empowerment theory points out resources as a pre-condition, agency which is facilitated in process through training and achievements (outcomes) as dimensions for women empowerment. By employing women empowerment theory and microfinance theory, the study looks firstly at access to resources (agricultural inputs); secondly, agency/ control over resources which may come from trainings; and thirdly, achievement in which to this study is measured in the farm productivity brought by application of modern technology. Also, social capital theory was adopted by this study to inform how the unity of members would lead to the sharing of ideas that impacts skills and knowledge of agribusiness.



**Figure 1: Conceptual framework adopted from Yount (2017)**

## CHAPTER THREE

### 3.0 RESEARCH METHODOLOGY

This chapter presents the methodology of the study detailing the study area, research design, study population, sampling frame, sampling techniques, data collection methods, validation of instruments and data analysis techniques.

#### 3.1 Description of the Study Area

##### 3.1.1 Demographic characteristics of study area

This study was conducted in Kilosa District which is one among the six districts forming Morogoro Region. The District covers 12 394 square kilometres. According to 2012 census, the District has a population of 438 175 people (Ishengoma *et al.*, 2016). The District was selected due to presence of IR-VICOBAs' umbrella association that engages in agricultural projects.

##### 3.1.2 Agro ecological characteristics

Kilosa has an average rainfall of 800mm – 1400mm with poorly drained black clay and loamy soils. The soils are suitable for maize, paddy, sisal, sugarcane, and onion cultivation. Usually, short rains start in October and end in December. The long-term rainfall starts in February and ends in May. The annual temperature ranges between 25°C and 30°C (Ishengoma *et al.*, 2016).

##### 3.1.3 Economic activities

Agriculture is the major economic activity and most of the people engage in farming of both food and cash crops. IR-VICOBAs' members engage in food crop cultivations in which maize and horticultural crops are the major crops.

## **3.2 Research Design**

A research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine the research purpose with economy in procedure (Kothari, 2009). The study adopted a cross sectional research design where by the data were collected once. The nature of the study objectives necessitated the use of the design in order to understand situation of women members once in time. Furthermore, the design was favourable due to limited time frame for the research.

## **3.3 Study Population, Sampling Frame and Sampling Procedures**

### **3.3.1 Study population and sampling frame**

The study population considered VICOBA's women farmers in Kilosa district. The sampling frame included women farmers in Dumila, Magole, Mandela and Kitete who were under KIRVICA.

### **3.3.2 Sampling procedures and sample size**

A combination of purposive sampling (non-probability) and simple random sampling (probability) was used to select respondents. Only those women who are VICOBA members belonging to KIRVICA were selected.

Two steps were involved here. The first step involved identification of four villages, mentioned in the previous section. The villages were purposely selected as explained earlier. The main criterion for the selection was presence of active IR-VICOBA's in the villages. The selection of the villages was done in collaboration with KIRVICA leaders. The second step involved random selection of 25 women IR-VICOBA's members from each village. The same procedure was repeated in the four villages to make a total of 100.

Purposively, the qualitative and secondary data were gathered first before administering of the questionnaires in order to refine the questionnaire. Nine (9) key informants were selected purposively; one officer from organization that supports IR-VICOBAs, one district agricultural officer, three IR-VICOBAs umbrella leaders, and four extension officers from selected villages. Key informants were selected to give in depth information due to the reason that they are ones who monitor activities implemented by VICOBAs.

Lastly, pretesting exercise was done in Madudu village before administering the questionnaires to the respondents. Referring from (Appendix 4), sample size from sampling formula provided by Krejcie and Morgan (1970) indicates that, out of 140 potential respondents, sample size of 103 respondents can be drawn. Members of IR-VICOBAs are engaging in the different IGAs, only those who registered as farmers were selected. Therefore, 100 respondents from 138 women farmers who were active members and registered as farmers were selected.

### **3.4 Data Source and Collection Methods**

The study included both primary and secondary data. Quantitative and qualitative data were collected for analysis.

#### **3.4.1 Secondary data collection**

Secondary data including unpublished sources were obtained at KIRVICA office in Kilosa. The documents included District Official Reports and Annual Reports from IR-VICOBAs' umbrella (KIRVICA). The information was useful in establishing the background of the study. Information obtained from secondary sources assisted in filling in gaps related to understanding the IR-VICOBAs contribution to empower women farmers.



### **3.4.2 Primary data collection**

Primary data are actual raw data that are collected by the researcher from subjects, objects or other units of measurement (Mugenda and Mugenda, 2003). In line with the study objectives of study, questionnaire, FGD, Key Informant Interviews, and direct observation were used to collect primary data. Key informant interviews were also held with people who were considered to have in depth understanding and knowledge on VICOBA and Agriculture. The key informants were officer from organization that support VICOBA, district agricultural officer, IR-VICOBA umbrella leaders and extension officers from selected villages. Focus group discussion (FGD) from each of four villages was held to collect opinions of members. FGDs included 8 to 10 IR-VICOBA members who were involved in crop cultivation and poultry keeping.

### **3.5 Data Reliability and Validity**

Validity is the extent to which a concept is accurately measured in a study. On the other hand, reliability is the accuracy of an instrument or in other words, the extent to which a research instrument consistently gives the same results when used in the similar situation or on repeated occasion(Heale and Twycross, 2015; Sileyew, 2019).

In order to ensure validity of the data, research design and data collection methods have been developed in line with the study objectives as well as research questions. Therefore, data collection methods to this study have been designed to collect information that respond to study objectives, and research questions. Furthermore, variables were formulated in line with theory that guides the study. Finally, instrument was developed under close guidance of the supervisor in order to ensure validity. Reliability was ensured

through administering questionnaire to the non-participating village of the study, and being modified with the necessary changes to avoid inconsistencies.

### **3.6 Data Processing and Analysis**

#### **3.6.1 Quantitative analysis**

Quantitative primary data were coded and entered into IBM SPSS Statistics Version 20 Software. This was done after cleaning and compiling data. Results were analysed descriptively whereby summary statistics including frequency, percentage distribution and means were obtained.

#### **3.6.2 Qualitative analysis**

Qualitative data were analysed using content analysis. Content analysis is a technique widely used in qualitative research to understand and interpret the content and internal features of a written text (Mugenda and Mugenda, 2012). Referring the procedures from the SAGE handbook of qualitative data analysis by Flick (2014), firstly, collected data were translated from Swahili to English. Secondly, data were transcribed so that to read and re-read to come up with data possessing value and become familiar to them. Then, data were classified per study objectives whereby similar findings were grouped together to analyse their interrelatedness before interpretation and discussion. With content analysis, words, meanings, pictures, symbols, themes and any other message that were communicated during the study were analysed.



## CHAPTER FOUR

### 4.0 RESULTS AND DISCUSSIONS

#### 4.1 Introduction

This chapter presents the results and discussions of the findings of the study based on the research questions and objectives of the study. Outputs from data analysis is summarized and presented in tables and pie charts. The analysis made is based on primary and secondary data gathered from the field.

#### 4.2 Socio-demographic Characteristics of the IR-VICOBA Women Farmers

The section includes the discussions on age, level of education, marital status and as presented in the (Table 1) and main occupation as presented in (Table 2). Background characteristics of the respondents was important to find out how age, education levels and marital would affect their participation in IR-VICOBA's.

**Table 1: Respondents' background characteristics (n=100)**

Attributes	Category	Frequency	Percent
Age	18-25	3	3
	26-35	26	26
	36-45	47	47
	46-60	21	21
	Above 60	3	3
Marital Status	Single	25	25
	Married	60	60
	Widow	12	12
	Separated	3	3
Education Level	None	6	6
	Adult	6	6
	Primary	64	64
	Secondary	23	23
	Tertiary	1	1

#### **4.2.1 Age of respondents**

As observed in results (Table 1), it indicates that 47% of respondents were aged between 36-45 years, 26% were aged between 26-35 years, 21% were aged between 46-60 years, 3% were aged between 18-25 and 3% were above 60. The results show that majority of the respondents were aged between 36-46 years. These age group members have joined IR-VICOBAs because they are the ones who engage in business. Ngalemwa (2013) found that most of the VICOBA members were born between 1971 and 1975 with the average age of 39 years. Manoti (2017) also found that women with the age group with 31 years and above were very active in VICOBA activities. This discloses that, majority of the IR-VICOBA members are ranging from 36-45 years. One explanation for the finding is that women in the mentioned age group may have more social responsibilities that prompt them to seek additional sources of income.

#### **4.2.2 Education level of respondents**

The results in Table 1 show that 64% of respondents had completed primary school education, 23% of the respondents had completed secondary school education, 6% adult education, 6% did not acquire any education 1% achieved tertiary education. The implication of the results is that most of the IR-VICOBA members have completed primary school education.

Similarly, Madaha (2017) also found that about 97percent of the respondents in the women network attended primary school education. The findings of the study highlight that, members of IR-VICOBA groups are those with primary and little for secondary education while those who attended tertiary education are very little. Number of reasons may cause this scenario including the reason that, most of the members are doing small business of which are not the interest of the highly educated people.

### **4.2.3 Marital status of the respondents**

The results (Table 1) show that (60%) respondents were married and living with their husbands in the same house, (12%) were widowed, (3%), were separated and 25% were single. These results indicate that majority of respondents interviewed were married.

According to Mphande (2016) marital status has positive implication on social organization and economic activities such as agriculture and resource management. Further, married couples are likely to be more productive in farming than singles due to labour supply in farm activities and access to productive resources. The findings are also close to that of Lucas and Akarro (2016) who found that, 70% of VICOBA members in Ilala, Tanzania were married.

The results imply that Married couples are settled and more committed to various development activities like joining economic activities. This is associated with the roles that they play in their families. This is probably one of the reasons that forced them to join the VICOBA in order to increase their income.

### **4.2.4 Source of income, size of farm and main crop**

As far as the study is concerned, respondents' occupation is important to know. Despite the farming business, VICOBA members may have other main source of income. To this study, only VICOBA's contribution to farmers may be captured. However, VICOBA could also support other businesses that need credit, groups of people as platform and trainings.

**Table 2: Source of income, size of farm and main crop(n=100)**

	<b>Category</b>	<b>Frequency</b>	<b>Percent</b>
Main Source of income	Farming	84	84
	Local arts	7	7
	Other	2	2
	Business	7	7
Farm size	Less than acre	5	5
	One acre	30	30
	2-5 acres	60	60
	6-10 acres	5	5
Crop	Cereals	67	67
	Vegetable	1	1
	Both vegetable and cereals	32	32

The main source of income for majority of VICOBA women members in the area of study is farming (Table 2). It therefore indicates that, rural VICOBA are comprised at large of members who are smallholder farmers.

Looking at Table 2, it reveals that 82% of respondents were farmers, 7% working on local arts, 2 % other and 7 doing businesses. By and large, the findings are somewhat similar to those of Rutenge (2016), which indicate that the occupation of the most VICOBA members were as follows, (71%) were farmers, other small business (13%), civil servants is (5%), transportation and labourers (5%) 6% doing other income generating activities. These results disclose that, VICOBA groups normally are group of people who have almost the same interest. VICOBA in the village areas are likely to compose members who are farmers.

However, if the potentials of the particular villages are not including farming, members would be performing activities that are relevant to the potentials of the particular villages. Moreover, the findings divulged that IR-VICOBA women members are those who own small businesses, in agriculture, they are the smallholder farmers with at least 2 acres and

at most 5 acres. These findings are in agreement with the findings by Sultan and Hasan (2010) pointing out that majority of women in VICOBA are smallholder farmers and owning 0.5 acres to 2.5 acres of land. By and large, IR-VICOBA women are farming cereal crops like maize with few farmers engaging in both crops; cereals and vegetables as presented in Table 2.

### 4.3 Services Provided by IR-VICOBAs to Facilitate Inputs Access

**Table 3: IR-VICOBA services for input access (n=100)**

	Attribute	Frequency	Percent
Members received loans from IR-VICOBAs	No	13	13
	Yes	87	87
Members received input services from NGOs	No	16	16
	Yes	84	84
Members connected to agro companies	No	17	17
	Yes	83	83
Members received inputs through collective purchase in VICOBAs	No	13	13
	Yes	87	87
Members attended training for agri-companies	No	20	20
	Yes	80	80

#### 4.3.1 Provision of credits

Table 3 revealed that, 87% respondents received loans from IR-VICOBAs at least once per year and 13% did not receive loans due to different reasons which include but not limited to: failing to meet the criteria to take loans, reliance on the capital from other sources of income as discussed in FGDs.

Likewise, the study conducted by Mmasa (2017), showed that 62% of the women farmers had access to VICOBAs due to the reason that smallholder women are low income earners who have no ability to take loans from Macro-finance Institutions that charge relatively higher interest rates and employ complicated procedures as compared to those of VICOBAs.



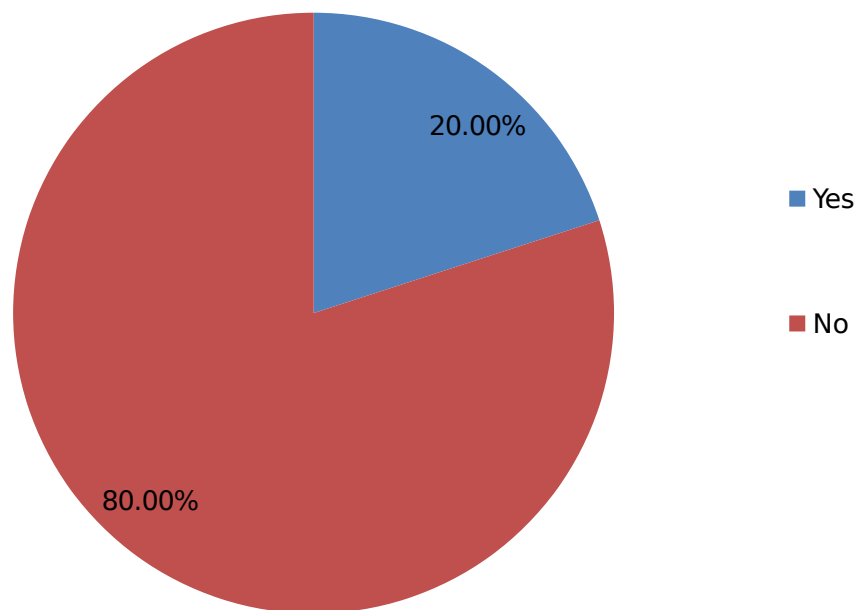
Also, in line with these findings, Haule (2015) highlights that, loans from VICOBA helped 60% women members to engage in agriculture. Loans from VICOBA help members to buy agricultural inputs for improving their farming business. In a view of that, VICOBA spent 67% of its capital to invest in agriculture. Also Salum (2017) found that VICOBA members could be more able to afford buying agricultural input than those who are not members. This implies that VICOBA are in position to support the application of improved inputs.

*“.....loans from VICOBA contribute a lot in purchasing inputs. VICOBA sometimes guarantee farmers who take loans from organization and companies. Some of VICOBA groups like Ebenezer in Dumila, Amain group in Madela vilaage are receiving agricultural inputs on loan for their farms. They have received drip lines from NCA and they pay back slowly without any interest”(KIRVICA chairperson, Dumila village, 05/03/2020).*

Availability of credit from VICOBA helps women farmers to access improved agricultural input. For instance, there was a consensus across all FGDs that credits from IR-VICOBA enable members to purchase inputs timely because they have money in their pockets and they do not need to wait from their husbands. Before joining IR-VICOBA, many of them were facing difficult in buying inputs because they need to ask capital from their husbands. Similar findings are shared by Madaha (2018). Unlike previous research, this the findings highlight that the available credit let them free to buy inputs once they need to do so. Hence, the number of women farmers applying improved agricultural inputs has increased (Fig. 2).

In addition to the statement above, women farmers came with an argument that, increase of the productivity that sustained VICOBA is contributed by the use of improved

agricultural inputs. Certainly, VICOBA's credits have been hope to the women in rural areas who are not in the formal sectors and without reliable source of income. Contribution of VICOBA's to women farmers in purchasing improved inputs is making women get empowered.



**Figure 2: Application of improved inputs before joining VICOBA's**

**Source: Survey Data (2020)**

Noteworthy, the findings indicate that microcredit from VICOBA's have given women freedom to invest in farming. Subsequently, they have power to decide where to locate their capital because the finance is not coming from the household, which may need to be discussed before its allocation. The findings in Table 3 show that majority of VICOBA members invested by purchasing improved inputs for farming business and very few on other businesses.

In supporting this study, the same was shared by other findings for instance, the study by Lushakuzi *et al.* (2017) found that, the credit from VICOBA had so lower interest that members can afford to take loans and pay back compared to other financial institutions. In sum, women are oftentimes pulled to VICOBA's because the organizations offer credits

without complicated procedures and give platform for them to access knowledge for managing income generating activities that can solve their local problems and needs.

Referring to the reasons for raise of VICOBAAs that, they play a role to assist disadvantaged people like women to business. As per this study, it holds true with the concept that women are supported with credit and business knowledge. So, the business knowledge, specifically agri-business to this study makes women buy improved agricultural inputs on receiving loan.

#### **4.3.2 Roles that NGOs play in IR-VICOBAAs to facilitate input access**

IR-VICOBAAs do play instrumental roles in facilitating input access to members. The results of the study (see Table 3) highlight that, 84 percent of the women farmers in VICOBAAs had an intervention for agricultural inputs from Non-Government Organizations and 16 percent did not intervene in any of the agricultural programmes offered. According the key informant interview with KIRVICA leaders, it pointed out NCA, MEDA, CCT and Anglican Church of Morogoro as organizations that collaborated with VICOBAAs to empower farmer to inputs access.

The findings are in line with a thesis by Yount (2017) who points out that in the framework for measuring women empowerment at multiple levels, participation in organizations is one way to the women empowerment. In order to establish a good link between farmers and agricultural companies there must be an initiator of the process that balances the two sides. NGOs based institutions are the most working in between without interest. Institutions are agents that support women access to their needs (Kabeer, 1999).

In line with these findings also the similar results were reported by Milonge (2014) who found that 86% of VICOBA women members had an access to NGOs. Moreover, Muganda (2016) found that an Enterprise and Rural Development - Community Initiatives (EARD-CI) based in Tengeru, a village outside of Arusha, improved the lives of VICOBA's women through access to affordable credit and training on sustainable agriculture.

In supporting the study findings, a general consensus across all FGDs is that IR-VICOBA's and NGOs partnership have made availability of agricultural inputs easy. Some of these inputs are drip irrigation systems, improved seeds and fertilizers. These inputs were accessed at low costs due to bulk purchase. Moreover, the organization has been supporting poultry project whereby modern and well-designed cages, incubators, chicks and feeds have been delivered to the IR-VICOBA's at an affordable loan.

Referring the role performed by NGOs, being working with disadvantaged people like women they normally find out existing groups that are including these special needs.

*“.....NGOs and other actors are normally interested to partner with groups that have majority of women members. Women's participation to VICOBA's can lead to their individual and collective empowerment. Due to the presence of unity, collective purchasing of agricultural inputs to minimize cost of production is now possible”*(NCA project officer interviewed in Dumila village on 05/03/2020).

**Table 4: Contributions of NGOs to input access through IR-VICOBA (n = 100)**

Activity	Never (1)	Rarely (2)	Frequently (3)	Very Frequently (4)	Score	Mean	Rank
	Freq(%)	Freq(%)	Freq(%)	Freq(%)			
Organizing improved inputs purchase	5(5%)	8(8%)	41(41%)	46(46%)	323	3.23	1
To negotiate inputs price	8(8%)	11(11%)	50(50%)	31(31%)	296	2.96	2
Trainings on inputs	7(7%)	16(16%)	47(47%)	30(30%)	293	2.93	3
Seedlings provision	12(7%)	17(7%)	26(26%)	45(45%)	292	2.92	4

Unlike past research, the findings of this study indicate that VICOBA in collaborations with other institutions have the potential to bear contributions that strengthens farmers' performance. Specifically, NGOs have enabled members in IR-VICOBA to develop entrepreneurial mind-set to utilize credits and other resource from IR-VICOBA. As per the results of this study (Table 4), NGOs have facilitated a link between agro dealers and farmers as well as training that comes to change women mindset. According to Haule (2015), women farmers may invest in agricultures as men if they receive credit from MFI". To this study, organizations have played a great role to women access of the agricultural inputs in VICOBA as presented in the Table 4.

#### 4.3.3 Linking members to the Agro input companies and dealers

IR-VICOBA's women farmers have been linked to the Agro companies in order for them to access improved inputs at lower price. Table 3 shows that 83 % respondents were linked to the agro companies against 17%. Some of women farmers were not linked by Agro

companies since they have recently joined IR-VICOBA and have not participated to farming activities (as explained by one of the key informants).

*“...VICOBA women members were enrolled by an application for data collection known as insyt app from e-soko organization. Members enrolled to this application, are receiving messages to remind them buying inputs when it is farming season. Message explains seed varieties that suit to our area. Also together with some other information contacts for the agro dealers are given in the message in order to link farmers and agro companies for sustainable service”*

(KIRVICA secretary interviewed in Dumila village on 05/03/2020).

#### **4.3.4 IR-VICOBA's contribution to collective purchase of inputs**

As explained in the concept of joint activities, it gives evidence that there is decrease of production cost if there is collective purchase of inputs. As per the results from the Table 3, 87 % of women farmers have engaged in collective purchase contrary to 13% who have not been in such purchase. In one FGD it was agreed that collective purchase has reduced the production cost at large. In explaining importance of VICOBA's the FGD came in conclusion that they should continue buying agricultural inputs from VICOBA's and not otherwise. Through field observation, it was noticed that VICOBA women farmers had a collective purchase of agricultural inputs in bulk.

*“.....Today, these members you see now are waiting hand planters which are brought to farmers at any time today. Their price is cheaper in VICOBA's because they have got discount”* (KIRVICA secretary interviewed in Dumila village on 05/03/2020).

#### **4.3.5 Members attending training from Agro companies**

In supporting access of agricultural inputs to VICOBAs' women, leaders of IR-VICOBAs' umbrella were preparing trainings for agricultural inputs from agro-companies. Members of IR-VICOBAs seem to utilize this opportunity in order to easily access improved agricultural inputs. Findings in Table 3 disclosed that 80% of women farmers had trainings on inputs accessibility by agro-companies against 20% women members without. The results highlight that IR-VICOBAs are potential on facilitating access to agricultural inputs as they link members to the agro companies that create more awareness on agricultural inputs and stated in the microfinance theory.

#### **4.4 Agribusiness Training to the Members for their Decision Making on Agriculture**

Agribusiness training provision by IR-VICOBAs to the women farmers is one of the parameters that a researcher has measured to find out women empowerment in decision making. Agribusiness Training to IR-VICOBA has enabled members to make informed decisions with regard to agricultural production. United Nations Capital Development Fund (2002) argue that business training in the microfinance institution benefit poor women entrepreneurs when the training is carefully designed to complement their existing skills and address their most pressing need. The theory on women economic empowerment by Kabeer (1999) mentions agency as one of the dimensions that can measure women economic empowerment. Moreover, Alkire (2007) defines agency as the ability to act on behalf of what one values and has reason to value.

**Table 5: VICOBA trainings and their contributions to the farming outputs (n=100)**

<b>Activities</b>	<b>Attribute</b>	<b>Frequency</b>	<b>Percent</b>
Farmers accessed agri-business trainings	No	10	10
	Yes	90	90
Contribution of agribusiness training to farmers who accessed trainings on resource control.	No	3	3.3
	Yes	87	96.7
Impact of training to the productivity	Decreased	0	0
	Maintained	5	94.4
	Increased	85	5.6

#### **4.4.1 Trainings on agri-business**

The researcher was interested to find out contribution of IR-VICOBA on delivering trainings to women members in order to strengthen their agency i.e the capacity to make decision on their own. Considering (Table 5), 90% of the respondents received training on the agri-business and 10% did not attend any training. Credits from IR-VICOBA always go with training as majority of VICOBA does.

In supporting these results, similarly Madaha (2017) found that 100% of women in VICOBA networks received entrepreneurial training. Women farmers in IR-VICOBA are expanding their knowledge on agricultural investment as they were trained on agribusiness. Different institutions that aim to introduce new knowledge or any training are now collaborating with groups. Some of the existing groups are VICOBA which are built under well organised structure with a discipline.

*“...IR-VICOBA normally have been good platforms for delivering agribusiness trainings because within the group there is a discipline to follow trainings. Also, I have been working with other VICOBA like those supported by Helvators in RIPOMA project for maize and rice production” (Kilosa district extension officer, Kilosa District, 03/03/2020).*



As disclosed by one FGD that, farmers cannot manage to control capital coming from credits without appropriate training. The members agreed that trainings from IR-VICOBAs on agribusiness were as compulsory as credit.

In sum, decision making is product that comes following exposure and trainings provided with the aim to eliminate disempowerment. In line with the results of other scholars came with almost similar findings. For instance, Salum (2017) and Masawe (2014) disclosed that VICOBAs provided training to women to increase management and planning capacity. Unlike past studies, the findings of the study disclosed that IR-VICOBA trainings have given them power to run business by themselves.

#### **4.4.2 Benefits of agribusiness training to women farmers**

Table 5 shows that 96.7% have benefited directly from agribusiness trainings provided while 3.3% claimed that they did not benefit from trainings. These farmers are just appreciating on the knowledge provided. For instance, FGD held in one of villages mentioned value addition, selection of crop and cost benefit analysis as some of the agribusiness trainings. It was argued that before joining VICOBAs some farmers were jobless because they had no capital and motivation for investment.

Certainly, any investment needs capital and business knowledge. Based on the results IR-VICOBAs contribute at large in making women farmers agency. As stated in the FGDs, through IR-VICOBAs women have increased confidence especially those who were not involving in any business before.

*“.....Training on agribusiness from IR-VICOBAs has been a change agent to the women mindset. Women who did not do any business before joining IR-VICOBAs are now engaging in a variety of income generating activities after receiving*

*trainings, including but not limited to farming business” (Village extension officer, Kitete village, 04/03/2020).*

Likewise, the same results are shared by Jeckoniah *et al.* (2012) who mentions VICOBAAs as development programmes that strengthened women in the onion value chain development initiatives after undergoing series of agribusiness trainings. As explained, productivity of farmers increased compared to the productivity before farmers attended training. So this implies that VICOBAAs provide both credit and training to empower members.

Similarly, Mmasa (2017) on studying determinants of Smallholder Women Farmers Access to Informal Credit in Tanzania – A Case of Singida and Chamwino Districts showed that farming experience and gross monthly income exerted positive following extension services. This implies that, agribusiness trainings to farmers receiving credits are of paramount important to make women farmers empowered.

#### **4.4.3 Impact of training to the agribusiness**

One of the contributions that women farmers benefit was increased agricultural productivity. Being empowered with skills, women farmers disclosed that they have gained confidence to invest and obtained high production compared to what they have been harvesting. From the results above (Table 5), 94.4 per cent of respondents increased their productivity and 5.6 per cent did not find any change.

*“.....Women Farmers of different faiths, together, collaborate by sharing ideas, in this platform in order to empower their agency to income generating activities decision. Also training contributes to give them confidence to decide on the*

*matters relating their economic activities”*(NCA project officer, Dumila village, 05/03/2020).

Results found by Josephat (2017) and Sharma (2017) indicate that, women who are involved in VICOBA services contribute and control the family income, loan received, and household asset and had an ability to run income generating activities on their own

*“...Women farmers in IR-VICOBA have increased their level of making decision. Women farmers are fast to adopt and implement the skills that we impart to them compared to those who are not members of IR-VICOBA. Most of women farmers in IR-VICOBA have expanded their farming business and now, they are ordering drip lines for installing drip irrigation system”* (Village extension officer, Kitete village, 04/03/2020).

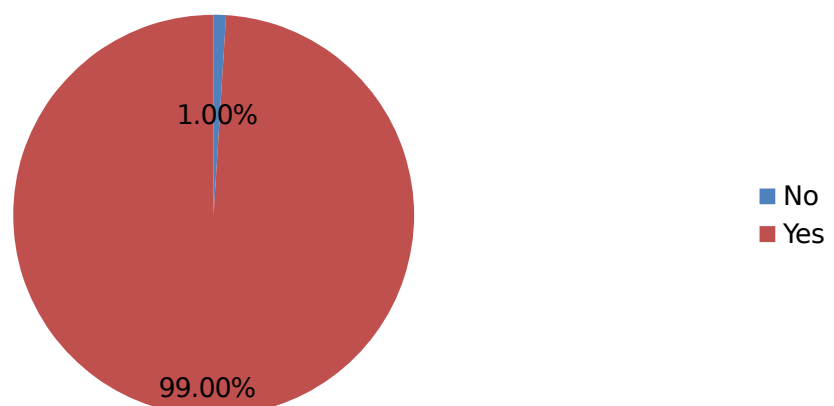
Obtained results are in line with other scholarly findings, for instance, a study by Ollotu (2017), found that the presence of VICOBA in Dodoma district, Tanzania helped women to own and run small business. Also, Mananga (2018) argue that VICOBA increase farming skills and decision on the family spending. Similar results were shared by Gomera (2020) who found that through VIKOBAs members who did not engage in any business were empowered through training and started sell vegetables, fruits, and cooking needs after they joined VICOBA. The unique findings of this study are that IR-VICOBA, unlike other strands of VICOBA, have potential to empower women agency. This gives an implication that women need knowledge on controlling resources in order to establish a business. And as per this study, IR-VICOBA stand to be an institution contributing in agribusiness training. So, opportunities are there everywhere but there is still insufficient knowledge on controlling. It just needs effort to form IR-VICOBA groups and the likes so that to address similar challenges facing women farmers.

#### 4.4.4 Agribusiness training for collective market and joint purchase to attain economies of scale

Agricultural Marketing Systems Development Programme in Tanzania (2011) points out microfinance institutions as agents that can contribute women farmers to market access. On highlighting the importance of groups, Women Collection Actions (2013) mentions different groups, including VICOBAAs that contributes to farmers' empowerment by accessing market.

Findings presented in (Figure 3) reveal that the majority of members (99%) compared to minority have disclosed that IR-VICOBAAs increase the bargaining power of members through farming similar crops and selling produce in a collective market. To act collectively is to expand business ground for members. And this is brought up when members are strengthened with agency to make decision on their resource.

These results are supported by other studies, for instance Mmasa (2017) and Sharma (2017) are clarifying that women farmers in any microfinance institution like VICOBAAs spend their financial resources on farming to enhance collective production and market.



**Figure 3: Farmers engaged in collective market and joint purchase of inputs**

Likewise, Madaha (2017) found that collective market for women networks had substantial return due to the fact that on one hand, joint marketing increased economies of

scale by reducing marketing costs, and improving chances of penetrating into new markets, while reducing transaction costs and increasing negotiating power of women farmers. The uniqueness of IR-VICOBA is further highlighted by the findings from FGDs. The findings indicate IR-VICOBA form clusters of crops. Each cluster group owns its farm. When it is time to sell, they looked for the buyer all together as IR-VICOBA farmers and sell the produce to the buyer in line with a price set by the group. In 2017, they earned more than 150 million from International Tanfeeds Ltd and WFP who paid to the IR-VICOBA umbrella account for maize purchase.

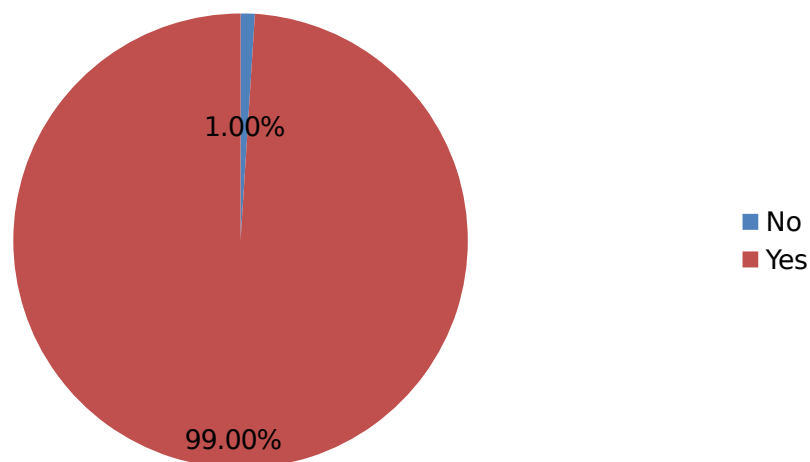
In sum, the ability of farmers to set prices is of paramount importance to break even in the business. Here, they, as members of IR-VICOBA and entrepreneurs, who receive both credits and agribusiness trainings, are expected to perform better in business than before they joined IR-VICOBA. So, they increase bargaining power that is not limited by presence of middlemen, they maintain the freedom to set prices for their produce and sell whenever they want if the market meets the price. The same results were shared by Madaha (2018) who disclosed that setting price was among the advantages provided by VICOBA to the women members. This is considered as a key advantage of IR-VICOBA to market economic reforms. Social capital theory also reveals that unity or collective actions always brings about development of the society.

#### **4.4.5 Agribusiness training for value addition of produce**

The findings disclose that, IR-VICOBA have played role in value addition. From the results (Figure 4), it shows that 99% are engaging in value addition and 1% is not involving in any. One FGD mentioned the packaging of honey, chicken meet roasting, for those who participate in poultry project as value addition as some of their Agri-business.

Through discussion it was disclosed that IR-VICOBAs organised members to attend exhibition where they learnt how to add value for their produce. Skills and knowledge on adding value normally increased their capacity to make decision.

The findings were also highlighted by other studies, for instance the study conducted by Lori (2017), on improving business development group of women through cashew nuts value addition indicate that VICOBAs have key contribution to organise processing. Further, VICOBAs performance was due to the fact that most of members received trainings on value additions. So the training provided significantly increased performance to value addition of cashew.



**Figure 4: Members engaged in value addition after receiving agribusiness training**

One FDG disclosed that, the majority of IR-VICOBA members received trainings on cost-benefit analysis, price setting of the produce and record keeping. These results are in line with Madaha (2017), disclosing that, women in the network have freedom to set prices for their crops and sell them whenever they want.

#### 4.4.6 Contributions of agribusiness training to women farmers' agency

**Table 6: Respondent perceptions of agribusiness training to women skills (n = 100)**

<b>Variables</b>	<b>Attribute</b>	<b>Frequency</b>	<b>Percent</b>
Decision making	No	0	0
	Yes	100	100
Farmers' clusters/ joint activities	No	1	1
	Yes	99	99
Collective market	No	1	1
	Yes	99	99
Cost benefit analysis	No	1	1
	Yes	99	99
Price setting	No	0	0
	Yes	100	100
Value addition	No	1	1
	Yes	99	100

Referring to the findings in Table 6, agribusiness training contributed to farmer's agency. To this study, farmer's agency is nothing than controlling resources. For instance, 100% of women farmers declared that through VICOBA, it is possible to develop agency that gives power on decision making. Further, women farmers revealed that clusters can be facilitated by agribusiness, as disclosed in the results (Table 6) that 100% responded positively on agribusiness contribution to the agency. In explaining more on cluster formation, FGDs divulged that they did not experience cluster formation before receiving trainings from VICOBA. Collective market was perceived positively by 99% against one percent. Collective market goes together with clusters in such that clusters sometimes act as platform where farmers market collectively.

As indicated in the results (Table 6), 100% of women farmers agree that VICOBA trainings help them in setting price of products. In addition to that, 99% of farmers

exposed that cost benefit analysis is one of the benefits coming from agribusiness. FGD held in one of the villages reached to the conclusion that farmers were just farming for business as usual and not for profit until they acquired business knowledge. So agribusiness training made majority of them doing farming as a business.

By and large, agribusiness assisted women farmers on value addition. As explained in 4.4.3 and Figure 3 also general view of responded show that Agri-business has potential contribution to value addition. Value addition expands farmers' knowledge for investment as far as agriculture is concerned. Therefore, women farmers develop their agency when they have wide knowledge on agriculture from production to value addition.

#### **4.5 Introduction of Farming Technology to IR-VICOBA Women Farmers**

IR-VICOBA's umbrella in Kilosa has been receiving a number of agricultural technologies from its partner NGOs and companies. This research aimed to find out to what extent IR-VICOBA has engaged in the pre-harvest modern techniques to increase productivity of its members as well as to the post-harvest techniques to reduce post-harvest loss.

In order to quantify trainings provided and attendance respondent had to assign (1), if she has not attended any training on the techniques provided (2) at least, attended once, (3) at least attended twice, Number (4) at least, attended thrice and (5) attended more than thrice.



**Table 7: Number of agricultural trainings that members attended to learn new agricultural technologies introduced in IR-VICOBAs  
(n = 100)**

Variables	Never (1)		Rarely (2)		Not Much (3)		Frequently (4)		Very Frequently (5)		Total score	Mean	Rank
	Freq	%	Fre	%	Fre	%	Fre	%	Freq	%			
Irrigation farming	0	0	0	0	3	3	28	28	69	69	466	4.66	1
Farming methods	0	0	1	1	5	5	36	36	58	58	451	4.51	2
Use of fertilizer	0	0	1	1	7	7	35	35	57	57	448	4.48	3
Explaining weather condition	0	0	1	1	12	2	29	29	58	58	444	4.44	4
Update on weather	2	2	1	1	5	5	44	44	48	48	435	4.35	5
Pest control and diseases	4	4	1	1	10	10	27	27	58	58	434	4.34	6
Timely planting	0	0	6	6	5	5	38	38	51	51	434	4.34	7
Post-harvest handling	1	1	1	1	7	7	48	48	43	43	431	4.31	8
Improved seedlings	0	0	9	9	6	6	36	36	49	49	425	4.25	9
Research institution visit	2	2	9	9	12	12	24	24	53	53	417	4.17	10
Leaning exhibition	7	7	7	7	6	6	24	24	56	56	415	4.15	11
E- extension service	2	2	4	4	17	17	33	33	44	44	413	4.13	12
Intercropping	0	0	12	12	11	11	31	31	46	46	411	4.11	13
Agroforestry training	6	6	2	2	13	13	34	34	45	45	410	4.1	14
Estimating farming inputs	0	0	13	13	15	15	31	31	41	41	400	4	15
Conservation farming	8	8	7	7	19	19	29	29	37	37	380	3.8	16
Soil test	1	1	26	26	14	14	21	21	38	38	369	3.69	17

#### **4.5.1 Contribution of IR-VICOBAs on facilitating member's selection to the suitable agricultural technologies**

Results obtained from questionnaires (Table 7) show that, drip irrigation method, control of diseases, post-harvest handling, farming methods and fertilizer application as the major agricultural technologies. The findings were also reflected in FGDs. The finding (Table 7) reveals that drip irrigation method which scores 4.66 and ranked as the most applied agricultural technology by members. This implies that majority have attended frequently compared to other due to the need. For stake holders, it implies that IR-VICOBAs with their partner NGOs have aimed to address all challenges pertaining to Irrigation. This to make sure that, farming is taking place during dry season. In one FGD held at Dumila reached to the consensus that, trainings provided by IR-VICOBAs are very important since they made members knowledgeable to overcome drought problem. For instance, they revealed that irrigation method has made them farming throughout the season rather than rainy season only. In so doing, it has been possible for farmers to repay IR-VICOBAs loans and continue business all the time in the year.

As seen in the findings (Table 7), other important agricultural technologies that members received included farming methods scoring 4.51 and ranked as the second technology of which its trainings being attended frequently. Further, controlling pests and diseases was the sixth technology to be under application that scored 4.34. Also, it was presented in one FGD that members can now control wide range of pests and disease due to the training that they have received from IR-VICOBAs. From the trainings they learnt different pesticides and their use on controlling pests and diseases. VICOBA platform gives them chance to discuss about any disease or pest outbreak because they meet once every week. Therefore, the findings imply that IR-VICOBAs have played a big role to train its members in case of any outbreak of pests or diseases.

Proper post-harvest handling was ranked in the eighth position scoring 4.31. One explanation of the findings is trainings provided by IR-VICOBAs are important in addressing post-harvest losses and ensuring food security. Ensuring food security to women and children is one way to empower women as described in the women empowerment theory (Refer women empowerment theory by Kabeer as explained in the theoretical frame work).

Fertilizer application was another technique important on the technology scoring 4.48 and ranked as the third in the Table 7. Women farmers adopted agriculture as business with the knowledge provided by facilitators that made them think about productivity. In that, farmers increased the soil nutrients by applying fertilizers. A consensus reached by one FGD, disclosed that importance of fertilizer application to the soil is already known to the VICOBA members. Members said that before engaging in VICOBAs and got trainings they thought that fertilizer application destroyed soil. So they were just beings satisfied with little produce they got. Hence, with training they were switched to the understanding that application of fertilizer is a part and parcel in farming.

Apart from above, other technologies like Agro-forestry as a technique to mitigate climate change, the use of mobile phone to collect and share information, conservation farming and soil testing were also the part of knowledge that members acquired to improve farming. As explained in all FGDs that, all these technologies are important and they should be encouraged by agricultural authorities. In one of FGDs, it was said that they had a campaign in their VICOBAs to ensure that everyone owns a smart mobile phone. This was for the reason that they fail to share innovations and solutions to the problems facing members because some members do not own smart mobile phones.

As shown in the results (Table 7), members were receiving trainings on different agricultural technologies at different rates based on need. Some of the technologies are insisted than others because they are suitable to their area. This is due to the need assessment done by stakeholders before interventions showing that with the application they would increase agricultural productivity.

By and large, the application of agricultural technologies has enabled them to network with potential customers and suppliers.

*“...Majority of the farmers were interesting to join IR-VICOBA because of the technology introduced to the groups. Non IR-VICOBA members become interested when they saw IR-VICOBA members benefit from agricultural technologies”*

(KIRICA secretary, Dumila village, 05/03/2020).

The findings are in line with the results obtained from other studies on VICOBA. For instance, Lushakuzi *et al.* (2017); Gomera *et al.* (2020); Nyanda (2015) and Magali (2018) indicate that VICOBA enhance easily the technology to its members. According the studies, members increase productivity as they increase knowledge that led to the application of modern technologies. Potentiality of technology adoption in VICOBA is high for the reason that members are always on learning process. Starting with the simple technology usage like mobile phone by incorporating to the business is very possible. For instance the study by Gomera *et al.* (2020) on mobile devices in supporting members' participation to VICOBA revealed that mobile phones had potentials to assist members in their operations. Gomera *et al.* (2020) further explained to what extent technology brought VICOBA members to start agribusiness like selling vegetables and fruits.

#### 4.5.1.1 Training on irrigation farming

National Policy of Irrigation (2009) aimed to invite stakeholders to support services for irrigation development that will facilitate awareness raising, training and empowerment of women. Moreover the policy insisted on active participation at all stages in irrigation development so as to ensure that women and vulnerable groups have equal access to water, land, as well as productive resources.

The results in Table 7 show that 69% of respondents at least attended four trainings, 28% attended three times and 3% attended two times in drip irrigation method. A FGD held in all villages exposed that irrigation method has contributed farmers with reliable income throughout a season. Members were revelled that since they have adopted irrigation method to farming repayment on weekly basis to VICOBAs has been possible. Further, it was explained that, members who were not active in VICOBAs become active and there was inflow of new members to VICOBAs.

*“.....IR-VICOBAs members have utilized potentials to adopt irrigation systems. Drip irrigation system is the method that has been introduced at first time to many through IR-VICOBAs. The drip irrigation method is now adopted by other members who are not in IR-VICOBAs after seeing that there is change in productivity of IR-VICOBA members. Some non-members are requesting to join after seeing advancement of members in technologies”*

(Village extension officer, Dumila village, 06/03/2020).

In line with these results, Girabi (2013) found that members of microfinance adopted farming technologies and increased their productivity. The study by Girabi revealed that microfinance members had opportunities that triggered them in adopting farming technology. For instance, availability of reliable market and input access gave them room to think about farming technology.

#### **4.5.1.2 Application of information technology to agriculture**

Findings in Table 7 show that 44% of respondents attended at least four trainings, 33% attended three trainings, 17% attended two times, 4% attended one time and 2% did not attend any training on mobile phone use.

Key informants who are KIRVICA leaders mentioned application of e-extension as one of the agricultural technologies that was facilitated to them by their partner organisations. They Leaders mentioned e-soko and Anglican Church Diocese of Morogoro as organizations that made them aware to the application of e-extension. Also through FDGs members pointed out that they have been interested with such kind of training because they can solve problem timely. For example, they mentioned that e-extension helped them to control pests timely. This is due to the fact that the relevant message comes when there is a particular problem as per the setting of the project.

According the key informant from KIRVICA leaders, e-soko who was sending messages to farmers had one contact person from NCA/ACDM who resided in the Kilosa. Therefore, through this person, e-soko collected information on the daily basis before sending messages to farmers. For instance, when there was an outbreak of pests, e-soko officers were in position to get information timely and they sent back messages right on time before farmers applying inappropriate pesticide.

The e-extension employed mobile phones and other gadgets including tablets on training delivery. Farmers with mobile phones were enrolled to data base of farmers who received SMS for trainings. Trainings on farm preparation, planting, pesticides control and postharvest handling were sent to them in the season 2018/19.

Lead farmers were also providing trainings to the farmers using video from programmed tablets which were monitored by e-soko centre. Training modules from planting to harvesting stage comprising of pictures, videos and written document were sent to their gadgets. In order to update information, the officer running the programmes was refreshing the gadgets to come up with new trainings; new modules appeared on the programme, known as “*JamboMaisha*”app. In order to deliver trainings to the farmers, trainings were displayed to the white walls or white boards.

#### **4.5.1.3 Training on improved farming methods**

In discussion with the key informants and by observation, the researcher found different agricultural implements that were helping women farmers to do farming. Some of the tools observed and mentioned by key informants were simple hand maize planters, modern cages for poultry keeping, incubators, machines for poultry feeds manufacturing, drone for controlling pests and diseases owned by NCA that was on the pilot study. IR-VICOBAs have also helped women to post harvest handling. KIRVICAs have been receiving innovation from World Food Organization (WFP) and NCA. The innovation with hermitic tools facilitated women farmers on proper storage of grain. Hence, it ensured food security and nutrition for families especially women and children. From these results it has been shown that, VICOBAs have potential to empower women in achieving food security if members are commonly aiming to address the challenge.

Likewise, Sultan and Hasan (2010) revealed that the women farmers in microfinance (that included VICOBAs) earned on vegetable four times than women farmers who were not involved with any microfinance or organization. Furthermore, the study found an increase of income from poultry birds increased by ratio 5:1. The agricultural productivity of

VICOBA women farmers seemed to increase due to the technology adoption among members.

*“.....With postharvest handling, we experienced high quality of the produce; the quality of our grain led us to sell in bulk. Buyers including WFP and International Tanfeeds ltd offered a better price than market price which was 506 Tsh per 1 Kg in 2017. This gave us more profit than if we could sell to the available market in street that offered very low price. We got this premium price because of the post-harvest handling skills we obtained from IR-VICOBA in collaboration with other organizations”*(KIRVICA chairperson, Dumila village, 05/03/2020).

Henceforth, Women farmers in VICOBA are storing the grains in good conditions. They have reduced post-harvest losses and increased quality of the grains. Also, majority of them mentioned value addition and use of modern technology as one of the techniques that have led them to food security.

#### **4.5.2 Adoption of good agronomic techniques**

The researcher aimed to find out applicability of techniques delivered by extension officers, NGO and Agro companies. Respondents had to assign (1) all practices that they never applied to farming and number (2) for all practices they have been engaged as a result of VICOBA trainings. From the results in (Table 8), it shows that majority of farmers have incorporated techniques from IR-VICOBA.

Table 8 with multiple sources of data (Key informants, Dumila, 25 June, 2020; Field Observations across all wards, (During data collection, from February to March, 2020) divulged that practice of good agronomic practices and modern agricultural technologies



among Kilosa IR-VICOBA farmers are in practice and, have improved productivity at large. Some of the good agronomic practices observed included but not limited to: the use of Silo and special bags for grain storage that have reduced post-harvest loss at large, production of chicks using incubators, locally designed maize planters, drip irrigation systems and e-extension services provided by e-soko.

**Table 8: Farmers' adoption of good agronomic practices introduced (n=100)**

<b>Technologies</b>	<b>No (1)</b>	<b>Yes(2)</b>	<b>Total score</b>	<b>Mean</b>	<b>Rank</b>
	<b>Freq/%</b>	<b>Freq/%</b>			
Drip Irrigation farming	2(2%)	98(98%)	196	1.96	1
Proper post-harvest handling	2(2%)	98(98%)	196	1.96	2
Proper use of fertilizers	3(3%)	97(97%)	194	1.94	3
Agricultural information from mobile phone	3(3%)	97(97%)	194	1.94	4
Choice of suitable inputs to your area	3(3%)	97(97%)	194	1.94	5
Estimation of input to purchase	4(4%)	96(96%)	192	1.92	6
Proper use of pesticides	5(5%)	95(95%)	190	1.9	7
The use of proper spacing	5(5%)	95(95%)	190	1.9	8
The use of farm machinery	5(5%)	95(95%)	190	1.9	9
Practice of value addition	5(5%)	95(95%)	190	1.9	10
The use of weather information to farming	5(5%)	95(95%)	190	1.9	11
Soil testing	16(16%)	84(84%)	168	1.68	12

As indicated above (Table 8), farmers have adopted some of the technologies which can address their challenges in farming. The rank in the Table shows the application of

techniques. This implies that drip irrigation farming is the most applied technologies while soil testing is the least applied technologies.

According to the FDG held in Dumila, some of the technologies need high capital to adopt for instance soil testing, most of them are testing soils collectively. Individuals are not able to test their soils due to the cost. Therefore, there is no accuracy for their results since it normally covers large area. Other technologies that seem to be in use are post-harvest handling, best application of fertilizers, use of mobile to collect information and get trainings, knowing input suitability for an area, estimating inputs for their farms, proper use of pesticides, crop spacing, use of farm machineries, value addition as arranged in the order of their applicability. This is from the most applicable to the least applicable. The results reveal that members may adopt one or more technologies in VICOBA's once there is intervention pertaining to what they are used to do.

The findings look similar to those of Effa and Herring (2005), on Micro Finance Support to Rural Women Farmers, that found out of 63 clients interviewed, 61(97%) of them adopted one or more innovations from Agricultural Extension/NGOs, compared to 20 (32%) of non-participants.

Also FAO (2018) stated that empowering women is to empower agriculture. Dissemination and income of women under microfinance and technical support (MFTS) programme found that, women farmers increased their productivity after engaging in the microfinance institution and applying techniques introduced.

*".....I have met majority of farmers in VICOBA with a discipline to the technology adoption compared to those who are not members. When I train farmers and come back for monitoring I find farms that belong to members of VICOBA's performing well, I think VICOBA's are among the groups that have*

*farmers adopting farming techniques quickly”*( Village extension officer, Mandela village, 09/03/2020).

These results are in line with Mananga (2018), who revealed that VICOBA members increased their harvest on incorporating technologies to horticultural farming. The same results were shared by Josephat (2017) who found that women in the microfinance institution are likely to increase productivity when they get access to training in the particular business.

In sum, adoption of good agronomic practices through IR-VICOBA is another advantage to the members. As explained in the above sections, it shows that weekly meeting by IR-VICOBA members ensures circulation of knowledge and hence easy diffusion. On sharing experiences and by observations members and other non-members of VICOBA become motivated to the modern practices that give positive results.

In the whole, IR-VICOBA operate in different approach from other types of VICOBA. IR-VICOBA are working on the sustainable bases whereby members do benefit from both, microfinance and entrepreneurial skills. Agribusinesses being the major business, members are also engaging in other small business.

## **CHAPTER FIVE**

### **5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS**

#### **5.1 Summary of the Study**

This study was based on the contribution of IR-VICOBAs in empowering women farmers. This is specifically to input access, agribusiness training and technology adoption. The study firstly looked on the demographic characteristic of the respondents (age, marital status, education level and occupation). As the aim of the study, it further divulged on how IR-VICOBAs played a role to empower women to farming as far as the dimensions of women empowerment theory (access, agency and achievement) are concerned. The theories of economic empowerment, social capital and that of microfinance were adopted to guide this study. The study found that, IR-VICOBAs can facilitate economic empowerment of women farmers, at large, those excluded from the formal sectors, who are small holder farmers.

#### **5.2 Conclusions**

Overall, IR-VICOBA are an improved version of VICOBAs designed to support farmers who are unprivileged especially women farmers. They have successfully brought together people from different religions and denominations to work together as teams in improving agricultural production and their livelihood. Other specific concluding remarks are presented in the following sections.

##### **5.2.1 Contribution of VICOBAs on increasing Women's Access to Agricultural Inputs**

Based on the findings, VICOBAs have managed to increase Women's Access to Agricultural Inputs. IR-VICOBAs, among other things, have changed mind-sets of women

farmers on the application of improved inputs. Before engaging in IR-VICOBAs, some of women farmers were not used to improved seeds and fertilizers. By and large, IR-VICOBAs have facilitated the use of improved seeds and fertilizers to women farmers through linking farmers to the agro-companies and allied NGOs. Henceforth, women have taken micro-credit and purchased agro inputs in order to increase productivity. Moreover, women farmers have been connected to the agro companies for sustainable services of agricultural inputs. Therefore, VICOBAs, depending on its model of operation may have chances to finance agriculture especially in inputs purchase and providing linking where farmers can get access to improved inputs. Application of improved inputs has created a reliable source of income that makes women farmers being able to run farming business and VICOBAs operations. Women farmers are now able to repay back loan because they are already empowered to that. Therefore, VICOBAs are in position to assist smallholder farmers in accessing agricultural inputs if they are grounded with that objective as the IR-VICOBAs do.

### **5.2.2 Contribution of VICOBAs in facilitating Agribusiness Training**

This study arrives at a major conclusion that, IR-VICOBAs do provide trainings that increase women capacity to make decision on business. The trainings on agribusiness provided to women farmers have created their awareness to the agriculture industry. Some of members who did not do farming before joining IR-VICOBAs have decided to farm. Further, women farmers have increased their knowledge to the agri-business that made them understand the concept of production chain and supply chain. Consequently, some farmers have engaged in value addition, supplying agricultural goods and others remain only in the production. Therefore, VICOBAs are able to empower smallholder farmers particularly women in case they adopt the similar approach that IR-VICOBAs employ.

This is to insist on the entrepreneurial skills that improve business knowledge of the members.

### **5.2.3 Contribution of VICOBAs in Farming Technology to Women Farmers**

Overall, there is technology advancement to women farmers resulted from trainings and introduction of modern agricultural tools. IR-VICOBAs have managed to make partnership with companies and NGOs available in the district to access reliable agricultural technologies. For instance, the introduction of drip irrigation system, hand planters, hermetic tools for post-harvest handling of grain and the drone application to control pests and diseases were among the useful technologies introduced. Therefore, women farmers are farming throughout a year. For first time, they manage to engage in agricultural production during dry season. For that reason, IR-VICOBAs are potential in supporting agricultural activities depending on how members utilize available resources. The findings of this study imply that IR-VICOBAs are in the best position to disseminate agricultural technologies. Regular meetings and discipline of the IR-VICOBA members are some of the opportunities that give chances to learn and adopt innovations of the agriculture.

## **5.3 Recommendations**

### **5.3.1 VICOBAs and Women's Access to Agricultural Inputs**

Other forms of VICOBA can draw lessons from IR-VICOBA. In order to increase agricultural input access, particularly to the smallholder women farmers, other forms of VICOBAs need to finance farmers during farming season. If members who farm are not on the list to receive loan then there should be a strategic plan that will favour farmers. In this way, VICOBAs will be utilizing its potential to finance farming. In so doing, poor women farmers will be in better position to access agricultural inputs on time that may

improve farming. This approach will ensure sustainability of VICOBA as well as agribusiness simply because VICOBA are in their favour as far as farming is concerned. For organisations supporting VICOBA such as NCA and other faith organisations, need to concentrate on linking farmers to the agro companies in order to ensure sustainability of services rather than giving loan which lasts as projects phase out. Also policy makers need to consider VICOBA as groups that finance business. In particular, agricultural policy should identify IR-VICOBA and other similar operating VICOBA and incorporate them in the policy statement that will favour their achievements.

### **5.3.2 VICOBA and Agribusiness Training**

Drawing lessons from IR-VICOBA, other strands of VICOBA- in the rural areas where there is large number of farmers- should be looking for the possibility to run farming business. Also women farmers should search out trainings on agribusiness from VICOBA before they receive credits. Before engaging to farming business, VICOBA groups need to learn from others because there is number of similar groups involving agriculture. In order to get used to business, they do not need to do business as usual that will only sustain their lives with basic needs. Since VICOBA are based on the business financing, policy should be made to make government sectors disseminate different entrepreneurial skills depending on the members' demand. For instance, VICOBA that do agribusiness need a close supervision from agricultural extension officer.

### **5.3.3 VICOBA and Agricultural Productivity**

In order to make the IR-VICOBA model sustainable and attractive to many, leaders should be looking on the possibility of utilizing available resource that brings efficiency. IR-VICOBA need to be updated with information pertaining to technologies For instance; the use of mobile phones especially smart phones should be encouraged to reach as many

members as possible. Those who support farmers in VICOBAAs should spend their time to change members' mindset on the technology. For instance, organisations like NCA and others that implement agricultural projects should make farmers utilize their capital in technology advancement. Such kind of approach will ensure achievement that will benefit farmers especially women who are still lagging behind in technology advancement. Government sectors, particularly those who are in position to introduce new agricultural technology may bring new practices to IR-VICOBAAs and other similar VICOBAAs so as to pilot their discoveries.



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**APPENDICES**

**Appendix 1: Questionnaire for Village Community Bank women farmers**

**SOKOINE UNIVERSITY OF AGRICULTURE**

**COLLEGE OF AGRICULTURE**

**DEPARTMENT OF AGRICULTURAL EXTENSION AND COMMUNITY  
DEVELOPMENT**

**QUESTIONNAIRE**

**By**

**Ernest William Dyanka, Mscstudent**

**INTRODUCTION**

I am a postgraduate student at Sokoine University of Agriculture, undertaking a study **titled the Role of Village Community banks (VICOBA) on economic empowerment of women farmers in Kilosa, Tanzania.**

More specifically, this research attempts to respond to three specific objectives namely to:

- i. To determine women members access to improved agricultural inputs through VICOBA.
- ii. To examine the contribution of VICOBA in facilitating agribusiness training to women smallholder farmers for their decision making.
- iii. To determine contribution of VICOBA in organizing technology adoption for increasing productivity among women farmers

You are therefore requested to offer your strong cooperation in responding to this questionnaire. We strongly appeal to you that information given will only be used for the stated purpose and not otherwise; again it will be confidential. I would like to thank you for agreeing to participate in this important study

Questionnaire Number-----

Date.....

District.....Ward.....Village.....

**PART A: GENERAL INFORMATION**

A1. Name of respondent (Optional).....Phone number -----

A2. What is your age?

1. 18- 25
2. 25- 35 ( )
3. 35-45
4. 45-60
5. Above 60

A3. Marital status

1. Single ( )
2. Married
3. Widow
4. Separated

A4. Education level

1. None
2. Adult ( )
3. Primary
4. Secondary
5. Tertiary
6. Others (specify)

A5. Number of people in the household? .....

A6. What influenced you to join the VICOBA (Please tick as many options as you can)

1. To access loans
2. To access training
3. To get moral support from other members during hard times...
4. Exchanging information with other members...
5. Others (please specify).....

A7. Main source of Income

1. Farming
2. Local Arts ( )
3. Employed (wage earning
4. Business
5. Others, please specify .....

A8. What is the size of your farm.....

1. Less than acre
2. Acre
3. 2-5 Acres ( )
4. 6-10 Acres
5. Above 10 Acres

A9. What are you farming? (Tick as many as you do)

1. Cereals
2. Vegetable
3. Both



4. Others, please Specify .....

A10. Where did you get idea about VIKOBA?

- 1. Media
- 2. Seminar or workshop ( )
- 3. Attending specialcourse
- 4. Others specify.....

**PART B: To identify role performed by VICOBA to empower women farmers in accessing farming inputs**

B1. Have you ever got credit from the VICOBA's for inputs?

- 1. No (if no, please go to B8)
- 2. Yes ( )

B2. If your answer is yes, how frequent are using credit from the VICOBA's?

- 1. Once per a year ( )
- 2. Twice per a year
- 3. More ,specify \_\_\_\_\_

B3. Was there any collateral for the loan?

- 1. No
- 2. Yes ( )

B4. If yes, which ones?

- 1. House
- 2. Home properties ( )
- 3. Guarantors .....

B5. What is the type of credit you obtained?

- 1. In cash ( )
- 2. In kind

B6. If it is cash, for what kind of inputs you borrowed the money? Tick as many as you can

- 1. To purchase seeds
- 2. To purchase fertilizers
- 3. Agrochemicals
- 4. Farm tools
- 5. Others specify\_\_\_\_\_

B7. If it is in kind, what are the inputs you borrowed? Tick as many as you can

- 1. Seed
- 2. Fertilizer
- 3. Farm tools
- 4. Agrochemicals
- 5. Others. Please specify\_\_\_\_\_

B8. If your answer for question B1 is no, what is the main source of your money to purchase inputs?

- 1. From own farm income
- 2. Borrowed from neighbors ( )

- 3. Gift from relatives
- 4. Others specify\_\_\_\_\_

B9. If your answer of question number 16.1 was no, what type of inputs you purchased last season? Tick as many as you can

- 1. Seed
- 2. Agrochemicals ( )
- 3. Fertilizers
- 4. Others specify\_\_\_\_\_

B10. If your answer for question 1 is no, what is your reason not to borrow?

- 1. High interest rate
- 2. Presence of own money ( )
- 3. Lack of collateral
- 4. Others specify\_\_\_\_\_

B11. Is there any storage facility provided by VICOBA to store agricultural inputs?

- 1. No ( )
- 2. Yes

B12. If your answer is yes, what is its contribution to your farming activity?

- 1. To get inputs timely
- 2. To minimize transport cost
- 3. Input access reliability
- 4. To get intact input ( )
- 5. Others specify\_\_\_\_\_

B13. Is there any organization supporting your VICOBA in accessing inputs?

- 1. No ( )
- 2. Yes

B14. If your answer above is yes, what service do you get from the organization?

- 1. Input credit
- 2. Guarantee loaning
- 3. Connecting to Agro dealers ( )
- 4. Others specify\_\_\_\_\_

B15. If VICOBA assists you in accessing inputs, what are problems encountered during distribution and what is your suggestion to improve service delivery.

- 1. Problems encountered  
\_\_\_\_\_
- 2. Suggested solutions  
\_\_\_\_\_  
\_\_\_\_\_

B16. Has VICOBA ever connected you with input supplier for input service sustainability?

- 1. No ( )
- 2. Yes

B17. If yes in question 10.21, what is the frequency of contact?

- 1. Never

- 2. Rarely ( )
- 3. Frequently

B18. What types of service most of the time you are getting from input supplier connected? Tick as many as you can

- 1. Input Supply
- 2. Experience sharing ( )
- 3. Others specify\_\_\_\_\_.

B19. Have you ever participated in any input supplier training organized by VICOBA?

- 1. No ( )
- 2. Yes

B20. Were you using improved inputs before joining VICOBA?

- 1. No ( )
- 2. Yes

B21. If yes, what was the source of finance or inputs?

Mention .....

B22. Were you satisfied with inputs you received before joining VICOBA

- 1. No ( )
- 2. Yes

B23. If no in the question number 10.32 above what was the major challenge facing you in accessing improved inputs? Tick as many as you can

- 1. Transport
- 2. Reliable access of improved inputs
- 3. Timely delivery
- 4. Capital
- 5. Others, specify.....

**VICOBA's involvement in different roles to facilitate women farmers with input access**

Please you are requested to tick against each statement according to the frequency of VICOBA's involving in each role; 4= Very Frequently, 3= frequently, 2=rarely, 1= Never

S/N	STATEMENTS	Level of performance			
		1	2	3	4
B2 4	VICOBA input price becomes lower compared to other suppliers				
B2 5	VICOBA leaders campaigning farmers to purchase improved agricultural inputs				
B2 6	VICOBA educating farmers to select suitable inputs to the area				
B2 7	VICOBA preparing nursery for supplying seedlings to farmers				
	Others , please specify				

**PART C: To examine the contribution of VICOBA in facilitating agribusiness training to women smallholder farmers for their decision making**

C1. Have you ever got agri-business training from VICOBA?

- 1. No
- 2. Yes

C2. Did you learn anything new in the agribusiness training/s you attended?

- 1. No
- 2. Yes

C3. What did you learn to maximize your output? Tick as many as you can.

- 1. Importance of using modern farming inputs
- 2. Cost benefit analysis
- 3. Best selection of crop
- 4. Value addition
- 5. Others, specify.....

C4. Has the knowledge you obtained strengthened your decision in farming business?

- 1. No
- 2. Yes

C5. If yes, which decisions have improved your farming business (tick as many as you can)

- 1. Adopt intensive farming with modern technologies
- 2. Modern technology
- 3. Increase farm size
- 4. Engaging in value addition chain
- 5. Other, please specify.....

C6. What is the impact of your decision making?

- 1. Increase your output
- 2. Maintain your output
- 3. Decrease your output

C7. What is the perception of your husband or other family members on you to be in VICOBA and doing farming?

- 1. Bad
- 2. Good

C8. Does your husband or family support your agribusiness?

- 1. No
- 2. Yes

C9. Is there any challenge that you face on making decision for your business

- 1. No
- 2. Yes
- 3. If yes, specify .....

C10. Were you doing farming before joining VICOBA?

- 1. No
- 2. Yes

C11. Have you ever got training from VICOBA about proper expenditure of revenue?

- 1. No
- 2. Yes

C12. If it is yes in the number 11.20, does the training help you to plan on the revenue expenditure?

- 1. No
- 2. Yes

C13. If you have not attended any training, why?

- 1. Lack of information
- 2. There was no any training
- 3. You did not find any importance

**Give your perception on the VICOBA contribution to facilitate the following skills that empower women in decision making? Tick the in right box of your choice**

	<b>Practices</b>	<b>NO</b>	<b>YES</b>
C14	VICOBA assistance to the price setting for breaking even in agricultural business		
C15	VICOBA training in cost –benefit analysis before investing		
C16	VICOBA training importance of value addition for acquiring super profit		
C17	VICOBA training and organizing collective marketing		
C18	VICOBA training men and women on making financial decisions		
C19	VICOBA training importance of farmer clusters eg. A group of farmers farming a specific crop.		

**PART D: To determine contribution of VICOBA in facilitating technology adoption for increasing productivity among women farmers.**

Please state if the following farming technologies have been facilitated in VICOBA to empower women farmers, tick in the appropriate box according to the frequency of performance.

	<b>STATEMENTS</b>	<b>Level of performance</b>				
		<b>Most frequently (5)</b>	<b>Frequently (4)</b>	<b>Not much (3)</b>	<b>Rarely (2)</b>	<b>Never (1)</b>
D1	VICOBA trainings to proper use fertilizers					
D2	VICOBA on training farming conservation					
D3	VICOBA training on the importance of using improved fruit trees eg. Mangoes, avocados					
D4	VICOBA on educating farmers on the best agricultural practices (e.g. land preparation, spacing, weeding, harvesting etc					
D5	VICOBA training importance of agro-forestry to mitigate climate change impacts					
D6	VICOBA on organizing crop pest controlling.					
D7	VICOBA training on irrigation farming					
D9	VICOBA training on post harvest handling; timely harvesting, transportation and Storage					

D10	VICOBA partnering with any supporting origination on delivering extension service using modern technologies eg. The use of mobile phones, projectors and e-extension method.					
D11	VICOBA collecting weather information and addressing to women farmers for use.					
D12	VICOBA contribution to sponsoring farmer trainers/lead farmers for workshops /exhibition					
D13	VICOBA on partnering with agricultural institutions for trials, research or implementing projects					
D14	VICOBA on organizing soil test					
D15	VICOBA facilitating farmers on input purchase estimation					
D16	VICOBA training importance of timely planting					
D17	VICOBA training on the importance of intercropping eg. Legumes mixing					
	Others, Specify					

**Which are the best practices have you adopted from VICOBA training, Tick Yes for the practices that you have adopted as a result of VICOBA training to improve your farming business and tick No to all practices that have not part of VICOBA training regardless of the application.**

	<b>PRACTICES</b>	<b>NO</b>	<b>YE S</b>
D18	Best use of pesticides		
D19	Best application of fertilizers		
D20	Application recommended spacing		
D21	Application of irrigation farming system eg. Drip irrigation		
D22	Proper post-harvest handling eg. Using special bags for storage, silos		
D23	Land preparation using farm machinery eg. Tractors ,hallowing		
D24	Accessing agricultural information from mobile phone		
D25	Agricultural produce value addition		
D26	Soil testing		
D27	Using of weather information for farming		
D28	Calculating inputs required to purchase by knowing farm size		
D29	Using drip irrigation system		
D30	Application of relevant inputs suitable to your area		
	Others ,Please specify		

## **Appendix 2: Check-list for key informant interview**

Ten (9) key informants selected purposively; Key informants are (1) officer from organization that support VICOBA, (1) district agricultural officer, (3) VICOBA umbrella leaders and 4 extension officers from selected villages.

The roles that VICOBA play in the economic empowerment of women farmers

Dear, Sir/Madam, I am here for the research purpose on the Contribution of Village Community Bankson economic empowerment of women farmers in Kilosa, Tanzania

1. How many VICOBA groups are you dealing with in this district?
2. Does VICOBA organization comply with agricultural activities?
3. How many women farmers in the district are benefiting from VICOBA?
4. How easy can you help women farmers who are in VICOBA?
5. What are the opportunities for women farmers in VICOBA?
6. What are the challenges that women farmers in VICOBA face?
7. Is there any potential for other women farmers to join VICOBA groups?
8. How can you describe the contribution of VICOBA to empower women farmers?
9. Is there any involved action or penalty for beneficiaries failing to abide on the VICOBA agreements? Yes or no, If yes, what action involved?
10. What could be any reasons for some of the women members not joining the VICOBA groups?
11. If VICOBA can empower women farmers, what are your strategies for empowering more women farmers through VICOBA?
12. Do you think any woman can manage to join VICOBA? Yes or No, Why?



**Appendix 3: Checklist for Focus Group Discussion**

A. Name of the Village.....

B. Location .....

1. When did IR-VICOBA starts in your area?
2. What are the services provided by IR-VICOBA in your area to assist you to input access?
3. Which of the (5) above mentioned services provided by VICOBA are the most important?
4. Why do you think the (5) above services are more important compared to others services?
5. Which are the agribusiness trainings provided in your area?
6. Do you think the trainings provided have increased your level of confidence on making decision in agribusiness?
7. What is the status of food security in your area?
8. How would you describe contribution of VICOBA to the increase in agricultural productivity?

**Appendix 4: Sample Size determination for a Finite Population**

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

**Appendix 5: List of Kilosa Inter-Religious VICOBA****(KIRVICA)**

<b>S/N</b>	<b>Ward</b>	<b>Village</b>	<b>VICOBA Name</b>	<b>ID number</b>
1	Dumila	Dumila	Agape	IR003002
2		Dumila	Ebeneza	IR003003
3		Dumila	Sayuni	IR003004
4		Dumila	Jipemoyo	IR003005
5		Dumila	Amani	IR003006
6		Dumila	Faraja	IR003007
7		Dumila	Upendo	IR003008
8		Dumila	Mshikamano	IR003009
9		Dumila	Amkeni	IR003010
10		Dumila	Winners	IR003011
11		Dumila	Galilaya	IR003012
12		Dumila	Msufini	IR003013
13		Dumila	Grace	IR003014
14		Dumila	Utulivu Live Express	IR003015
15		Dumila	Utukufu	IR003016
16		Dumila	Unit is power	IR003017
17		Dumila	Hapakazitu	IR003018
18		Dumila	Nuru	IR003019
19		Dumila	Juhudi	IR003020
20		Dumila	Mzalendo	IR003021

<b>S/N</b>	<b>Ward</b>	<b>Village</b>	<b>VICOBA Name</b>	<b>ID number</b>
1	Zombo	Zombo	Faraja	IR002961
2		Zombo	Upendo	IR002962
3		Zombo	Taifa	IR002963
4		Zombo	Chapa Kazi	IR002964

<b>S/N</b>	<b>Ward</b>	<b>Village</b>	<b>VICOBA Name</b>	<b>ID number</b>
1	Mkwatani	Mkwatani	Neema	IR002965
2		Mkwatani	Upendo	IR002966
3		Mkwatani	Tumaini	IR002967
4		Mkwatani	Amani	IR002968
5		Mkwatani	Juhudi	IR002969

6		Mkwatani	Tupendane	IR002970
7		Mkwatani	Maendeleo	IR002971
<b>S/N</b>	<b>Ward</b>	<b>Village</b>	<b>VICOBA Name</b>	<b>ID number</b>
1	Magole	Magole	Tupendane	IR003022
2		Magole	Amani	IR003023
3		Magole	Muungano	IR003024
4		Magole	Hope	IR003025
5		Magole	Tumaini	IR003026

<b>S/N</b>	<b>Ward</b>	<b>Village</b>	<b>VICOBA Name</b>	<b>ID number</b>
1	Magole	Mandela	Amani	IR003027
2			Tupendane	IR003028

<b>S/N</b>	<b>Ward</b>	<b>Village</b>	<b>VICOBA Name</b>	<b>ID number</b>
1	Kitete	Magole	Upendo	IR003029
2			Tumaini	IR003030
3			Mkombozi	IR003031