

MOSHI CO-OPERATIVE UNIVERSITY

**FACTORS INFLUENCING YOUTH PARTICIPATION IN AGRICULTURAL
CO-OPERATIVE SOCIETIES IN THE NORTHERN REGION, BURUNDI**

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CO-OPERATIVE SOCIETIES IN THE NORTHERN REGION, BURUNDI**

BY

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**A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR AWARD OF THE DEGREE OF MASTER OF ARTS IN
CO-OPERATIVE AND COMMUNITY DEVELOPMENT OF
MOSHI CO-OPERATIVE UNIVERSITY**

OCTOBER, 2023

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I, **REVERIEN NDEREYIMANA**, declare that this research report is my own original work and that it has not been presented and will not be presented to any other higher learning institution for a similar or any other academic award.

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CERTIFICATION

The undersigned certify that they have read and hereby recommend for acceptance by the Moshi Co-operative University a research report titled, “**Factors influencing youth participation in agricultural co-operative societies in the northern region, Burundi**”, for partial fulfilment of the requirements for the degree awards for Master of Arts in Co-operative and Community Development in Moshi Co-operative University

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ACKNOWLEDGEMENT

I would like to thank the Almighty God for giving me the strength, knowledge, capacity, and opportunity to study the Master program at Moshi Co-operative University. Firstly, I expand my sincere thanks to my supervisors Dr. Prosper John Kimaro and Dr. Meda Mrimi Theodory for their guidance and their time commitment to make this dissertation effective. Since without this support, this work may not be conceivable. Moreover, I thank Moshi Co-operative University, National Commission for Science, Technology and Innovation of Burundi for allowing me to undertake this research project. Furthermore, I am thankful to the entire community of Tanzania, specially, Moshi Co-operative University for the support during my studies in this institution. I am also thankful to my siblings and my classmates for their love and prayers in this journey. Special thanks go to my precious mother for being patience when I was outside my home country. My gratitude goes to my sponsor Inter-University Council for East Africa (IUCEA) in partnership with Kreditanstalt Für Wieder Aufbau (KFW) German Development Bank and Adroit International Consult for the financial and technical supports, without them, it might not be conceivable to complete my studies.

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LIST OF ABBREVIATIONS & ACRONYMS

ACS	:	Agricultural Co-operative Societies
AMCOS	:	Agricultural Marketing Co-operatives Societies
ANACCOP	:	National Agency for Promotion and Regulation of co-operative Societies
BIJE	:	Investment Bank for Youth
BCR	:	Benefit Cost Ratio
CICOPA	:	International Organization of Industrial and Service Co-operatives
DAICO	:	District and Agricultural, Irrigation and Co-operative Office
FAO	:	Food and Agriculture Organization
GDP	:	Gross Domestic Product
GPRS	:	Growth and Poverty Reduction Strategy
ICA	:	International Co-operative Alliance
IFAD	:	International Fund for Agricultural Development
ILO	:	International Labour Organization
ISTEBU	:	Institute of Statistics and Economic Studies of Burundi
IUCEA	:	Inter-University Council of East Africa
KFW	:	Kreditanstalt Für Wiederaufbau
MoCU	:	Moshi Co-operative University
NAS	:	National Agricultural Strategy
NGOs	:	Non-governmental organizations
PAEEJ	:	Economic Empowerment and Youth Employment Program
PRSP	:	Second Poverty Reduction Paper
SET	:	Social Exchange Theory
SPSS	:	Statistical Package for Social Science
TRA	:	Theory of Reasoned Action
UNSDGs	:	United Nations Sustainable Development Goals

ABSTRACT

Youth participation in Agricultural Co-operative Societies (ACS) is crucial for both co-operative development and socio-economic progress. However, their involvement in ACS remains limited. This study aimed to assess the factors influencing youth participation in agricultural co-operative societies within the northern region of Burundi. Specifically, the study sought to assess the level of awareness among youth regarding ACS in the study area, to examine the cultivation related co-operative activities in which youth are involved, to establish the costs and benefits associated with their participation and examine the socio-economic factors influencing their engagement in ACS. The research adopted a cross-sectional research design, involving a sample of 332 respondents selected through purposive, simple random and convenience sampling. Both quantitative and qualitative data were collected using questionnaires, interview guides and focus group discussion guides. Through IBM SPSS version 25 and Excel, descriptive statistics analysis was used for quantitative data while content analysis was employed for qualitative data. The study applied Benefit-Cost Ratio (BCR) analysis to evaluate the costs and benefit of youth participation in ACS while a binary logistic regression model was used to examine socio-economic factors influencing youth participation in ACS. Results indicated low awareness level among youth regarding ACS with an average mean index of 2.23 and aligning standard deviation of 1.35. Notably, crops like beans (42%), vegetables (15.6%), rice cultivation (13%) and maize (9.3%) were the most cultivation related co-operative activities in which youth are involved. The BCR demonstrated a positive return on investment in ACS (BCR=1.6), indicating a viable venture. Socio-economic factors such as access to market ($p=0.020$), access to credit ($p=0.049$), access to land ($p=0.034$), education level ($p=0.037$) and profitability ($p=0.027$) emerged as key predictors influencing youth engagement in ACS. In conclusion, youth's limited membership in ACS stemmed from lower level of awareness, negative perceptions and adherence to traditional co-operative models. Recommendations include increasing awareness among youth through initiatives by different stakeholders in ACS. Additionally, changing from traditional model to entrepreneurial model, the study recommended to government establishing a Ministry of Co-operative and Small and Medium Enterprises, along with a co-operative university.

Key words: *Youth, Youth participation, Agricultural Co-operative Societies*

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

Agricultural co-operative societies have a long history of reducing poverty and increasing employment opportunities across the globe (Sultana, 2020). In Canada, the United States of America and across Europe, agricultural co-operatives have helped small-scale farmers to link up with the export market (Mdluli, 2019). Co-operatives, particularly in Africa, were also seen as mediating agencies of livelihood assets, including financial capital, natural capital, physical capital and social capital (Mdluli, 2019). Co-operatives can mediate and facilitate access to financial capital, as well as physical and natural capital such as land and infrastructures for agricultural purposes (Makoye *et al.*, 2022). They are also an essential part of social capital, including dialogue, democracy and human empowerment, giving a voice and livelihood to workers in the informal economy (Godden *et al.*, 2017).

According to the Food and Agriculture Organization (FAO) and the International Fund for Agricultural Development (IFAD) (2012), youth account for a large percentage of the rural population and face unemployment or underemployment. Despite potential opportunities in agricultural co-operative societies, youth often do not consider them as remunerative activities and they are not attracted to such economic opportunities in urban areas (CICOPA, 2018). However, equitable and efficient agricultural co-operatives can play an important role in helping youth overcome specific challenges and engage in such societies (FAO, 2012).

Youth tends to shy away from the agricultural sector, perceiving it as dirty and rigorous (Ramushu, 2021). Historical perceptions and literature indicate that while some youths have participated in agricultural co-operative activities but their participation was not notable due to reasons such as unemployment, family background and lack of interest in the agricultural sector (Magagula and Tsvakirai, 2020). Additionally, there has been a decline in youth interest in farming, despite their productivity and prime years (Som *et al.*, 2018). Engaging young people in agricultural co-operative societies becomes imperative, considering their large population, predominantly rural location and high levels of unemployment or underemployment (Ouko *et al.*, 2022). The emphasis is not on returning to traditional farming methods but rather on value chains, entrepreneurship and

farming as a co-operative business, encompassing all stages from farm inputs to production, processing, and consumption (Ouko *et al.*, 2022).

Many countries in Africa, particularly in Sub-Saharan regions, have recognized the need for policies that promote youth integration in agricultural co-operative activities to reduce food insecurity and unemployment (Sumberg *et al.*, 2021). These policies may include incentives for young people engaged in agricultural co-operatives, fair market opportunities, training in new technology and presenting agricultural co-operative as a profitable venture (Sylistar, 2022). The involvement of youth is crucial for achieving sustainable development in agriculture and national development goals (Adesugba and Mavrotas, 2016).

In the East African Community, youth participation in agricultural co-operative societies is still a challenge. For example, in Uganda, youth participation in agricultural co-operatives has shown a decline, with participation dropping from 73.2% to 24.2% between 2005-2006 and 2009-2010 (Ahaibwe, 2013). In Tanzania, agricultural co-operative societies have been key players in the co-operative and agricultural sectors. However, the sector is predominantly rural-oriented and mostly carried out by elders with an average age of 50 years (Anania *et al.*, 2020). In Kenya, it is argued that youth are the major drivers of change and the foundation of the country. Mobilizing youth for national development through their participation in agricultural co-operatives is considered crucial (Situma, 2021; Kissing, 2016).

In Burundi, there has been an increase of agricultural co-operatives in rural areas. In 2012, the department of cooperatives commissioned by the International Labour Organization (ILO) reported an overall quantitative evolution of agricultural cooperatives in Burundi. Between 1952 and 1967, 16 cooperatives were registered, 21 cooperatives in 1970 and 26 cooperatives in 1973. With their revival between 1990 and 2000, around 689 farming cooperative groups were registered in 1998 and 1500 in 2013 totalizing nearly 63126 members and more than 157 285 households in 2016. However, despite an increase of membership in agricultural food cooperatives in rural areas and a strong support from various stakeholders, it is clear that the living conditions of farming households have not been improved (Manirakiza, 2020). Furthermore, youth participation in agricultural co-operative societies is limited and they prefer engaging in other economic activities such as mining, industry sectors and small businesses (Yami *et al.*, 2019). Youth face challenges in elaborating, designing, implementing, monitoring and evaluating youth

empowerment strategies in agricultural co-operative development (Mapango, 2012). Local community participation has been poor and there are issues with inadequate allocation, poor farming processes and weak monitoring of co-operative societies (Buthelezi, 2020).

Lack of awareness about agricultural co-operative societies among youth and the small number of youths joining such co-operatives have been criticized. Insufficient access to information, knowledge and education contribute to the lack of awareness (Rolle, 2018). Access to knowledge, information and addressing economic challenges is crucial for youth engagement in agricultural co-operative societies. Economic benefits and costs, innovation, community support, perceived skills, resources perception interest in agricultural co-operative activities, government support, land availability, unemployment, agricultural knowledge and rural credit facilities are factors that influence youth in agricultural co-operative societies (Borda *et al.*, 2014). However, these factors may differ from one region to another and there is a limited knowledge on the level of awareness of agricultural co-operative societies among youth as recommended by scholars (Damas and Chikoyo, 2023).

Therefore, agricultural co-operative societies need more improvement to ensure high production to meet demands as population continues to increase. Youth engagement in agricultural co-operatives is gaining attention due to its employment potential and the role it plays in reducing unemployment (Kimaro *et al.*, 2015; Anania *et al.*, 2017). Given this background, the study aims to assess the factors that influence youth participation in agricultural co-operative societies in the northern region of Burundi.

1.2 Statement of the Problem

There is a lower level of youth participation in agricultural co-operative societies in Burundi (Manirakiza, 2020). This situation has raised concerns for the government and agricultural stakeholders due to reduced production and youth unemployment (Yami *et al.*, 2019). Since the early 1990s, the concept of farming co-operatives has recurred in official discourses related to the liberalization approach (Ndayisaba, 2021). However, this situation encountered challenges in 2007, with an estimate indicating that merely 29% of farmers were members of co-operative societies. Additionally, within the tea-growing region of Burundi, which contributes significantly to the national economy through exports (more than 90% of exports), only 25 hills out of over 70 had co-operative

associations. This disparity was underscored by a 6.8% decrease in the number of members in farmer's co-operatives from 2014 to 2015 at the national level (Ndayisaba, 2021). Consequently, this economic activity has not been embraced by the younger generation, who perceive it as an occupation reserved for elderly, illiterate and economically disadvantaged individuals in rural areas (FAO, 2012).

Various initiatives and policies have been established by the government and stakeholders in an effort to promote and support co-operative societies, for instance, the National Agency for Promotion and Regulation of Co-operative Societies (ANACCOOP 2017), Investment Bank for Youth (BIJE) and Youth Economic Empowerment Program (PAEEJ). Their roles were to empower youth and provide them with opportunities for agricultural macro-credit, along with education and information on herbal resources. However, these initiatives have not succeeded in effectively integrating youth into agricultural co-operative societies (Manirakiza, 2020).

Different factors, such as perception and interest in agricultural co-operative activities, government support, land availability, unemployment, agricultural knowledge and rural credit facilities have been identified as influencers of youth participation in agricultural co-operatives in other studies (Mdluli *et al.*, 2019; Ng'atigwa *et al.*, 2020). However, these factors may vary across regions and cannot be readily generalized to the context of Burundi. Furthermore, the agricultural sector remains unattractive to youth, resulting in their migration from rural to urban areas in pursuit of better opportunities (Sandhu *et al.*, 2021). Previous research has inadequately addressed factors that influence youth participation in agricultural co-operatives, often concentrating on individual farming activities or specific types of agricultural co-operatives (Cheleni, 2016; Kimaro *et al.*, 2015; Anania *et al.*, 2016).

Additionally, there exists limited knowledge about the level of awareness of agricultural co-operative societies among youth, as scholars recommend (Damas and Chikoyo, 2023). This encompasses the cultivation related co-operative activities involving youth, the costs and benefits associated with their participation in agricultural co-operative societies and the socio-economic factors particularly in the northern region of Burundi. Hence, the current study aims to address this contextual and knowledge gap by assessing the factors influencing youth participation in agricultural co-operative societies in the northern region of Burundi.

1.3 Objectives

1.3.1 General objective

The general objective of this study is to assess the factors influencing youth participation in agricultural co-operative societies in the northern region of Burundi.

1.3.2 Specific objectives.

Specifically, this study sought to achieve the following objectives:

- i) Assess the level of awareness among youth regarding agricultural co-operative societies in the northern region of Burundi.
- ii) Examine the cultivation related co-operative activities in which youth are involved in the northern region of Burundi.
- iii) Establish the comparable costs and benefits of youth participation in agricultural co-operative societies.
- iv) Examine the socio-economic factors that influence youth participation in agricultural co-operative societies.

1.4 Research Questions

To achieve the specific objectives, the study addressed the following research questions:

- i) What is the level of awareness among youth regarding agricultural co-operative societies in the northern region of Burundi?
- ii) What are the cultivation related co-operative activities in which youth are involved in the northern region of Burundi?
- iii) What are the comparable costs and benefits of youth participation in agricultural co-operative societies?
- iv) What are the socio-economic factors that influence youth participation in agricultural co-operative societies?

1.5 Justification of the Study

For Burundi to achieve its vision of eradicating extreme poverty and hunger by 2025 and promoting broad-based, equitable and sustainable growth, as outlined in the Second Poverty Reduction Paper (PRSP-II), Growth and Poverty Reduction Strategy (GPRS) and

the National Agricultural Strategy (NAS), agriculture must take priority. Agricultural co-operative societies function as effective tools for youth development (Situma, 2021). Therefore, the findings of this study aim to engage stakeholders and decision-makers in agricultural co-operative societies, with the goal of enhancing agricultural production and creating more youth employment opportunities within the country.

The significance of this study lies in its potential to offer alternative solutions to key social issues faced by the population, especially the youth, such as poverty and food insecurity. The outcomes of this study are anticipated to contribute to the attainment of the United Nations Sustainable Development Goals (UNSDGs) for 2030, particularly goals 1 and 2. This research provides valuable insights for local authorities in aligning with the Sustainable Development Goals, based on the research findings and recommendations.

Furthermore, agricultural co-operatives not only enable youth to meet their essential needs but also bolster their own developmental capacities. By addressing economic and social challenges through collaborative group efforts, this study aims to foster youth empowerment and overall community development. The findings from this study serve as a reference for other researchers interested in delving into this field and lay the groundwork for further research and deeper understanding of the subject.

1.6 Organization of the Study

The research study is divided into five chapters. The first chapter of the study presents the study's background information, statement of problem, research objectives, research questions and justification of the study. The second chapter includes a review of the literature relevant to the study, divided into four sub-chapters: definition of key terms, theoretical literature review, empirical literature review and conceptual framework. The third chapter is about research methodology, which includes research design, target population, types of data and data collection methods, Sample size, sampling techniques, validity and reliability of data, data analysis and ethical consideration of the study. Chapter four addresses the findings and discussion the study. Lastly, chapter five addresses the summary, conclusion and recommendations that arise from the findings of the study. Likewise, the study recommends areas for further study.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Definitions of the Key Terms

2.1.1 Youth

Youth encompass individuals aged 15 to 24 years old (Smith, 2012). Moreover, the African Union adopts the age range of 15 to 35 as the definition of youth. In rural areas, youth present an opportunity to foster farming entrepreneurship due to their potential to overcome significant constraints in expanding agricultural production. They often exhibit greater openness to new ideas and practices compared to older individuals (Yousefi *et al.*, 2022). In the context of this study, the term "youth" pertains to all individuals between the ages of 18 and 35 years, both members and non-members of agricultural co-operative societies in the study area.

2.1.2 Youth participation

Youth participation entails the engagement of young individuals in responsible and demanding activities that address legitimate needs, providing them with opportunities to organize or make decisions that impact others, with consequences that extend beyond their own sphere (Rexhepi *et al.*, 2018). In this study, the term "youth participation" refers to active involvement of young people in production, processing and marketing in agricultural co-operative societies in the study area.

2.1.3 Co-operative society

According to the International Co-operative Alliance (ICA, 1995), a co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise. This definition underlies the key ICA principles of voluntary and open membership, democratic member control, member economic participation, independence and autonomy, education, training and information, co-operation among co-operatives and concern for the community. In this study, co-operative is defined as an autonomous association of youth united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly owned and democratically controlled enterprise especially in agricultural co-operative societies in the northern region of Burundi.

2.1.4 Agricultural co-operatives

An agricultural co-operative, also known as a farmer's co-operative is a co-operative where farmers pool their resources in certain areas of activity (Milovanovic *et al.*, 2018). In this study, agricultural co-operative is a co-operative where youth farmers put together their resources in agricultural activities. A broad typology of agricultural co-operatives distinguishes between agricultural services co-operatives which provides various services to their individuals farming members and agricultural production resources (Land, machinery) are pooled and member farm jointly. Agricultural co-operative society has good employment opportunities, youth are not engaged in that sector which is considered by many youths as dirty and rigorous (Ramushu, 2021). Potential of agricultural co-operatives to offer employment through agricultural co-operatives society for the youth is recognized nationally and word wide (CICOPA, 2018). In this study agricultural co-operative is a co-operative where youth farmers pool their resources in certain agricultural activities.

2.2 Theoretical Literature Review

This section presents the theories adopted in this study. Among the different theories from the literature, the Social Exchange Theory (SET) developed by sociologists George Homans and Peter Michael Blau in 1958 and the Theory of Reasoned Action (TRA) formulated by Fishbein and Ajzen in 1967 were employed to provide insights for the researcher's understanding. These two theories were chosen because of their clear explanatory capacity regarding the entire study. These theories were applied as follows:

2.2.1 Social Exchange Theory

This study takes a scientific approach guided by Social Exchange Theory (SET), which furnishes a comprehensive framework for comprehending the motivations behind individuals' involvement in social groups and how their interactions are shaped by the associated benefits and costs. Discovered by sociologists George Homans and Peter Michael Blau in 1961, this theory emerged from an interest in the psychology of small groups, focusing on understanding interpersonal relationships within communities and dyadic interactions (Cropanzano *et al.*, 2017). It was initially presented in Homans' essay "Social Behaviour as Exchange" in 1958. Social Exchange Theory posits that individuals make rational decisions based on the anticipated outcomes of their actions. Within the context of youth participation in agricultural co-operative societies, this theory implies

that the likelihood of their engagement is influenced by their perception of whether the benefits outweigh the associated costs (Cropanzano *et al.*, 2017).

The theory offers a foundation for predicting individual behaviour in social situations. The anticipated outcomes of an exchange can be computed and used to forecast the likelihood of specific behaviours (Banyambona, 2013). Social Exchange Theory adopts a relational approach, emphasizing relationships between individuals rather than isolating individual behaviour. It highlights the significance of social connections and their role in shaping behaviour (Cropanzano *et al.*, 2017). This theory has been applied across various contexts, encompassing interpersonal relationships, organizational behaviour and economic transactions. It has proven valuable for comprehending exchange dynamics across a variety of settings (Choi, 2017).

The objectives of this study align with the principles of Social Exchange Theory. Firstly, the study aims to assess the level of youth awareness regarding their participation in agricultural co-operative societies. This assessment is crucial for understanding perceived benefits and costs based on available information, knowledge, youth training in agricultural co-operative societies and their experience with such societies. Secondly, the study examines the cultivation co-operative activities in which youth are engaged, allowing a detailed exploration of specific benefits and costs that influence their involvement. Furthermore, the study seeks to determine the comparative costs and benefits of youth participation in agricultural co-operative societies. This objective directly corresponds to the fundamental tenets of Social Exchange Theory, as understanding perceived costs and benefits can inform strategies aimed at boosting participation by maximizing benefits and minimizing costs. Finally, the study delves into the socio-economic factors impacting youth participation in agricultural co-operative societies, thus contributing to a broader comprehension of the exchange processes influencing their decision-making.

By employing Social Exchange Theory, this study endeavours to illuminate youth behaviours and attitudes toward agricultural co-operative societies, while also analysing how perceived benefits and costs impact their participation. The study underscores the importance of fostering supportive and inclusive environments, offering incentives and rewards, providing training opportunities and streamlining administrative processes to increase youth engagement and support the sustainability of agricultural co-operative activities. The theory proved relevant to the study by viewing agricultural co-operative

societies as avenues for improving youth well-being. Moreover, the theory identified elements that should be considered when building and managing agricultural co-operative societies to attract youth as members. The findings of this research provide valuable insights for stakeholders and decision-makers, empowering them to design effective strategies that encourage and support youth participation in agricultural co-operative societies.

Additionally, the study adopted the Theory of Reasoned Action (TRA) to comprehend social factors influencing youth participation in agricultural co-operatives, aspects not covered by Social Exchange Theory.

2.2.2 The Theory of Reasoned Action

This study drew guidance from the Theory of Reasoned Action (TRA), formulated by Fishbein and Ajzen in 1967. This theory focuses on uncovering the factors underlying the formation and alteration of behavioural intentions. According to the TRA, most socially relevant behaviours are under volitional control, making behavioural intention the foremost predictor of actual behaviour (Lim *et al.*, 2021). Behavioural intention refers to an individual's planned performance of a specific behaviour. The stronger a person's intention to carry out a behaviour, the higher the likelihood that the behaviour will indeed be performed. Behavioural intention is determined by an individual's attitude towards the behaviour and their perceived social norms (Yeo *et al.*, 2017). The theory assumes that a person's behaviour is governed by their intention to carry out or abstain from a behaviour, and this intention is influenced by their attitude towards the behaviour and their subjective norms.

The theory's foundation rests on the assumption that human beings typically act sensibly, considering available information and consciously considering their actions. A person's intention to act or not act becomes the immediate determinant of their action; barring unforeseen events, people are expected to act in accordance with their intentions (Otieno *et al.*, 2015). The theory provides insight into individual behaviour across different contexts, scenarios and situations. Unlocking insights based on attitudes towards behaviour, norms and perceived control enables practitioners and marketers to identify barriers and strategies for encouraging behavioural change. However, the theory has limitations, including a significant overlap between attitudes and norms. Attitudes and

norms can often be interchangeable. When someone forms an intention to act, they will typically act without limitations.

In this study, the TRA was utilized to examine the social factors influencing youth intentions to participate in agricultural co-operative societies in the northern region of Burundi. The study assessed youth behavioural intention by considering various factors such as gender, household size, education level, marital status and social capital that impact their involvement in agricultural co-operative societies. The theory allowed the study to discern the gap between youth behaviour and their actual attitudes towards agricultural co-operative activities. It facilitated understanding the relationship between behavioural actions and attitudes towards agricultural co-operative societies.

2.3 Empirical Literature Reviews

2.3.1 Background to the agricultural sector and co-operatives societies in Burundi

In Africa, agriculture is among the most important sectors that contribute to the Gross Domestic Product GDP (up to 40%) and it has the potential to employ the large population of youth which is estimated to exceed 300 million by 2025 (Raheem, 2021). In Burundi, the economy is predominantly agricultural activities with more than 90% of the population depend on agricultural sector (Niragira, 2022). The agricultural sector account for 50% the country Gross Domestic Product (GDP) and approximately 90% total foreign earning having tea and coffee as the major exports. However, constraints such as a drought, heightened population growth, tradition farming method, land fragmentation, low land productivity, inadequate management of water resources, outbreak on diseases crops, lack of credit facilities among small holder farmers and limited access to research (Niragira, 2022).

Despite these challenges, there are opportunities in agricultural sector such as the ideas of forming co-operatives-based agriculture, good climate condition, possession of abundant water resources as well as potential irrigation land are offering prospective development in agriculture (IFAD, 2008). The government has also developed policies such as the Growth and Poverty Reduction Strategy (GPRS), National Agriculture Strategy, Burundi Vision 2025 in supporting agriculture sector through agricultural co-operative societies. The government has also attempted to stimulate youth's interest in agricultural production and processing whereby the government established National Agency for Promotion and Regulation of co-operative Societies (ANACOOOP 2017), a

new programme called Investment Bank for Youth (BIJE). Youth Economic Empowerment Program (PAEEJ) that provide loans to youth under 35 years who are interested in starting agricultural business, the youth fund was pointed out as an important means to curb the problem of youth unemployment in the country. The government set about 200 billion annually from the national budget as youth development fund.

2.3.2 Awareness on youth participation in agricultural co-operative societies

Kissing's *et al.* (2016) studied factors influencing youth participation in agricultural cooperative projects in Kenya, a case of Kathiani subcounty, machakos county. One of the objectives was to explore youth awareness on agricultural co-operative project in the study area. The study used a sample size of 96 respondents selected from youth group in the study area. The level of youth awareness was measured by access to information; youth experience youth training on agricultural co-operative projects. The study used descriptive statistics analysis to analyse data. The study found that 80% of youth joined agricultural co-operative projects because they were aware about these projects, only 20% of youth joined the projects because of unemployment. It is widely documented that education is key to overcoming development of rural children but it has also been shown that basic numeracy and literacy skills help to improve farmer's livelihood (Wagner *et al.*, 2017). Youth access to knowledge and information is crucial for addressing the main challenge they face in agricultural co-operatives societies. The study was limited on agricultural co-operative projects in Kenya, sample size was small. Therefore, this study aims at determining the level of awareness among youth about agricultural co-operative societies in context of Burundi.

Damas and Chikoyo (2023), conducted a study on factors influencing youth participation in agricultural marketing co-operative societies in Ruangwa district, Tanzania. One of the objectives was to examine youth perception in agricultural marketing co-operative societies as an organization for poverty reduction. A sample size of 184 youth selected randomly from 2 Agricultural Marketing Co-operative Societies in the study area. Descriptive statistic technique was used to analyse data. The findings confirm that that youth had positive perception on AMCOS toward poverty reduction. The study recommends that District and Agricultural, Irrigation and Co-operative Office (DAICOs) across the country should increase youth awareness about Agricultural Marketing Co-operative Societies activities which will help them to deeper understanding of the benefits that are derived from AMCOS and the challenges involved if they decide to take

agricultural activities as a profession. Therefore, this study aims to determine the level of awareness among youth regarding agricultural co-operative societies in the northern region of Burundi.

Ochan (2017), studied the effect of members' awareness on co-operative: Is it a reason for failure? (Lisson from agricultural co-operative in Ababo and Gog District, Gambella, Ethiopia. One of the objectives was to assess the member's awareness of basic co-operative concepts in Ababo and Gog district in Gambella region. The study used a sample size of 248 respondents selected purposively from agricultural cooperative members. Data were collected through questionnaires and focus group discussion. Descriptive statistical tool was used to analyse data. The study found that 75.4% of respondents were not aware about agricultural cooperative concepts. Furthermore, the results show that only 15.73% of respondents did know the difference between cooperative and other businesses. The study concluded that training is one of the principles which could improve the knowledge and skills required to upgrade the awareness of agricultural cooperative societies. The study recommended that training, education and information as a principle have essential role to play in increasing member's awareness about co-operative societies.

Different stakeholders in agricultural co-operative societies should conduct awareness creation programs through training and mass media to help people to understand the basic knowledge and benefits of co-operatives. The study recommended to same study in another region or other county. Therefore, this study aims to assess the level of awareness among youth members and non-members regarding agricultural co-operative societies in the northern region of Burundi.

2.3.3 Youth participation in agricultural co-operative activities

The involvement of youth in agricultural co-operative production had contributed significantly to agricultural development and empowering youth to always meet their needs (Ahiwe *et al.*, 2021). But inability of governments to integrate youths in agricultural activities has been the major problem for country agricultural development. Therefore, for the country to be economically stable the agricultural sector must be strong and youth have to be encouraged on their participation in agricultural co-operative activities (Ahiwe *et al.*, 2021). Literature shows that there is lower number of youths participating in farming and agricultural co-operatives even though they are most productive are in the

prime of lives both enhancing the level of youth participating in agricultural co-operative society and include youth in decision making process (Rwekaza *et al.*, 2020). Agricultural co-operative society has good employment opportunity, youth are not engaged in that sector which is considered by many youths as dirty and rigorous (Ramushu, 2021). Potential of agricultural co-operatives to offer employment through agricultural co-operatives society for the youth is recognized nationally and word wide.

Kimaro *at al.* (2015) studied about the determinants of youth participation in agricultural activities, the case of Karehe East ward in Moshi district, Tanzania. The study used both qualitative and quantitative approaches, descriptive data analysis method where SPSS, supported, analysis of data and provided frequencies, percentages and numbers. One of the objectives was to determine types of agricultural activities in which youth are involved in the study area. The study found that vegetable, maize, beans, rice cultivation and groundnuts are the most agricultural activities that youth engage in Karehe East ward in Moshi district, the study used a sample size of 90 respondents. Therefore, this study was based on agricultural activities based on individual youth farmers with a small sample size. Therefore, this study examines the cultivation related co-operative activities in which youth are involved in the northern region of Burundi.

2.3.4 The costs and benefits of youth participating in agricultural co-operative societies

Thrikawala *et al.* (2022) conducted a study on cost- benefits analysis of irrigation projects in Singapore. Cost -Benefit Ratio (CBR) was applied to analyse data, the findings show that the projects were economically viable because the CBR was 1.4 which is greater than 1 for good investment adoption. Akpalu (2020) conducted a study on cost-benefit analysis of co-operatives to mitigate artisanal small scale old mining externalities. His paper investigated the costs and benefits of forming mining co-operatives within Ghana community. The study applied the prescription of Copenhagen centre consensus centre which states that the present values of projects should be discounted at annual rate of 5%, 8% and 14%. The study applied the cost benefit ratio to analyse data. The findings show that the intervention has a CBR around 1.2 which suggests a positive net profit for the projects.

Anania *et al.* (2017) conducted a study co-operative enterprise and youth employment creation: Prospects and challenges reflections from Tanzania agricultural sector. The

study aimed to determine the opportunities for youth ‘employment creation through co-operative enterprise study specially determined the alternative approaches of employment creation of youth through a co-operative enterprise. The study used descriptive and more qualitative approaches. The result shows that there are two alternative approaches for employment creation such as direct approach where co-operative employ youth as staffs or savants, financing youth ‘income generating activities, initiating managed business within co-operative, facilitate access to land facilities and indirect approaches to employment creation where co-operative supports youth access to market, provide education and training to youth, linking youth with creditors. The study recommended that there should be a further study to know the number of youths who are employed in agricultural co-operative societies in Tanzania and other country also.

Manirakiza (2020), studied the impact of farmers co-operatives on social economic living conditions of rural households in Burundi. The objective of the study was to analyse if the agricultural food co-operatives improve social economic living conditions of their members. The results shows that agricultural co-operatives contribute in increasing of food production of either co-operative member by easy access to agricultural training and chemical fertilizers or non-members due to the effect of positive externalities. The study concluded that due the strong mobilization of Burundian government on promotion of co-operative movement since 2018, especially on the event of election in 2020, co-operatives could have a partisan stokes, which would comprise the autonomy advocated by universal principles of Rockdale. The studies above were limited on benefits and ignored the cost of youth participation in ACS. Therefore; this study aims to determine comparable costs and benefits of youth participation in agricultural co-operative societies in context of Burundi.

2.3.5 Socio-economic factors and youth participation in agricultural co-operative societies

Nyamba and Sanga (2022), conducted a study on youth engagement in agricultural activities, status and prospects for agricultural sector development in Makambako Town Council, Njombe region in Tanzania. The study used a single size of 250 youth respondents identified randomly from the area. The study found that agricultural knowledge, availability of land, interest in agricultural activities such as access to markets, access to credit, profitability; access to land, access to fertilizer, fertile soil, favourable environment, temperature, availability of different types of soil, good

transportation facilities and well connectivity are the most factors determining rural youth participation in agriculture-based livelihood activities in the study area. The study concluded that youth in the study area are not significantly engaged in agricultural activities. The study recommended that it can be replicated by similar research designing other place of other country where comparable social economic and physical condition exist in order to confirm present research findings.

Ng'atigwa *et al.* (2020), on study assessment of factors influencing youth involvement in Horticulture agribusiness in Tanzania. One of the objectives was to analyse the social factors influencing youth participation in agribusiness in the study area. The study found that gender, household size, perception, education and marital status are social factors that influence youth participation in agribusiness the study area. Elem (2019), co-operatives and eradication of poverty, hunger in rural communities in south Eastern Nigeria trough inclusive sustainable agricultural development. The specific objective was to analyse factors hindering women rice farmer co-operative societies in contributing adequately to poverty and hunger eradication among rural communities.

To accomplish its purpose, the study adopted quantitative and qualitative approaches and applied cross sectional survey design, purposive sampling techniques were used. The descriptive statistical analytical method involving frequencies, table, percentage were employed. The study recommended that governments should establish co-operative institutions where rural co-operatives could have access to co-operative education programme and training in co-operative management. Therefore, this study aims to examine socio-economic factors influencing youth participation in agricultural co-operative societies in context of Burundi.

Youth participation in agricultural co-operative activities has captured the attention of numerous researchers. Various studies have been carried out by different scholars in different countries, including Njenga *et al.* (2012), Kissing *et al.* (2016), Kashimi (2019), Ng'atigwa *et al.* (2020), Elem (2019), Kimaro *et al.* (2015), Anania (2017) and Nyamba and Sanga (2022). However, a significant number of researchers have not adequately addressed the factors that influence youth participation in agricultural co-operatives. Instead, they often concentrated on agricultural activities conducted by individual farmers, utilizing small sample sizes. Additionally, only a few studies focused on Agricultural Marketing Co-operatives Societies (AMCOS) as demonstrated by Anania *et al.* (2016), Damas and Chikoyo (2023). There remains a scarcity of knowledge

concerning the level of youth awareness regarding agricultural co-operative societies, the cultivation related co-operative activities in which youth are involved, socio-economic factors, as well as the costs and benefits of youth participation in agricultural co-operatives in Burundi, especially in the northern region. Hence, the purpose of this study is to address this contextual and knowledge gap by comprehensively assessing the factors that influence youth participation in agricultural co-operative societies.

2.4 Conceptual Framework

The conceptual framework provided in figure 1 illustrates that the independent variables encompass youth awareness of Agricultural Co-operative Societies (ACS), the cultivation related co-operative activities involving youth, the costs and benefits associated with youth participation in ACS, as well as socio-economic factors. Meanwhile, the dependent variable is youth participation in agricultural co-operative societies, measured through the count of youth engaged in ACS (youth participating in ACS and youth not participation in ACS). The independent variables exert an influence on the dependent variables, wherein youth awareness of ACS impacts their participation in terms of knowledge about ACS, access to information, ACS training and practical experience. The cultivation related cooperative activities further affect youth participation, with crops yielding greater benefits being more likely to attract youth involvement.

Youth engage in agricultural co-operative societies if they perceive that the benefits of ACS participation outweigh the associated costs. These benefits encompass augmented capital income, salary generated, improved food availability, membership fees, capital costs for investments, administrative and overhead expenditures. Moreover, socio-economic factors play a role in youth participation in ACS. These factors comprise access to markets, credit accessibility, profitability, land availability, access to fertilizers, gender, household size, education level, marital status and social capital.

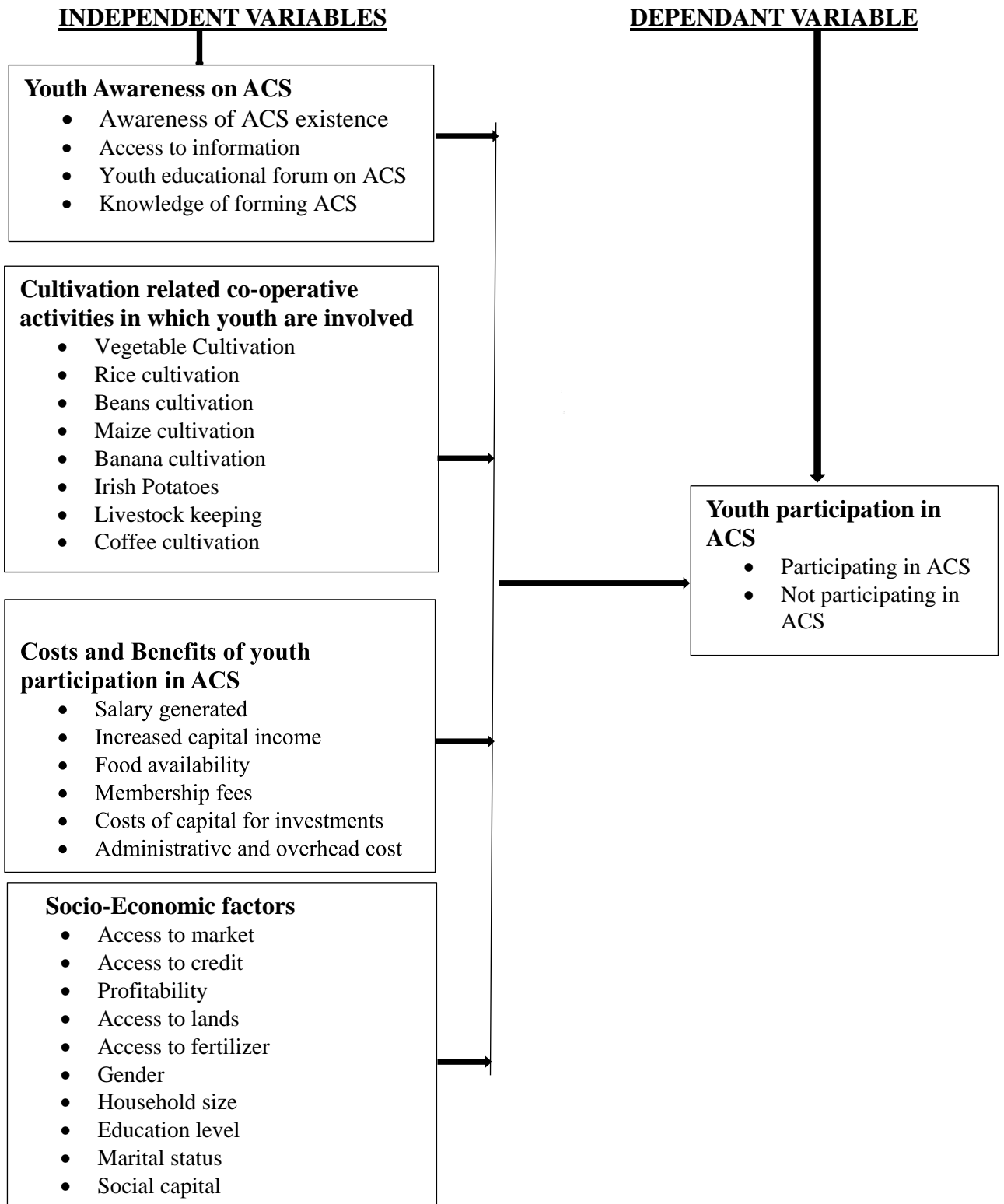


Figure 1: The conceptual framework of youth participation in agricultural co-operative societies in the north region of Burundi

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Research Design

The study employed a cross-sectional research design, which facilitates data collection at a specific moment in time (Ali-Azzam *et al.*, 2020). The choice of this design was driven by the study's objective to assess factors influencing youth participation in agricultural co-operative societies. This design was selected as it accommodates various tools and methods of data collection. Furthermore, it permitted comparisons among different respondent groups, enabling an understanding of the interplay between dependent and independent variables. The design's utilization also ensures a heightened level of precision, reliability and validity in both the method of data collection and the tools employed.

3.2 Geographical Coverage

The study was conducted in northern region of Burundi specially in three provinces namely Muyinga, Ngozi and Kirundo. According to National Agency for Promotion and Regulation of co-operative Societies (ANACOOB, 2022), Burundi accounts for 6000 registered co-operative societies which operate in different sectors including agriculture. The number of agricultural households in Burundi is estimated at 1 556 529 including 1 221 688 headed by men (78.5%) and 334 811 headed by women, the average size of a firm household is 5.1. The size is 5.4 people in male-headed households and 3.9 in female headed households. The agriculture population of Burundi is estimated at 7 902 860 people, it is made up 48.4% men and 51.6% women farmers. The density of the population living in agricultural households is estimated at 305.6 people per km² (ISTEBU, 2015). The northern region is selected because of its unique characteristic which is availability of agricultural cooperative activities, where some youths engage in agricultural co-operatives that produce different products such as rice, beans, maize, banana, Irish potatoes, livestock keeping, tea and coffee and other vegetable products.

In the north region of Burundi, agricultural co-operatives are seen as economic base of the region. The region is also rich in terms of fertile soil, availability of rain and medium

sized flowing streams. Likewise, there are lower number of youths participating in agricultural co-operatives compared to other regions.

Most of youths in northern region of Burundi leave their native areas moving to city like Bujumbura and Gitega to look for better life while they leave agricultural opportunities at their home places.

3.3 Population, Sample and Sampling strategies

3.3.1 Target population

The target population for this study comprised youth who are both members and non-members of agricultural co-operative societies in the northern region of Burundi. This population is estimated to encompass 1920 youth, with 728 from Muyinga, 977 from Ngozi, and 215 from Kirundo (ANACOOB, 2022). The selection of agricultural co-operative societies in the northern region was motivated by their higher susceptibility to the issue of lower youth membership in ACS in such locality. As such, the unit of observation was the youth members and non -members of these agricultural co-operative societies while the unit of analysis was agricultural co-operative societies under the northern region of Burundi.

3.3.2 Sample size

The sample size of this study was 332 respondents determined by mathematical formula of Yamane (1967):

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

where **n** is sample size, **N** is number of population and **e** is the error or confidence level. Convectional confidence level of 95% was used to ensure the more accurate findings from sample and sample error of 0.05 using the total population of 1920. Therefore, the sample size comprised 332 respondents.

3.3.3 Distribution of sample size using sampling fraction

$$\text{Sampling fraction} = \frac{n}{N} = \frac{332}{1920} = 0.1723953$$

$$n \text{ for Muyinga} = 0.1723953 * 728 = 125.5 = 126$$

$$n \text{ for Kirundo} = 0.1723953 * 215 = 40.5 = 37$$

$$n \text{ for Ngozi} = 0.1723953 * 977 = 168.5 = 169$$

Table 1: Sample size and sampling strategies

Respondents	Simple size	Sampling strategy
Youth members of ACS	140	Simple random sampling
Youth non-members of ACS	192	Convenience sampling
Old farmers	3	Purposive sampling
Co-operative officers	3	Purposive sampling
Total	338	

3.3.3 Sampling techniques

The study utilized simple random sampling, convenience sampling and purposive sampling techniques. Simple random sampling was employed to select youth members of ACS under northern region of Burundi. The list of respondents was gotten from ACS leaders. Simple random sampling was adopted because it gives chance to every respondent to be selected. Convenience sampling was employed to select youth non-members of ACS who were easily accessible within the study area. This approach was chosen due to the availability of respondents. For example, in the case of selecting non-members of agricultural co-operatives, researcher engaged local leaders who assisted in identifying youth aged between 18 and 35 years old.

Additionally, the study also applied purposive sampling. This method was employed to specifically select co-operative leaders with expertise in co-operative societies, including old farmers and co-operative officers. These individuals were chosen because of their first-hand experience with co-operative societies in the study area.

3.4 Source of Data

Data for this study were gathered from primary source only. Primary data collection involved the use of survey questionnaires, focus group discussions and key informant interviews. The use of primary sources of data increases the reliability of the collected data since the data was collected directly from respondents and specifically for this study's objectives.

3.5 Data and Data Collection Methods

3.5.1 Key informant interview

The study employed the key informant interview method, chosen to complement the information gained from questionnaires regarding youth engagement in agricultural co-operatives. An interview guide was utilized for data collection, designed and conducted

in a professional manner to extract valuable insights and opinions from key respondents who possess extensive knowledge about youth participation in agricultural co-operative societies. The key informants comprised three co-operative officers and three experienced old farmers.

3.5.2 Survey

The study employed a self-administered survey questionnaire to obtain quantitative data from participants. A self-administered survey is one in which the respondent fills out the questionnaire on their own, without the help of an interviewer. The method of distribution, which is typically used to reach a large number of people was in-person and it was done with paper and a pen. Therefore, it made it possible to quickly and accurately collect data from a large number of respondents by using a survey questionnaire.

To measure respondents' participation, a five-point Likert scale was employed to gather data from survey questionnaire. The participation was ranked in ascending order from strongly agree to strongly disagree on a scale of 1 to 5. The responders were required to mark whether they strongly agree (1), agree (2), neutral (3), disagree (4) and strongly disagree (5) with the statement by checking in the appropriate boxes.

3.5.3 Focus group discussion

A focus group discussion involves approximately six to twelve participants guided by a facilitator, where group members engage in open and spontaneous discussions about a given topic. This technique proves valuable for exploring ideas, concepts and perceptions related to specific existing situations (Barbour, 2014). For this study, three focus groups discussion were conducted, each comprising 9 to 12 participants (Barbour, 2014). The first focus group discussion was conducted in Muyinga province, Bwasare village. Convenience sampling was used to select youth members of ACS to form a group who were available at that time. The second focus group discussion was conducted in Ngozi province, Gashikanwa village. Convenience sampling was used to select youth members of ACS to form a group who were available at that time. The third focus group discussion was conducted in Tangara District, Nyagatovu village. Convenience sampling was used to select youth members of ACS to form a group who were available at that time. In all provinces data were collected and included in the research study. This technique was employed to observe participants' perceptions and gather information regarding both monetary and non-monetary costs and benefits associated with youth participation in agricultural co-operative societies.

3.6 Methods for Data Analysis

Data Analysis was facilitated through the utilization of Statistical IBM-SPSS version 25 and Microsoft Excel, enabling efficient data processing and analysis.

The data analysis procedure was carried out as follows:

3.6.1 Assessment of the level of awareness among youth regarding agricultural co-operative societies in the north region of Burundi

This objective was analysed using descriptive statistics to evaluate the level of awareness among youth regarding their participation in agricultural co-operative societies in the area. Descriptive statistics proved valuable in providing insights into youth awareness of agricultural co-operative societies. This was accomplished through Likert scale response, graphic representations of their awareness, such as tables displaying frequency numbers, percentages, mean and Standard deviation. Respondents were asked to rate their level of awareness on a scale of 1 to 5 where 1=fully not aware, 2=not aware, 3=neutral, 4=aware and 5= fully aware. The responses were interpreted based on a mean index adopted from Kalatya and Moronge (2017) where a mean of 1.0 to 2.5 show not agreed (lower level of awareness) a mean of 2.6 to 3.4 identify neutrality (moderate level of awareness), while a mean of 3.5 to 5.0 indicated agreed upon (high level of awareness). The utilization of descriptive analysis facilitated the conversion of raw data into meaningful percentages, mean and standard deviation enhancing comprehension. These visual representations not only illustrated patterns and trends but also identified areas requiring intervention to enhance knowledge and understanding.

3.6.2 Examining cultivation related co-operative activities in which youth are involved in their region of Burundi

The second objective was approached through the application of descriptive statistics to explore the various cultivation related co-operative activities engaging youth. Descriptive statistics, in this context offered valuable insights into the specific agricultural co-operative activities' youth participated in. Visual representations such as graphs and tables showcased these activities. Descriptive analysis transformed raw data into meaningful averages, enhancing interpretability. These visual presentations helped illustrate patterns and trends and were instrumental in identifying the most beneficial crops, likely to attract youth participation in agricultural co-operative societies. Additionally, the insights

derived from these analyses contributed to formulating suggestions on extending these activities.

3.6.3 Establishment of comparable costs and benefits of youth participating in agricultural co-operative societies

Both quantitative and qualitative methods were employed to achieve this objective. This objective was analysed by using Benefit Cost Analysis where Benefit-Cost Ratio (BCR) was applied.

The formula used is as follows:

$$BCR = \frac{\sum_{t=1}^n \frac{B_t}{(1+i)^t}}{\sum_{t=1}^n \frac{C_t}{(1+i)^t}} \dots\dots\dots (2)$$

Whereby;

B_t = Discounted stream of benefits, C_t = Discounted stream of costs, n = number of years, i = discount rate, t = Time

B_t = Increased capital income + salary generated + food availability

C_t = Membership fee + cost of capital investment + Administrative and overhead cost

If the BCR is greater than 1, it means that the benefits of youth participation in ACS outweigh the costs of participation in ACS. If the BCR is less than 1, it means that the costs of the youth participation in ACS outweigh the benefits.

The study adopted the Cost Benefit Ratio (BCR) model as one of the metrics of Social Benefit Cost Analysis (SBCA). In this study, SBCA is defined as the ratio of the present value of annualized benefits (B) of youth participation in agricultural co-operative societies to the present value of annualized costs (C) associated with their participation. The BCR compares the relative benefits and costs of investment over time to determine its economic efficiency from society's perspective (Thrikawala *et al.*, 2022).

To calculate the present values, both the benefits and costs of youth participation were discounted at annual rates of 8%, based on the prescription of the Copenhagen Consensus Centre (Akpalu, 2020). The benefit-cost ratio was then calculated using the conventional

formula to assess the economic efficiency of youth participation in agricultural co-operative societies over a one-year period.

3.6.4 Examining socio-economic factors influencing youth participation in agricultural co-operatives societies

The fourth objective was analysed by adoption of Binary logistic regression model, it was used to analyse data and resulting output in terms of p-values to test the relationship between the independent variables (Socio-economic factors) and dependent variable (Youth participation in agricultural co-operatives society). Binary logistic regression is used when the responses are binary in nature.

In this case, agricultural co-operative had only two options, youth participation in ACS or not on the influence of socio-economic factors. The answers were in terms of yes and no. The analysis was done by using the following binary logistic regression equation:

$$\text{Log}\left(\frac{p}{1-p}\right) = \alpha + \beta_1 X_{1i} + \beta_2 X_{2i} + \beta_3 X_{3i} + \beta_4 X_{4i} + \dots \beta_{10} X_{10i} + \varepsilon_o \dots \dots \dots (3)$$

P = dependent variable and represents the probability of either youth participating in ACS or not participating coded as 1 and 0 respectively.

α = intercept, $\beta_1 - \beta_{10}$ = Regression coefficients, ε_o = stochastic error term.

X_1 = Access to market

X_2 = Access to credit

X_3 = Profitability

X_4 = Access to lands

X_5 = Access to fertilizer

X_6 = Gender

X_7 = Household size

X_8 = Education

X_9 = Marital status

X_{10} = Social capital

Table 2: Operational Definition of Variables and their Measurement levels

Variables	Definition	Measurement	Instrument
Youth Awareness on ACS	Awareness of ACS existence Access to information Youth educational forum on ACS Knowledge of forming ACS	Five-point Likert Scale	Questionnaire
Cultivation related co-operative activities in which youth are involved	Vegetable cultivation, Rice cultivation, Beans cultivation, Maize cultivation, Banana cultivation, Irish Potatoes, Livestock keeping and coffee	Five-point Likert Scale Nominal	Questionnaire Interview
Cost and Benefits of youth participation in ACS	Membership fee, cost of capital investment, administrative and overhead cost, increased capital income, salary generated from ACS and food obtained from ACS	Nominal Ratio	Questionnaire Focus group discussion
Socio-economic factors influencing youth participation in ACS	Access to market, access to credit, access to land, profitability, access to fertilizer, gender, household size, education level, marital status and social capital	Five-point Likert Scale	Questionnaire Interview
Youth participation in ACS (DV)	Youth participating in ACS and not participating in ACS	Categorical Scale	Questionnaire

3.7 Data Reliability

Data reliability was assessed to ascertain the consistency of the research tools, aiming to identify and rectify errors (Mahajan, 2017). The study ensured reliability through the measurement of internal consistency, employing diverse research tools including the Cronbach's alpha coefficient. To ascertain reliability, a pilot study was conducted with 12 participants as recommended by Creswell (2014) that the sample size should exceed the number of items in the questionnaire. The internal consistency of the questionnaire was evaluated using the Cronbach's Alpha coefficient. For the main study, survey questionnaires were utilized without any modifications. The calculated Cronbach's Alpha value was 0.81, which is greater than 0.7. A value lower than 0.7 would suggest insufficient internal consistency reliability, as deemed unacceptable by Creswell (2014).

The recorded reliability value of 0.81 for all study variables indicates that the internal consistency of the study is stable and dependable.

3.8 Validity of Data

To ensure validity in the sample survey, research instrument validation, including a pilot study, was employed. Prior to the main study, a pilot test was conducted with potential sample participants to assess validity. Pre-testing the questionnaire held paramount importance in this study, as it involved a thorough review of questions to eliminate ambiguity, confusion, or potential offense that could bias responses. This meticulous approach fortified the research instrument's validity. Both the survey questionnaire and interview guide underwent content validity tests to ascertain an adequate number of items for accurate measurement of the subject matter. Experts input was sought to review and suggest improvements for questions that were poorly phrased or strayed from objectives. According to Rugasira *et al.* (2022), a Content Validity Index (CVI) above 0.5 is highly recommended. Validity holds significance as it minimizes bias, enhancing data accuracy.

Internal validity was also ensured by controlling and isolating extraneous factors that could influence the dependent variable. Generalizations were only feasible and reliable with the attainment of internal validity, ensuring external validity as well. The study employed the content validity index to validate data, encompassing both qualitative (content validity) and quantitative (cognitive interview) approaches. Content validity was assessed using the CVI, calculated by dividing the number of valid questions (22) by the total number of questions (26). The Content Validity Index led to be 0.84, signifying a satisfactory level of data validity.

3.9 Piloting

Prior to data collection, piloting was carried out to evaluate the instrument's validity and reliability. The quality of collected data hinges on the validity and reliability of the data collection tool, ensuring that data is gathered and measured consistently and with stability. This piloting process involved a subset of the targeted population, enabling the assessment and enhancement of instrument clarity, reliability and internal validity. Furthermore, the piloting phase aimed to identify and address any logical issues that could potentially hinder respondents' understanding of the questions.

Twelve respondents were administered the questionnaires as part of the piloting process (comprising 6 youth co-operative members, 6 youth non-members of co-operatives and

1 focus group discussion). Subsequently, after receiving responses, participants were asked to provide insights into their experiences while completing the study questionnaire. This exercise served to gather feedback on various aspects, including the questionnaire's length, time required for completion, wording of questions, question sequence and participants' suggestions for questionnaire improvement. A summary of the feedback and resulting modifications to the questionnaire are presented in Table 3:

Table 3: Finding from piloting study

Comment	Responds
Number of year old	For particular improvement, the question was rephrased as follows; please indicate your age?1) 18-21, 2) 22-25, 3) 26-29, and 4) 30-35
School attended	The level of education was put in different level such as1) No education level, 2) primary,3) seconder, 4) certificate 5) Diploma,6) Degree and 7) Master and 8) PhD
Level of scale reading them	The level of scale was rephrased from lowers point higher points: Strongly agree - 1, agree - 2, neutral -3 disagree -4 and strongly disagree - 5.
To know non-monetary cost and benefits of youth participation in ACS	Focus group discussion was employed to get more information on research study.

3.10 Ethical consideration

Throughout the research process, ethical norms and standards were strictly adhered to. The guidelines and principles of MoCU were respected, for example a research letter was obtained from Moshi Co-operative University and subsequently submitted to the National Commission for Science, Technology and Innovation in Burundi. Prior to data collection, a research permit was obtained and presented to the local leaders in the study area. Respecting the rights of individuals to decide whether to participate in the research or not, the study prioritized principles of confidentiality, privacy, honesty, sensitivity and participant anonymity. To ensure confidentiality, participants were assigned numerical identifiers in place of their names. Before gathering information, respondents were explicitly asked for their willingness to share their insights, underscoring the commitment to safeguard participant confidentiality. It is noteworthy that the data collected was solely intended for academic research purposes.

Moreover, the researcher underscored the transparency and integrity of all forms of communication, filtering out any misleading information. Additionally, steps were taken

to ensure accurate representation across various dimensions, including gender, age and membership status (members and non-members of agricultural co-operative societies) within the study area.

3.11 Multicollinearity

Multicollinearity in the data occurs when the independent variables are highly correlated with each other. The rule under binary logistic regression model is that independent variables should not be correlated with each other. If VIFS are equal to one, it indicates no or little multicollinearity; when VIFS range between one to five, it indicates moderate; VIFS range from five to ten indicates high correlation; and lastly, if VIFs are greater than ten and the tolerance is less than 0.2, it implies that coefficients are poorly estimated and there is a multicollinearity problem that should be fixed accordingly. Therefore, VIFS under this study was equal to one and the tolerance levels were found to be greater than 0.2, which implies that Multicollinearity problem did not exist as presented in the Table 4.

Table 4: Multicollinearity statistics

Variable	Tolerance	VIF
Access to market	0.801	1.321
Access to credit	0.833	1.883
Access to land	0.881	1.465
Profitability	0.963	1.943
Access to fertilizer,	0.750	1.964
Gender	0.940	1.321
Household size	0.960	1.993
Education level	0.686	1.89
Marital status and	0.745	1.987
Social capital	0.756	1.845
	0.745	1.89

CHAPTER FOUR

4.0 FINDINGS AND DISCUSSION

4.1 Introduction

This chapter provides an overview of the general information of respondents, as well as the analysis and discussion of findings of the study. It is divided into two parts. The first part presents the socio-demographic characteristics of the respondents, while the second part focuses on the empirical findings and discussion related to the study objectives. The main objective of this study is to assess the factors that influence youth participation in agricultural co-operative societies in the northern region of Burundi. Specifically, the study aims to determine the level of awareness among youth regarding agricultural co-operative societies in the study area. Additionally, the study examines the cultivation related co-operative activities in which youth are involved. Furthermore, the study establishes the comparable costs and benefits associated with youth participation in agricultural co-operative societies. Lastly, it examines the socio-economic factors that influence the involvement of youth in agricultural co-operative societies.

4.2 Socio-Demographic Characteristics of Respondents

This section includes information about gender of respondents, ages of respondents, marital status of respondents, education level of respondents, household size of respondents and youth membership profile in agricultural co-operative societies and time frame working in these agricultural co-operative societies.

4.2.1 Gender of respondents

Different societies often assign distinct roles and responsibilities based on gender. These roles can influence the level of access to resources, decision-making power and opportunities available to young people within agricultural co-operative societies. For instance, in some cultures, young women might be expected to focus more on household chores and caregiving, while young men may be encouraged to take up leadership positions or engage in certain types of agricultural work. The findings of the study in Table 5 below show that the majority 82.8% of respondents were males while the remaining 17.2% of respondents were females. This indicated that the majority of youth

participating in agricultural co-operative societies in the study area were males. Gender is an important attribute when it comes to youth engagement in co-operatives activities. Notably, it was observed that 82.8% of the respondents were men, while 17.2% were females. This observation implies that a higher number of male youths dominate participation, as they tend to engage in various economic activities beyond the confines of their households.

4.2.2 Ages of respondents

Societal norms and expectations surrounding age can influence the opportunities and limitations that young people encounter in agricultural co-operative societies. Addressing age-related stereotypes and promoting intergenerational collaboration can create a more inclusive environment for youth participation. The findings in Table 5 show that the majority 44% of respondents was aged between 26 to 29 years old, 28.6% of respondents were aged between 22 to 25 years old, 21.7% of respondents were aged between 30 to 35 years old and 5.7% were aged between 18 to 21 years old. This suggests that the majority of youth in the study area were above 22 years old, a time when they are actively seeking for opportunities in agricultural co-operative societies as business organizations. These co-operative societies serve as a significant employer, providing individuals with both food and income.

4.2.3 Marital status of respondents

Marital status is an important variable in understanding family structures, social dynamics, and access to certain rights and benefits within a community. Marital status with youth participation in agricultural co-operative societies can shed light on how this factor influences young people's involvement in agricultural activities. The findings in the Table 5 below show that the majority 81.3% of respondents were married, 12% of respondents were single, 4.8% of respondents were divorced and 1.8% were window/windower. This indicated that most of youth who are participating in agricultural co-operative societies are married which is a time for them to work for family.

4.2.4 Education level of respondents

Education level serves as a crucial indicator of a person's knowledge, skills, qualifications, and it plays a significant role in shaping their opportunities, social mobility and participation in various aspects of society. The findings in Table 5 show that the majority 59.3% of respondents completed primary school, 19.9% of respondents

completed secondary school, 10.8% of respondents had no any formal education, 5.4% of respondents completed certificate level, 2.4% of respondents hold bachelor's degree, 1.8% of respondents had diploma, 0.3% of respondents hold master's degree and none hold a PhD. These findings provide a comprehensive understanding of the subject matter of the study. This implies that youth with lower levels of school education are more likely to be involved in agricultural co-operative compared to these with higher levels of education. In some societies, higher education might be associated with moving away from rural areas or pursuing urban careers, affecting the desire or willingness of youth to participate in agricultural work.

4.2.5 Household size of respondents

The study sought to determine the size of the household of the respondents. The findings in the Table 5 show that the majority 30.1% of the respondents indicated that they had 3 household members. Additionally, 27.1% of respondents had two household members, 20.5% of respondents had 4 four household members, 10.8% of respondents had one household member, 7.8% of respondents had five household members and 3.6% of respondents had more than six household members. These findings indicate that majority 30.1% of the respondents had more than three household members which suggests a limitation in accessing resources such as land, capital, water and other resources to support agricultural co-operative societies among youth.

4.2.6 Youth membership profile

Youth membership in agricultural co-operative is important for their social economic development. The findings of this study presented in Table 5 show that 42.2% of respondents were members of agricultural co-operative societies while 57.8% of respondents were not members of agricultural co-operative societies. This suggests at lower level of youth participation in agricultural co-operative societies. Youth often perceive agricultural co-operatives as activities meant for elder people and economically disadvantaged individuals. The findings are supported by the empirical studies conducted by various scholars such as (Anania *et al.*, 2020) who also observed a lower number of youth individuals involved in agricultural co-operative societies.

4.2.7 Nature of youth participation in agricultural co-operative societies

The results in Table 5 indicate that 38.3% of the respondents agreed that they were involved in farming co-operative on a part-time basis, 3.9% of respondents were involved

in farming co-operative on fulltime basis. Additionally, 57.3% of the respondents agreed that they were not working in agricultural co-operative societies either a full-time or part-time basis. The majority of the respondents were involved in farming on a part-time basis. This suggests that they are likely involved in other livelihood diversification or income generating activities in addition to agricultural co-operative societies.

Table 5: Profile of respondents (n=332)

Variables	Category	Frequency (n=332)	Percentage (%)
Gender group			
	Male	275	82.8
	Female	57	17.2
Ages group			
	18-21	19	5.7
	22-25	95	28.6
	26-29	146	44
	30-35	72	21.7
Marital status			
	Single	40	6
	Married	270	81.3
	Divorced	16	4.8
	Widowed	6	1.8
Education Level			
	No education	36	10.8
	Primary	197	59.3
	Secondary	66	9.9
	Certificate	18	5.41
	Diploma	6	1.8
	Degree	8	2.4
	Master	1	0.3
	PhD	0	0.00
Household size			
	1	36	10.8
	2	90	27.1
	3	100	30.1
	4	68	20.5
	5	26	7.8
	6 and above	12	6.3
Membership profile			
	Members	140	42.2
	Non-members	192	57.8
Time frame working in ACS			
	Fulltime	13	3.9
	Part-time	127	38.3
	None of above	192	57.8

4.3 Empirical Findings and Discussion

This section describes findings in accordance with the study variables and objectives, which form the foundation of the research study. This section presents an analysis and interpretation of the views and opinions gathered from the respondents through administered questionnaires, conducted interview and focus group discussion.

4.3.1 Youth awareness regarding agricultural co-operative societies

The first objective of this study was to assess the level of awareness among youth regarding agricultural co-operative societies in the northern region of Burundi. The purpose of this study was to determine whether youth in the study area possess information related to agricultural co-operative societies. By utilizing descriptive statistics, this research aimed to provide valuable insights into awareness among youth regarding agricultural co-operative societies and identify areas that require to enhance knowledge and understanding. Furthermore, the findings help decision makers to facilitate informed decisions and development of targeted strategies to increase awareness and engagement in these societies. To achieve this, data was collected from both youth members and non-members of agricultural co-operative societies in the study area. Additionally, various empirical reviews were conducted to confirm the currently findings.

4.3.1.1 Level of youth awareness regarding agricultural co-operative societies

The first research question of this study was to assess the level of youth awareness regarding agricultural co-operative societies in the northern region of Burundi. Respondents were asked to rate their level of awareness on a scale of 1 to 5 where 1=fully not aware, 2= not aware, 3= neutral, 4= aware and 5= fully aware. The responses were interpreted based on a mean index adopted from Kalatya and Moronge (2017) where a mean of 1.0 to 2.5, show not agreed, a mean of 2.6 to 3.4 identify neutrality, while a mean of 3.5 to 5.0 indicate agreed upon. The Response from the Table 5 below present Likert scale response for each theme undertaken by youth in their respective area.

As revealed in Table 6, the general level of awareness among youth regarding agricultural co-operative societies in the northern region of Burundi is low with an average mean of constructs of 2.23 and an aligning standard deviation of 1.35. This as per Kalatya and Moronge mean index implies that respondents indicated that they were not aware of the existence of ACS, the process or procedure of forming ACS, the requirements for registering ACS and they have attended few ACS educational forums. These findings imply that many youths may not be able to participate in ACS if they are not aware of its

existence. Secondly, lack of understanding about requirements and registering procedure is a major hindrance to increasing the number of youths in ACS. The same finding was reported by Ochan (2017) who found that only 15.73% of youth in Ethiopia, Gamballa district were aware about agricultural co-operatives indicating a low level of awareness among youth regarding agricultural co-operative societies.

According to the findings presented in Table 6, respondents were asked if they are aware about the existence of agricultural co-operative societies. It was found that only 42% of respondents indicated that they were aware about the existence of agricultural cooperative societies while 40% of respondents were not aware about the existence of agricultural co-operative societies and 13% were fully not aware about the existence of ACS. The finding also show that the existence of agricultural co-operative had a mean of 2.84 and standard deviation of 1.52 indicating that there was very high variance in responses from participants.

In regards to whether they understand the process of forming agricultural co-operative societies 44% of respondents reported that they understand the process of forming agricultural co-operative societies. Additionally, 27% of respondents were fully not aware about the process of forming agricultural co-operative societies while 26% of respondents do not understand the process of forming agricultural co-operative societies. The finding also indicated that understanding the process of forming agricultural co-operative societies had a mean of 2.66 and standard deviation of 0.80 indicating that there was very high variance in responses from participants. This means that almost a half of respondents understand the process of forming agricultural co-operative societies.

Furthermore, respondents were asked if they are aware about agricultural co-operative societies educational forum. The findings revealed that 35% of respondents reported that they were aware about agricultural co-operative societies educational forum while 32% of respondents reported that they were not aware about agricultural co-operative societies forum, 22% of respondents indicated that they were fully not aware about agricultural cooperative societies educational forum. The finding also indicated that educational forum about ACS had a mean of 1.37 and standard deviation of 1.31 indicating that there was small variance in responses from participants.

Regarding the understanding of registering requirements, 42% of respondents reported that they were aware about all registering requirements, 18% of respondents were not aware about all registering requirements. Additionally, 28% of respondents were fully not

aware about the all registering requirements of agricultural co-operative societies. The findings also indicated understanding the registering requirements had a mean of 1.30 and standard deviation of 1.87 indicating that there was small variance in responses from participants which indicates a lower of knowledge about the requirements of registering ACS. Furthermore, respondents were asked if they are aware about the benefits of agricultural co-operative societies. The findings indicated that 56% of respondents reported that they are aware about the benefits of agricultural co-operative societies, while 18% of respondents reported that they were fully not aware about the benefits of agricultural co-operative societies. The finding also indicated that the benefits of agricultural co-operative societies had a mean of 3.01 and standard deviation of 1.28 indicating that there was high variance in responses from participants.

These findings are not consistent with Kissing's *et al.* (2016) who conducted a study on factors influencing youth participation in agricultural co-operative projects in Kenya. The study found that 80% of youth joined agricultural co-operative projects due to their awareness of these initiatives. This implies that in Kenya, youth are more informed about agricultural co-operative societies compared to youth in Burundi.

Table 6: Level of awareness among youth regarding ACS (332)

Statement about level of awareness on ACS	1		2		3		4		5		Mean	Std. Dev
	N	%	N	%	N	%	N	%	N	%		
I am aware of the existence of ACS	13	13	40	40	1	1	42	42	4	4	2.84	1.52
I understand the process of forming ACS.	27	27	26	26	2	2	44	44	1	1	2.66	0.80
I am aware of ACS educational forums	22	22	32	32	2	2	35	35	9	9	1.37	1.31
I understand all the registering requirements	18	18	28	28	7	7	42	42	5	5	1.30	1.87
I am aware about the benefits of ACS	18	18	10	10	5	5	56	56	11	11	3.01	1.28
Average											2.23	1.35

Key words: 1=fully not aware, 2=not aware, 3=Neutral, 4=aware, 5= fully aware

To gain the overall understanding of awareness among youth regarding agricultural cooperative societies, respondents were asked if they are access to information on ACS, number of trainings they have attended and their experience about agricultural cooperative societies.

4.3.1.2 Access to information on agricultural co-operative societies

Respondents were asked about the source of information they receive on agricultural cooperative societies. According to the data presented in the Table 7, the majority 54.6% of respondents indicated that they received training from non-government organizations. A smaller proportion 43.3% of respondents reported receiving training from government, while minority of respondents 1.5% of respondents mentioned receiving training from private sector. Intensively, only 0.6 % of respondents stated that neither non-government organizations, government nor private sector provide training to youth on agricultural cooperative societies. These findings suggest that the majority of programmes on agricultural cooperative societies are organised by non-governmental organisations and government.

4.3.1.3 Youth educational forum on ACS

Respondents were asked to indicate the number of trainings that they have attended regarding agricultural co-operative societies. The findings presented in Table 7 indicate that the majority 53.6% of respondents attended between one and five trainings. Additionally, 44% of respondents reported attending between six and ten trainings. While a smaller proportion 2.4% of respondents indicated that they have attended more than ten trainings on agricultural co-operative societies. The findings suggest that most of youth in the study area have attended between one and five trainings about agricultural cooperative societies.

4.3.1.4 Youth experience on agricultural co-operative societies

Respondents were asked about the duration of participation in agricultural co-operative societies. The findings presented in the Table 7 below reveal that the majority 94% of respondents had an experience of less than one year. A smaller proportion of respondents 3.6% reported having an experience of between one year and five, while 2.4% of respondents indicated having between six years and ten of experience. These findings suggest that the majority of youth participating in agricultural co-operative societies have accumulated less than one years of working experience in the field. These findings align with the principles of Social Exchange Theory. Firstly, the study aims to assess the level of youth awareness regarding their participation in agricultural co-operative societies. According to SET, this assessment is crucial for understanding perceived benefits and costs based on available information, awareness and knowledge about agricultural co-operative societies and their experience with such societies.

Table 7: Youth awareness regarding agricultural co-operative societies

Variables Category	Frequency (332)	Percentage (%)
Source of information		
NGOs	181	54.6
Government	144	43.3
Private sector	5	1.5
None of above	2	0.6
Youth educational forum on ACS		
1-5	178	53.6
6-10	146	44
More than 10	8	2.4
Youth experience on ACS		
Less than 1 year	312	94
1-5 years	12	3.6
6-10 Years	8	2.4

4.3.2 Cultivation related co-operative activities in which youth are involved

The second objective of this study was to examine the cultivation related co-operative activities in which youth are involved in the study area. The purpose of this objective was to gain a deeper understanding of the cultivation related co-operative activities that attract and involve the majority of youth in the study area and provide valuable insights to inform policymakers and stakeholders. The study aimed to identify areas for improvement and propose recommendations for enhancing support mechanisms for youth engaged in cooperative activities. To achieve this objective, data was collected from youth members of agricultural co-operative societies in the study area. Additionally, survey and interview were conducted. Descriptive statistics were used to analyse the data and graphical representations such as table and graph were employed to illustrate the agricultural co-operative activities. Descriptive analysis was instrumental in converting raw data into meaningful information, and these visual representations helped identify patterns and trends. Furthermore, the analysis helped identify the crops that benefited the most and were more likely to attract youth participation in agricultural co-operative societies.

4.3.2.1 Cultivation related co-operative activities in which youth are involved

The findings from figure 2 below indicate that the majority 42.8% of respondents were engaged in beans cultivation, followed by 15.6% respondents who were involved in vegetable cultivation. Furthermore, 13% of respondents were involved in rice cultivation, 11.7% of respondents were involved in coffee cultivation, 9.3% of respondents were involved in maize production, 3.1% of respondents were involved in banana cultivation, 2.4% of respondents were involved in Irish potato cultivation, and only 2.1% of respondents were involved in livestock keeping. These findings are in line with Kimaro *et al.*, (2015), who found that vegetable, maize, beans and rice cultivation are the most common agricultural activities that youth engage in Karehe East ward, Moshi district. This indicates a similarity in agricultural co-operative activities between Burundi and Tanzania, likely influenced by shared environmental and geographical conditions.

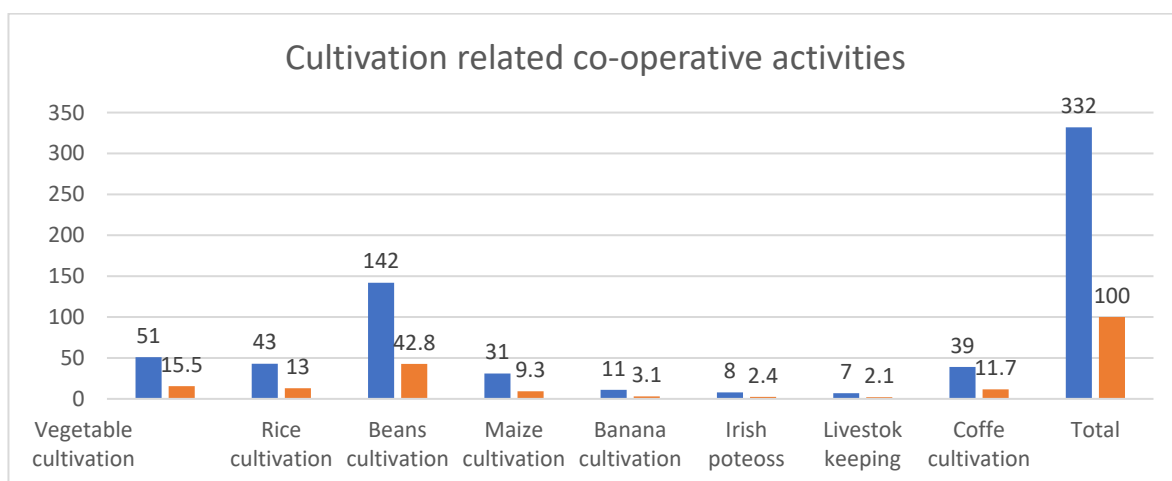


Figure 2: Cultivation related co-operative activities

4.3.2. Cultivation related co-operative activities that attract most of youth in the study area

The second research question of this study was to examine the cultivation related co-operative activities in which youth are involved. The respondents were asked the kinds of cultivation related co-operative activities in which youth are involved in agricultural co-operative societies. The response from the Table 8 below present Likert scale response for each cultivation related co-operative activity undertaken by youth in their area.

Table 8: Cultivation related co-operative activities that attract most youth

Statement about cultivation related Cooperative activities	S. A		A		N		D		SD	
	N	%	N	%	N	%	N	%	N	%
Vegetable cultivation attract youth in ACS	50	50	48	48	1	1	1	1	0	0
Rice cultivation attract youth in ACS	54	54	44	44	2	2	0	0	0	0
Beans cultivation attract youth in ACS	51	51	48	48	1	1	0	0	0	0
Maize cultivation attract youth in ACS	50	50	49	49	1	1	0	0	0	0
Banana cultivation attract youth in ACS	20	20	46	46	15	15	10	10	9	9
Irish potatoes cultivation attract youth	15	15	48	48	35	35	1	1	1	1
Livestock keeping attract youth in ACS	10	10	47	47	30	30	13	13	0	0
Coffee cultivation attract youth in ACS	40	40	48	48	1	1	1	1	0	0

Key words: **SA**: Strongly Agree, **A**=Agree, **N**=Neutral, **D**=Disagree, **SD**=Strongly Disagree

According to the finding presented in Table 8 respondents were asked whether vegetable cultivation attracts youth participation in agricultural co-operative societies, 50% of respondents strongly agreed that vegetable cultivation attracts and influences youth participation in agriculture and 48% of respondents agreed with statement. Vegetables are more productive in the northern region of Burundi due to favourable climate conditions, abundant water resources and potential for irrigation, which offer prospects for agricultural development (IFAD, 2008). This finding aligns with the study by Kimaro *et al.*, (2015), which found that vegetable, maize, beans, and rice cultivation are the primary agricultural activities in which youth engage in the Karehe East ward in Moshi district. This shows that climate conditions of Moshi District likely to be the same with the one of the northern regions of Burundi.

In regard whether rice cultivation attracts youth participation in agricultural co-operative societies, the findings from the Table 8 above show that 54% of respondents strongly agreed that rice cultivation attracts most youth in the northern region to participate in agricultural co-operative societies and 44% of respondents agreed that most youth are engaged in rice cultivation. Rice cultivation is more productive in the northern region due to favourable climate conditions and the availability of abundant water and irrigation resources.

Furthermore, respondents were asked to agree if beans cultivation attract them to participate in agricultural co-operative societies. The findings from the above Table 8 show that 51% of respondents strongly agreed that it attracts most youth to work in agricultural co-operative societies, and 48% of respondents agreed that they were

involved in beans cultivation. Beans cultivation is seen as economic base of the northern region because 70% of production within the country are from the northern region.

Regarding to maize cultivation, respondents were asked whether maize cultivation influence youth participation in agricultural co-operative societies, 50% of respondents strongly agreed that maize cultivation attract and influence youth participation in agricultural co-operative societies and 49% of respondents agreed that most of youth are involved in maize farming co-operatives.

Furthermore, respondents were asked whether banana cultivation attracts youth participation in agricultural co-operative societies. The findings presented in the Table 8 above show that 20% of respondents strongly agreed that banana cultivation attract and influence youth to participate in agricultural co-operative societies, 46% of respondents agreed that youth are attracted and influenced by banana cultivation, 15% of respondents were neutral and 10% disagreed that banana cultivation attract and influence youth to participate in agricultural co-operative. This finding is supported by an interview of Miburo old co-operative farmer who said that:

“Banana cultivation in the north region is owned by old farmers because most of youth are attracted by other crops that take short time for harvesting. He said that banana production takes a long time harvesting and it requires high capital and follower up.”
(Miburo,14 May, 2023)

Concerning to Irish potatoes cultivation, respondents were asked whether Irish potatoes cultivation attracts youth participation in agricultural co-operative societies. The finding presented in the Table 8 above show that 15% of respondents strongly agreed that Irish potatoes attract and influence youth participation in agricultural co-operative societies, 48% of respondents agreed that that Irish potatoes attract and influence youth participation in agricultural co-operative societies, 35 % of respondents were neutral and only one respondent disagreed that Irish potatoes attract and influence youth participation in agricultural co-operative societies.

Furthermore, respondents were asked whether Livestock keeping attracts youth participation in agricultural co-operative societies,10% of respondents strongly agreed that livestock keeping influence and attract youth participation in agricultural co-operative societies, 47% of respondents agreed that livestock keeping attract and influence youth participation in agricultural co-operative societies, 30% of respondents

were neutral while 13% of respondents disagreed that livestock keeping influence and attract youth participation in agricultural co-operative societies.

Lastly, respondents were asked whether coffee cultivation influence youth participation in agricultural co-operative societies, 50% of respondents strongly agreed that coffee production attract and influence youth participation as an export product that generate high income and 48% of respondents agreed that coffee cultivation attract and influence youth participation in agricultural co-operative societies.

The findings above are supported by Social Exchange Theory. It assumes that individuals make rational decisions based on the expected benefits and costs of a particular action. In any ACS activities, individuals may weigh the benefits and costs of participating in activities, such as increased income, improved access to resources, social connections and personal satisfaction, against the potential costs, such as time and effort, potential conflicts with other activities and perceived risks (Choi, 2017).

4.3.2.3 Reason of youth participation in agricultural co-operative societies

The respondents were asked about the reason why they participate in agricultural co-operative activities. The findings from Table 9 show that 50.3% of respondents indicated participating in agricultural co-operatives as a source of income, 35.5% of respondents stated that they participate in agricultural co-operative activities for self-employment purposes, 12% of respondents indicated participating in agricultural cooperative activities to obtain food and 2.1% of respondents mentioned participating in agricultural co-operative activities for the purpose of obtaining raw materials. These findings indicate that the majority of youth participate in agricultural co-operative activities primarily for the purpose of generating income.

Table 9: Reason of participation in ACS

Reasons of participation	Frequency (n=332)	Percentage (%)
Self-employment	118	35.5
Source of income	167	50.3
To obtain food	40	12
To get raw material	7	2.1
Total	332	100.0

4.3.3 The Comparable costs and benefits of youth participation in agricultural co-operative societies

The third specific objective of this study was to establish the comparable costs and benefits of youth participation in agricultural co-operative societies. Both quantitative and qualitative methods were employed to achieve this objective. The purpose of the study was to determine whether agricultural co-operative societies constitute a good investment for society.

4.3.3.1 Costs of participation in ACS

The cost elements related to the establishment of agricultural co-operative societies both registration cost, ongoing operational cost such as cost of capital for investment, administrative and overhead cost were computed.

4.3.3.1.1 Membership fee in agricultural co-operative societies

Respondents were asked regarding their prescription fee they pay in agricultural cooperative societies. The outcomes presented in Table 10 demonstrate that 93% of respondents noted a maximum membership fee of 10 000 BIF in agricultural co-operative societies. Conversely, only 7% of respondents did not provide a specific amount as the membership fee. These findings collectively imply that the prevailing perception among the majority of respondents is that the highest membership fee within agricultural co-operative societies stands at 10 000 BIF.

4.3.3.1.2 Cost of capital in agricultural co-operative activities for investment

Respondents were surveyed regarding their monthly contributions to agricultural cooperative societies for investment. The results presented in Table 10 demonstrate that a significant majority, specifically 97.3% of respondents disclosed that they contribute 100 000 BIF on a monthly basis. Furthermore, 1.5% of participants stated their contribution falls within the range of 100 000 BIF to 500 000 BIF, while 1.2% of respondents mentioned contributing between 600 000 BIF and 1 000 000 BIF. These findings collectively highlight that the prevailing contribution amount, as indicated by most respondents, is 100 000 BIF. The cumulative annual capital investment cost in agricultural co-operative societies could potentially reach 1 200 000 BIF.

4.3.3.1.3 Administrative and overhead costs in agricultural co-operative societies

Respondents were asked regarding the monthly payment of administrative and overhead costs within agricultural co-operative societies. The findings from Table 10 indicate that a significant proportion, specifically 96.7% of respondents pointed out that administrative and overhead costs in agricultural co-operative societies remain below 100 000 BIF. Moreover, 1.8% of respondents specified overhead costs amounting to 10 000 BIF or higher, 0.9% of respondents mentioned a range between 5 000 BIF and 10 000 BIF for overhead costs, while 0.6% of respondents stated overhead costs ranging from 100 000 BIF to 500 000 BIF. Hence, these results imply that the majority of respondents affirmed 100,000 BIF as the prevailing overhead cost in agricultural co-operative societies. The cumulative annual administrative and overhead costs for a year could potentially reach 1 200 000 BIF.

Table 10: Cost of participation in ACS

Estimated membership fee	Frequency (n=332)	Percentage (%)
Membership fee in ACS		
5 000 BIF	0	0.00
10 000 BIF	309	93
Not estimated	23	7
Cost of capital for investment		
Below 100 000 BIF	323	97.3
100 000-500 000BIF	5	1.5
600 000 -1 000 000 BIF	4	1.2
Administrative and overhead cost in ACS		
Below 100 000 BIF	321	96.7
100 000-500 000 BIF	2	0.6
500 0000-1 000 000 BIF	3	0.9
1000 0000 BIF and above	6	1.8

To gain the overall understanding of cost of youth participation in agricultural co-operative societies, a focus group discussion was conducted. Respondents were asked to debate on other non-monetary costs or intangible costs such as social and environment impacts. For example, in Gasorwe district, discussants stated that:

“Active participation in agricultural co-operatives often requires a significant time commitment. This can pose challenges for us who are balancing our involvement with other responsibilities such as education, work, or family obligations. The commitment required for attending meetings, participating in decision-making processes, and carrying out cooperative activities may require

careful time management. Engaging in agricultural co-operatives requires acquiring knowledge and understanding of cooperative principles, agricultural practices, and the functioning of the organization. For us who are new to the agricultural sector or cooperative models, there may be a learning curve involved in understanding the complex dynamics of the cooperative and agricultural systems. This learning process may require effort, patience, and a willingness to adapt.” (Bwasare village, 25 May, 2023)

In Ngozi, Gashikanwa, discussants stated that:

“Agricultural co-operatives are often composed of members from different age groups and backgrounds. We may face challenges related to inter-generational dynamics, including gaining respect and recognition from older members who may hold traditional views or be resistant to change. Our participation in agricultural co-operatives may require us to balance our personal aspirations with the collective goals of the cooperative. We may have individual career aspirations, educational pursuits, or personal goals that need to be aligned with the co-operative’s objectives. Striking a balance between personal aspirations and the collective interests of the cooperative may involve negotiation, compromise and long-term planning” (Gashikanwa District, 25 May, 2023)

In Ngozi, Tangara district, discussants stated that:

“Active participation in agricultural co-operatives often involves sharing decision-making responsibilities. We may face the pressure of making informed decisions that impact the cooperative and our membership status. Developing decision-making skills, gathering relevant information, and balancing different perspectives can be demanding and requires the ability to handle responsibility.” (Nyagatovu Village, 26 May, 2023)

This implies that despite the non-monitory cost of youth participation in agricultural co-operative societies, they account other costs for their operations. This affects their lives which make them not continue participating in agricultural co-operative societies.

Table 11: Summary of costs

Category	Value (BIF)	Source
Membership fee	10 000	Field data
Cost of capital for investment	1 200 000	Field data
Administrative and overheads	1 200 000	Field data
Total	2 410 000	Field data

4.3.3.2 Benefits of participation in ACS

There are several benefits that we assume arise from the formation of agricultural co-operatives. They include increased revenue from improved production practices, salaries, food, employment opportunities, self-help and others.

4.3.3.2.1 Income generated from ACS

Respondents were inquired about the monthly income derived from their involvement in agricultural co-operative societies. The results elucidated in Table 12 reveal that a notable majority, specifically 94.9% of respondents, indicated that their income stemming from participation in agricultural co-operative societies falls within the range of 10 000 BIF to 30 000 BIF. Additionally, 4.8% of respondents specified their income to be within the range of 30,001 BIF to 50 000 BIF, while 0.3% of respondents mentioned an income range spanning from 50 001 BIF to 100 000 BIF. This data suggests that the prevailing income bracket for most youth engaged in agricultural co-operative societies is a maximum of 30 000 BIF per month. The collective annual income estimation could potentially reach 360 000 BIF.

4.3.3.2.2 Salary generated from ACS

Respondents were asked regarding the monthly salary amounts provided to youth in agricultural co-operative societies. The results outlined in Table 12 reveal that a substantial majority, specifically 98.8% of respondents, indicated that youth receive a salary of 200 000 BIF or more each month. Furthermore, 0.6% of respondents reported that the salary acquired from agricultural co-operative societies amounts to 100 000 BIF, while an additional 0.6% of respondents mentioned a salary range spanning from 100 000 BIF to 200 000 BIF. As such, these findings indicate that the predominant remuneration for youth engaged in agricultural co-operative societies is a minimum of 200 000 BIF. The cumulative annual salary computation could potentially reach 2 400 000 BIF.

4.3.3.2.3 Food generated from ACS

Respondents were surveyed regarding their monthly estimates of the monetary value of food obtained from agricultural co-operative societies. The results presented in Table 12 demonstrate that a significant majority, specifically 99.1% of respondents indicated an estimated range of food value between 90 000 and 100 000 BIF per month. Additionally, 0.6% of respondents stated they received between 50 000 and 90 000 BIF worth of food from agricultural co-operative societies each month, while 1% of respondents mentioned amounts at 100 000 BIF and above. Consequently, this data signifies that the majority of young individuals participating in agricultural co-operative societies estimate the value of their monthly food at 100 000 BIF. The calculated total annual benefits could potentially amount to 1 200 000 BIF.

Table 12: Benefits of participation in ACS

Estimated amount	Frequency (n=332)	Percentage (%)
Income generated from ACS		
10 000-30 000 BIF	315	94.9
30 001-50 000 BIF	16	4.8
50 001-10 0000	1	0.3
Salary generated from ACS		
100 000 BIF	2	0.6
100 000-200 000 BIF	2	0.6
200 000 BIF and above	282	98.8
Food generated from ACS		
50 000- 90 000 BIF	2	0.6
90 000-100 000 BIF	329	99.1
100 000 BIF and above	1	0.3

To gain the overall understanding of benefits of youth participation in agricultural co-operative societies, group of respondents has discussions on other non-monetary benefits or intangible benefits such as social and environment impacts. For example, during a focus group discussion in Muyinga province, Gashoho sector, it was stated:

“Our involvement in agricultural co-operatives provides opportunities for skill development in various areas such as leadership, teamwork, communication, decision-making, and project management. These skills are transferable and valuable in other aspects of life as well” (Gashoho sector, 17 May, 2023)

In Ngozi province, it was stated that:

“Co-operatives foster an environment where knowledge and information are shared among us. By participating in such societies, we have access to valuable agricultural knowledge and expertise from experienced farmers. This knowledge sharing helps in preserving traditional farming practices while also incorporating new techniques and innovations. Joining agricultural co-operatives allows us to connect and interact with fellow farmers, industry professionals, and experts in the field. These networks provide opportunities for mentorship, collaboration, and the exchange of ideas. Building relationships within the agricultural community can be beneficial for our future endeavours and personal growth”. (Kiremba village, 20 May, 2023)

In Vumbi district, it was stated that:

“Participating in co-operatives gives us a sense of empowerment and confidence as we actively contribute to decision-making processes. we have a platform to voice their opinions, ideas, and concerns, which enhances our self-esteem and fosters a sense of ownership and responsibility. In many agricultural communities, traditional farming practices and cultural heritage are deeply intertwined. By participating in co-operatives, we have the opportunity to learn and preserve these cultural traditions, ensuring our continuity for future generations” (Gasura village, 21 May, 2023)

This implies that despite the monetary benefits, agricultural co-operative societies help young people in other intangible benefits such as social and environment impacts.

Table 13: Summary of benefits

Category	Value (BIF)	Sources
Income generated from ACS	360 000	Field data
Salaries paid in ACS	2 400 000	Field data
Food generated in ACS	1 200 000	Field data
Total	3 960 000	Field data

Benefits Costs Ratio results

$$BCR = \frac{\sum_{t=1}^3 \frac{960\,000}{(1+0.08)^t}}{\sum_{t=1}^2 \frac{410\,000}{(1+0.08)^t}} = 1.6$$

n=1

$$i=8\%=0.08$$

$$B_t=3\,960\,000$$

$$C_t=2\,410\,000$$

Participating in agricultural co-operatives is expected to yield a cost of BIF 2.410 million over 1 year, while generating a benefit of BIF 3.960 million. The BCR is 1.6 which is greater than 1, this means for every unity of Burundian Francs invested in agricultural co-operative societies generates 1.6 as return on investment. The analysis indicates that the benefits are 1.6 times higher than the costs, making it a favourable proposition. Benefits in BIF (million): This represents the estimated total benefits generated by investing in the agricultural co-operative, measured in millions of Burundian Francs. Costs in BIF (million): This represents the estimated total costs associated with establishing the ACS, also measured in billions of Burundian Francs. BCR (Benefits Cost Ratio): This ratio is calculated by dividing the total benefits by the total costs. The BCR indicates how much return or benefit is obtained per unit of cost invested.

The findings above are supported by Social Exchange Theory. It assumes that individuals make rational decisions based on the expected benefits and costs of a particular action. In any activities, individuals may weigh the benefits and costs of participating in activities, such as increased income, improved access to resources, social connections and personal satisfaction, against the potential costs, such as time and effort, potential conflicts with other activities, and perceived risks (Choi, 2017). In this study, Social Exchange Theory help the researcher to understand the individual's behaviours towards agricultural societies where youth will be more likely to participate in agricultural co-operatives if they perceive that the benefits outweigh the costs.

Furthermore, the findings above are in line with Thrikawala *et al.*, (2022), conducted a study on cost-benefits analysis of irrigation projects in Singapore. The BCR found was 1.4, which was a good result and they recommended the projects to be adopted. Anania *et al.*, (2017), conducted a study on co-operative enterprise and youth employment creation: Prospects and challenges reflections from Tanzania agricultural sector. The findings indicated that there are two alternative approaches for employment creation such as direct approach where cooperative employ youth as staffs or savants, financing youth 'income generating activities, initiating managed business within co-operative, facilitate access to land facilities and indirect approaches to employment creation where co-

operative supports youth access to market, provide education and training to youth, linking youth with creditors. Manirakiza (2020), studied the impact of farmers co-operatives on social economic living conditions of rural households in Burundi. He found that agricultural co-operatives contribute in increasing of food production of either co-operative member by easy access to agricultural training and chemical fertilizers or non-members due to the effect of positive externalities. Additionally, the finding above is in line with Akpalu and Copenhagen Consensus Centre, (2020) in the study cost-benefit analysis of co-operatives projects in Ghana, where BCR was 1.2 and they proposed that co-operative projects should be adopted.

4.3.4 Socio-economic factors influencing youth participation in agricultural co-operative societies

The fourth objective studies the socio-economic factors that influence youth participation in agricultural co-operative societies in the northern region of Burundi. Socio-economic predictors including access to market, access to credit, profitability, access to lands, access to fertilizer, gender, household size, education level, marital status and social capital have been used to determine the likelihood contribution on youth participation in agricultural co-operative societies by the adoption of binary logistic regression model. The table below presents the coefficients of binary logistic regression generated from all social-economic predictors that cause the likelihood of youth participation in agricultural co-operative societies.

Table14: Model fitting information

Omnibus Tests of Model Coefficients		
Chi-square	Df	Sig.
Step	10	0.001
Block	10	0.001
Model	10	0.000
Model Summary		
-2Log likelihood	Cox&Snell R Square	Negelkerke R Square
440.080 ^a	0.035	0.048
Hosmer and Lemeshow Test		
Chi-square	Df	Sig.
54.8	1	0.65

The model was statistically significant with $p < 0.05$, indicating that model was able to differentiate respondents who reported that socio-economic factors influencing youth

participation in agricultural co-operative societies. The Omnibus Tests of Model Coefficients show that, predictor model of goodness of fit is better than the block 0 model fit where $p=0.001$ ($p<0.05$) and the chi-square is 54.88. The results in the Table 14 show that the model as a whole explained 0.035 (Cox&Snell R Square) and 0.048 (Nagelkerke R Square) of the variances in acceptable level. Hosmer and Lemeshow Test result in Table 13 also support our model as being well acceptable at standard level. Poor Hosmer and Lemeshow of Goodness of fit Test is when $p<0.05$ but for this model the result revealed that $p>0.05$ (0.65). Therefore, the model (with set variables used as predictor variables) is better than the guesses showed in block 0.

Table 15: Binary logistic regression results on youth participation in ACS (332)

Predictor variables	B	S. E	Wald	Sig	Exp(B)	Marginal effect
Access to market	-3.434	1.475	5.418	0.020	0.032	-0.067
Access to credit	0.266	1.061	0.063	0.049	0.304	0.012
Access to land	1.492	1.906	0.612	0.034	1.444	0.043
Access to fertilizer	-1.097	0.730	0.051	0.133	0.334	-0.126
Gender	-0.169	0.753	0.051	0.042	0.844	-0.006
Profitability	1.019	0.936	1.184	0.027	1.770	0.026
Household size	-0.145	-0.145	0.025	0.875	0.865	-0.015
Education level	-1.927	0.926	4.328	0.037	0.146	-0.068
Marital status	-1.041	0.902	1.330	0.249	0.353	-0.194
Social capital	1.279	1.058	1.461	0.227	0.592	0.224
Constant	-2.384	1.937	1.514	0.021	10.844	

Df=1

The results presented in Table 15 show that access to market was significant predictor ($p<0.05$) but negatively related to the livelihood of youth participation in agricultural co-operative societies. This means that an increase in one unit for access to market caused a decrease in probability option to youth participation in agricultural co-operative societies by 0.067. Thus, access to market has significance influence to youth motivate to participate in agricultural co-operative in order to gain a market. The p-value is 0.020, which is less than the typical significance level of 0.05 while $B= -3.434$, $SE=1.475$. This finding is in line with Gulamiwa (2015) who found that without a market it discourages youth from participating in horticulture in activities in Mvomero.

This finding is also supported by interview of old co-operative farmer in Ngozi province who said that:

“Government of Burundi has been helping farming co-operative to gain a good market at international market for different products such coffee, maize and tee, he confirmed that farming’s co-operative helped them to put together their harvest and sold them at high price.” (Rukundo, 18 May, 2023).

Concerning to access to credit, the finding show that it is positive and significant predictor ($p < 0.05$) of livelihood of youth participation in agricultural co-operative societies. This means that for an increase in one unity for access to credit caused an increase in the probability of youth participation in agricultural co-operative societies by 0.012. The p-value is 0.049, which is less than 0.05 while $B = 0.266$ and $SE = 1.061$. Thus, access to credit has significance influence to youth motivate to participate in agricultural co-operative in order to gain a credit. These findings are in line with Nyamba and Sanga (2022) who found that access to credit is a crucial factor determining rural youth participation in agriculture-based livelihood activities.

Regarding to access to land, the finding show that it is positive and significant predictor ($P < 0.05$) of livelihood of youth participation in agricultural co-operative societies. The p-value is 0.034, which is less than 0.05 while $B = 1.492$ and $SE = 1.906$. This means that for an increase in one unity for access to land caused an increase in the probability of youth participation in agricultural co-operative societies by 0.043. Thus, access to land has significance influence to youth motivate to participate in agricultural co-operative societies. Most youth said that having land mean full participation in agricultural co-operative societies. This finding is supported the study of Kimaro *et al.* (2015) who found that access to land for youth is a crucial factor that determine their participation in agriculture sector. This means that as land size increases, youth may increase their involvement in agricultural co-operative societies and work as group because most of youth in Burundi join co-operative society in order to enjoy economies of scales. This finding is supported by interview of a co-operative officer in Muyinga province who said:

“Access to land is an important factor for youth to participate in agricultural co-operative societies, even if it requires other factors such as availability of fertile land, water and irrigation in order to increase likelihood of youth participation in agricultural co-operative societies. He said that most of household in Muyinga have big land which make youth to participate in agricultural co-operative societies.” (Nduwayezu, 21 May, 2023)

However, access to fertilizer is negative and not significant predictor ($P > 0.05$) of livelihood of youth participation in agricultural co-operative societies. The p-value is 0.133, which is greater than 0.05 while $B = -1.097$ and $SE = 0.730$. Thus, access to fertilizer has no significance influence to youth motivate to participate in agricultural co-operative societies. This finding opposes the finding of Nyamba and Sanga (2022), who conducted a study on youth engagement in agricultural activities, status and prospects for agricultural sector development in Makambako Town Council, Njombe region in Tanzania. He found that access to fertilizer is positive a significant for them to participate in agricultural activities. The finding is supported by interview of government agronomist in Kiremba District who said that:

“In Burundi, government provides fertilizer to everyone who are engaged in agriculture sector not cooperative member only because individuals are requested to submit their order for every season. So, youth joint agricultural co-operative because they want to work together.” (Miburo, 17 May, 2023)

Moreover, gender is negative but significant predictor ($P < 0.05$) of livelihood of youth participation in agricultural co-operative societies. The p-value is 0.042, which is less than 0.05 while $B = -0.169$ and $SE = 0.753$. This means an increase in one unit for gender caused a decrease in probability option to youth participation in agricultural co-operative societies by 0.006. Thus, gender has significance influence to youth motivate to participate in agricultural co-operative societies where youth male accounts high number that youth famers. This implies that female youth involvement in horticulture agribusiness is a challenge because females have to integrate it with their domestic responsibilities of taking care of the family, cooking and other household chores. This finding is in line with Ng’atigwa *et al.*, (2020) who found that the variable “Gender female” is negative and significant at 5%. His findings indicated that female youth are less likely to be involved in the horticulture sub-sector by 0.52 times (odds=0.52) compared with their male counterpart.

Furthermore, profitability is positive and significant predictor ($P < 0.05$) of livelihood of youth participation in agricultural co-operative societies. The p-value is 0.027, which is less than 0.05 while $B = 1.019$, $SE = 0.936$. Therefore, this variable is considered statistically significant. Thus, profitability has significance influence to youth motivate to participate in agricultural co-operative societies. It implies that for every unit increase in profitability, the log odds of youth participation in agricultural co-operative societies

increase by 0.026. This is because most of youth prefer to engage in business where they get high profit. The finding above is supported by Social Exchange Theory. It assumes that individuals make rational decisions based on the expected benefits and costs of a particular action. This finding is also supported by the study conducted by Damas (2023), who found that the level of profit has a positive contribution in predicting youth participation in AMCOS. He further explained that profit is an outcome of market reliability and stable but reasonable price which are highly probable to be guaranteed by AMCOS to its members. Therefore, this attracts youth to engage in AMCOS because they gain high profit.

Additionally, household size is negative but not significant predictor ($P > 0.05$) of livelihood of youth participation in agricultural co-operative societies. The p-value is 0.875, which is greater than 0.05 while $B = -145$ and $SE = 0.928$. Therefore, this variable is not considered statistically significant. Thus, profitability has no significance influence to youth motivate to participate in agricultural co-operative societies. This finding does not support the study conducted by Ng'atigwa *et al.* (2020) who found that household size influence youth participation agricultural co-operative societies. Therefore, this could be explained by different reasons such as changing social dynamics which means as societies evolve, traditional family structures may have shifted and youth participation in agricultural co-operatives might not be strongly influenced by household size anymore. Additionally, due to diverse interests, youth nowadays may have diverse interests and aspirations, leading them to base their participation decisions on individual factors rather than household size. Furthermore, the economic independence of youth might have increased over time, making household size less relevant in determining their participation in agricultural co-operatives and lastly urban migration and urban lifestyles might have impacted the significance of household size in rural agricultural co-operatives.

Concerning the education level, the finding show that it is negative but significant predictor ($P < 0.05$) of livelihood of youth participation in agricultural co-operative societies. The p-value is 0.037, which is less than .05 while $B = -1.927$ $SE = 0.926$. Therefore, this variable is considered statistically significant. Thus, education level has significance influence on youth participation in agricultural co-operative societies. This means that an increase in one unit for education level caused a decrease in probability option to youth participation in agricultural co-operative societies by 0.068. This implies that youth who have lower level in school education are more likely to be involved in

agricultural co-operative than people with high level of education. The findings of this study are in line with Ng'atigwa *et al.* (2020) who found that "Primary education" is positive and significant at 1% influencing male and female youth involvement in horticulture agribusiness with regards to innovations. The findings are also supported the TRA, the theory assumes that a person's behaviour is governed by their intention to carry out or abstain from a behaviour and this intention is influenced by their attitude towards the behaviour and their subjective norms.

Marital status is negative and not significant predictor ($p > 0.05$) of livelihood of youth participation in agricultural co-operative societies. The p-value is 0.249, which is greater than 0.05 while $B = -1.041$ and $SE = 0.902$. Therefore, this variable is not considered statistically significant. Thus, marital status has no significance influence to youth motivate to participate in agricultural co-operative societies. The findings of this study do not support the study conducted by Klasen *at al.*, (2021) who found that rural youth marital status is associated with their membership participation in Agricultural Marketing Co-operative Societies, they argued that most of youth who are married rely on agricultural for the socio-economic needs such food, clothes, education and other needs.

Lastly, the findings show that social capital is positive but not significant predictor ($P > 0.05$) of livelihood of youth participation in agricultural co-operative societies. The p-value is 0.227, which is greater than 0.05 while $B = 1.279$ and $SE = 1.058$. Therefore, this variable is not considered statistically significant. Thus, social capital has no significance influence to youth motivate to participate in agricultural co-operative societies. This finding does not support the study conducted by Damas (2023) and Ramushu (2021) who found that agricultural marketing co-operative societies are socially protecting their members through solidarity members and youth involvement in decision making. This finding can be explained by changing social dynamic where traditional social network may be weak due to various societal changes, effecting the effectiveness of social capital in promoting livelihood opportunities for youth in agricultural co-operative societies. Furthermore, government policies and institutional arrangements might not fully support and promote youth engagement in agricultural co-operative societies, limiting the impact of social capital.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides an introduction, a summary of the study, conclusions and recommendations derived from the research conducted in the study area. Its aim is to equip researchers with the ability to address the targeted issues and offer insights for future studies or research concerning the factors that influence youth engagement in agricultural co-operative societies within the northern region of Burundi.

5.2 Summary

The primary goal of this study was to assess the factors influencing youth participation in agricultural co-operative societies in the northern region of Burundi. The specific objectives were as follows: firstly, to assess the awareness level among youth regarding agricultural co-operative societies within the northern region of Burundi. Secondly, to examine the cultivation related co-operative activities in which youth are involved in the same region. Thirdly, to establish the costs and benefits associated with youth participation in agricultural co-operative societies. Lastly, to examine the socio-economic factors that impact youth engagement in these societies. This chapter summarizes the study's findings, which have been analysed and presented based on the stated objectives. Additionally, it offers recommendations to policymakers and stakeholders on how to enhance youth participation in agricultural co-operative societies.

Moreover, this chapter provides conclusions drawn from the study's findings, along with recommendations, theoretical suggestions and potential areas for further related research. Regarding the socio-demographic information of the respondents, the section includes details about respondents' gender, age, marital status, education level, household size and membership profile in agricultural co-operative societies. The findings indicate that 82.8% of respondents were male, while the remaining 17.2% were female. In terms of age distribution, 44% fell within the 26 to 29-year-old bracket, 28.6% were aged between 22 to 25 years, 21.7% ranged from 30 to 35 years and 5.7% were between 18 to 21 years old. Regarding marital status, 81.3% of respondents were married, 12% were single, 4.8% were divorced and 1.8% were widowed. As for education levels, 59.3% completed primary school, 19.9% completed secondary school and 10.8% had no formal education. Findings concerning household size revealed that 30.1% had three household members,

27.1% had two members, 20.5% had four members, 10.8% had only one member, 7.8% had five members and 3.6% had more than six members. Lastly, the findings showed that 42.2% were members of agricultural co-operative societies, while 57.8% were not.

The study revealed a lower level of awareness among youth about agricultural co-operative societies with an average mean of constructs of 2.23 and an aligning standard deviation of 1.35. This implies that youth awareness has an impact on their participation. These findings imply that many youths may not be able to take advantage of ACS if they are not aware of its existence. Secondly, lack of understanding about requirements and registering procedure is a major hindrance to increasing the number of youths in ACS.

The findings indicated that 53% of youth attended one up to five training sessions, with 94% having between one to five years of experience with agricultural co-operative societies. Regarding the availability of various information sources to guide their participation, 49% of respondents strongly agreed that they have access to such sources. Furthermore, 40% of respondents agreed that various sources of information are accessible in their area to guide them during their participation in agricultural co-operative societies.

In terms of the cultivation related co-operative activities in which youth are involved, the majority (42.8%) engaged in beans cultivation, followed by vegetable cultivation (15.6%). Additionally, 13% were involved in rice cultivation, 11.7% in coffee cultivation, 9.3% in maize production, 3.1% in banana cultivation, 2.4% in Irish potato cultivation and 2.1% in livestock keeping. The study highlighted that beans, rice, vegetables and maize were the primary crops that attracted and influenced youth to participate in agricultural co-operative societies.

Furthermore, the study assessed the comparable costs and benefits of youth participation in agricultural co-operative societies. Findings from the assessment of youth members revealed that investing in agricultural co-operatives is projected to incur costs of BIF 2.410 million over one year, while generating benefits of BIF 3.960 million. This results in a Benefit-Cost Ratio (BCR) of 1.6, indicating a positive return on investment. The analysis demonstrated that benefits outweigh costs, making it a favourable venture. These findings align with the Social Exchange Theory, which posits that individuals make rational decisions based on expected benefits and costs.

Finally, the study investigated socio-economic factors influencing youth participation in agricultural co-operative societies, using socio-economic predictors such as market access, credit availability, profitability, land access, fertilizer access, gender, household size, education level, marital status and social capital. These factors were assessed using a binary logistic regression model to determine their likelihood of contributing to youth participation. The results indicated that predictors like market access ($p=0.020$), credit availability ($p=0.049$), access to land ($p=0.034$) education level ($p=0.037$) and profitability ($p=0.027$) significantly influence youth engagement in agricultural co-operative societies.

5.3 Conclusion

The conclusion was drawn based on the study's objectives and research questions. The findings revealed a lower level of awareness among youth regarding agricultural co-operative in the study area which leads to lower membership profile for youth in that sector. Training, education and information play a big role in increasing number of youths in agricultural cooperative societies. Furthermore, youth are engaged in various agricultural co-operative activities that yield substantial revenues. However, their operational approach lacks professional skills, mainly due to the traditional co-operative model they adhere to. Contrasting this, agricultural co-operative societies in other countries such as Tanzania, Kenya and Ethiopia have adopted entrepreneurial management models. Moreover, the study unveiled that agricultural co-operative societies, when managed effectively, operate as business organizations akin to others. It was demonstrated that investing in agricultural co-operatives can yield positive returns on investment with BCR equals 1.6.

Lastly, factors such as access to markets, credit, profitability, land, fertilizer, gender, household size, education level, marital status and social capital have implications for youth participation in agricultural co-operative societies. Similarly, the binary logistic regression analysis indicated that access to markets, credit, land, profitability and educational level significantly predict the likelihood of youth engagement in agricultural co-operative societies.

5.4 Recommendations

Based on findings obtained, the following recommendations are given in order to improve the level of youth participation in agricultural co-operative societies:

There is a need to put more emphasis on increasing awareness among youth regarding agricultural co-operative societies. Stakeholders in agricultural cooperative, ANACCOOP and PAEEJ should conduct ACS awareness campaigns and forums in all regions across the country including north region. In contemporary time, old farmers in agricultural co-operative are not able to increase production in term of quality and quantities, therefore efforts and emphasis should be directed to youth by different actors in agricultural co-operative societies. Youth already part of agricultural societies should receive guidance on increasing production through Value Added Processing and the introduction of an entrepreneurship model. This model should emphasize innovation, technology adoption, effective marketing and higher product pricing to drive revenue growth.

Additionally, the study recommends to government establishing a Ministry of Co-operative and Small and Medium Enterprises. This ministry can play a pivotal role in promoting youth participation by offering financial incentives such as grants, low-interest loans, subsidies, or tax breaks to encourage youth involvement, facilitating access to land and agricultural resources through dedicated land leasing programs and technical support, investing in tailored agricultural training and education programs to equip youth with modern farming techniques and business skills and improving digital infrastructure in rural areas to attract youth to co-operative participation. Concerning to market linkages, supporting co-operatives in negotiating fair prices and accessing larger markets will make agriculture economically viable for the youth.

Moreover, governments can develop targeted programs like mentoring initiatives and youth-led ventures to promote innovation in the agricultural sector. Launching public awareness campaigns can dispel misconceptions and highlight the benefits of co-operative participation for young people. Simultaneously, creating supportive policies by simplifying registration processes and reducing bureaucratic hurdles can foster co-operative growth. Encouraging collaboration among stakeholders like government agencies, private sector actors and NGOs can amplify efforts to promote youth participation. Lastly, showcasing success stories of young farmers benefiting from co-operatives can inspire and motivate other youth to join similar initiatives. By combining these strategies, governments can effectively increase youth participation in agricultural co-operatives, ultimately promoting sustainable agriculture, rural development and nurturing a new generation of agricultural leaders.

Concerning to youth themselves, the study recommends that young people can take the initiative to form their own youth-led agricultural groups or co-operatives. These groups can act as a platform for collective decision-making, resource sharing and mutual support among like-minded individuals. Young farmers should invest in their skills development by seeking agricultural training, attending workshops and engaging in vocational courses. Gaining expertise in modern farming techniques and sustainable practices will strengthen their confidence and effectiveness within co-operatives. Furthermore, youth should build networks and collaborating with other youth in the agricultural sector. This will lead to valuable opportunities and knowledge exchange. Participating in agricultural forums, conferences and online communities can expand their social and professional circles. Utilizing digital resources, young farmers can access market information, agricultural best practices and government schemes that support the agricultural sector. Staying informed empowers them to make well-informed decisions within the co-operative.

Additionally, young individuals can advocate for the recognition and inclusion of youth in agricultural policies and programs. Raising awareness about the challenges they face and the potential contributions can make support from various stakeholders. Exploring diverse agricultural activities, such as agro-processing, value addition, or niche markets, can provide additional income streams for youth in co-operatives, making their participation more economically viable. Seeking mentorship from experienced farmers or joining successful co-operative societies can offer invaluable guidance and inspiration. Having role models can provide young farmers with the confidence and motivation to persevere.

Moreover, embracing agricultural technology and digital tools can improve farm efficiency and productivity, making co-operative participation more attractive to youth. Young individuals should actively participate in the decision-making processes of the co-operative. Developing leadership skills will enable them to advocate for their needs and contribute to the co-operative's growth and success. By taking these proactive steps, young farmers can overcome socio-economic barriers and contribute significantly to agricultural co-operative societies. Their involvement will not only benefit their own livelihoods but also contribute to sustainable agriculture and rural development.

5.5 Area for Further Studies

The study has concentrated on examining factors influencing youth participation in agricultural co-operative societies in the northern region of Burundi. The study suggests that future research could explore the following areas:

Firstly, conducting a study to assess the existing policies and legal frameworks concerning agricultural co-operatives and youth engagement in Burundi. Such research could illuminate the strengths and weaknesses of current policies, enabling recommendations for enhancement.

Secondly, undertaking a study to analyse the impact of capacity building and training programs on youth involvement in agricultural co-operative societies. This research could evaluate the efficacy of various training approaches in promoting their engagement and achievements.

Lastly, conducting a comparative study between the northern region of Burundi and other regions to comprehend how distinct socio-economic contexts influence youth participation in agricultural co-operative societies. Such research would provide valuable insights into regional or cultural disparities in youth engagement and co-operative activities.

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APPENDICES

Appendix I: Questionnaires

Moshi Co-operative University

Reverien NDEREYIMANA

Email: reverienendru0@gmail.com

Tel: +257 69898468/+255 753425822

Dear respondents, my name is Reverien NDEREYIMANA. I am a postgraduate student at Moshi Co-operative University in Tanzania, pursuing a Masters of Arts in Co-operative and Community Development and I am conducting academic research on “**Factors influencing youth participation in agricultural co-operative societies in the northern region, Burundi**”. You have been selected to help in this study and I am humbly requesting you to allow me to ask you questions. The information sought is meant for research objective and will not be used against you in anyway. I will ensure that the feedback reaches all these who will participate in this research study. The findings will greatly inform all stakeholders in the youth agricultural co-operative societies and will contribute to the customs the youth back to agricultural sector in the country. Your responses will be treated with confidentiality. Thank you.

SECTION A: Ethical Issues

Ethical question	Yes	No
1. Do you have a question		
2. Do you agree to be interviewed		
3. Is it good to start our conversation now		
4. If the answer in 3 above is ‘No’, which time can we start our conversation?		

SECTION B: Verification - Only for the Researcher, Interviewee

Name of Interviewee			
Date of Interview	Year	Month	Day
Name of the researcher			

SECTION: C**Part A: Demographic information.**

Please indicate your scores in the comment column (tick the appropriate answer)

S/N	Question Filters	Gender Categories	Code	Comment column
1	Please indicate your gender	Male	1	<input type="checkbox"/>
		Female	2	<input type="checkbox"/>
2	Please indicate your age	18 to 21years	1	<input type="checkbox"/>
		22 to 25 years	2	<input type="checkbox"/>
		26 to 29 years	3	<input type="checkbox"/>
		30 to 35 years	4	<input type="checkbox"/>
3	Please indicate your marital status	Single	1	<input type="checkbox"/>
		Married	2	<input type="checkbox"/>
		Divorced	3	<input type="checkbox"/>
		Window/widower	4	<input type="checkbox"/>
4	What is your level of education	No education	1	<input type="checkbox"/>
		Primary	2	<input type="checkbox"/>
		Secondary	3	<input type="checkbox"/>
		Certificate	4	<input type="checkbox"/>
		Diploma	5	<input type="checkbox"/>
		Degree	6	<input type="checkbox"/>
		Master	7	<input type="checkbox"/>
		PhD	8	<input type="checkbox"/>
5	Are you involved in ACS?	Yes	1	<input type="checkbox"/>
		No	2	<input type="checkbox"/>
6	If yes which time, do you work in ACS?	Fulltime	1	<input type="checkbox"/>
		Part-time	2	<input type="checkbox"/>
7	What is the size of your household	Small size	1	<input type="checkbox"/>
		Big size	2 and above	<input type="checkbox"/>

SECTION: D**Part A: Level of awareness among youth regarding agricultural co-operative societies in the northern region of Burundi.**

Please tick the appropriate answer on the following questions:

8 a) What do you understand about agricultural co-operative society?

b) Please indicate your views on the following statements about the level of awareness regarding agricultural co-operative societies.

Key words: **1:** Fully not aware **2:** Not aware **3:** Neutral **4:** Aware **5:** Fully aware

SN	Statement about youth awareness of ACS	1	2	3	4	5
1	I am aware about the existence of ACS					
2	I understand the process of forming ACS					
3	I am aware about ACS educational forum					
4	I understand all the requirement for registering ACS					
5	I am aware about the benefits of ACS					

Please tick the appropriate answer on the following questions

9 Who offer trainings to youth in this area on agricultural co-operative societies?

- a) NGOs c) Private sector
 b) Government d) None of the above

10. How many trainings organized by any of the actors as stated in question 9, have you attended?

- 1-5 b) 6-10 c) More than 10

11. For how long have you been involved in any types of agricultural Co-operative activities?

- a) Less than 1 year b) 1-5 years c) 5-10 years

Part B: Cultivation related co-operative activities in which youth are involved in northern region, Burundi.

12. Do you participate in any agricultural co-operative society?

- a) Yes b) No

If yes in 12, why do you participate in agricultural co-operative society? for which reason among the following?

- a) Self-employment c) To get raw material e) Self help
 b) Source of income d) To obtain food

13. a. What are the cultivation related co-operative activities in which youth are involved among the followings?

- a) Vegetable cultivation e) Banana cultivation
 b) Rive cultivation f) Irish potatoes
 c) Beans cultivation g) Livestock keeping
 d) Maize cultivation i) coffee cultivation

b Cultivation related co-operative activities mostly likely to influence and attract youth's participation in your area. Put and tick the appropriate response

Key words: **1:** Strongly Agree **2:** Agree **3:** Neutral **4:** Disagree **5:** Strongly Disagree

S/N	Cultivation related cooperative activities in which youth are involved	1	2	3	4	5
1	Vegetable cultivation					
2	Rive cultivation					
3	Beans cultivation					
4	Maize cultivation					
5	Banana cultivation					
6	Irish potatoes					
7	Livestock keeping					
8	Coffee cultivation					

Part C: Costs and benefits of youth participation in agricultural co-operative societies in north region, Burundi.

14. How much money do you pay as membership fees in agricultural co-operative societies?

- a) BIF 5 000
- b) BIF 10 000
- c) Not estimated

15. How much money do you contribute to your agricultural co-operative societies for investment per month?

- a) Below BIF 100 000
- b) BIF 100 000-500 000
- c) BIF 600 000-1000 000
- d) BIF 1000 000 and above

16. How much income do you generate from your involvement in ACS per month?

- a) Below BIF 10 000
- b) BIF 10 000 -30 000
- c) BIF 30 001-50 000
- d) BIF 50 001-100 000

17. How much money as salary that youth employed in ACS are paid per month?

- a) BIF 100 000
- b) BIF 100 000-200 000
- c) BIF 200 000 and above

18. How much money do you pay as administrative and overhead cost in your agricultural co-operative societies per month?

- a) Below BIF 100 000
- b) BIF 500 000-1000 000
- c) BIF 1000 000 and above

19. Estimate the food you get from your ACS in terms of money per month?

- a) BIF 50 000
- b) BIF 50 000-100 000
- c) BIF 100 000 and above

20. Indicate the extent to which costs and benefits of youth participation in agricultural cooperative societies. Tick the appropriate answer on the bellow table;

Keys: **1**= Strongly agree, **2**=Agree, **3**=Neutral, **4**=Disagree, **5**=Strongly Disagree

S/N	Statements about costs and benefits of youth participation in ACS	1	2	3	4	5
1	Employment opportunities in ACS is high than other sectors.					
2	Participating in ACS increase capital income.					
3	Participating in ACS increase member access to food					
4	Participating in ACS increase member access training and education					
5	Overhead costs in ACS are high than benefit received					
6	Membership fee is high compared to benefit generated					
7	Cost of capital investment is greater than benefit received					

21. Mention other other costs and benefits of youth participation in agricultural cooperative societies.

Part D: Socio-economic factors that influence youth participation in agricultural cooperative societies

22. a. Indicate the appropriate answer on the following statements

S/N	Statements about factors that influence youth participation in ACS	Yes	No
1	Access to market influence youth participation in ACS?		
2	Access to credit influence youth participation in ACS?		
3	Profitability influence youth participation in ACS?		
4	Access to land influence youth participation in ACS?		
5	Access to fertilizer influence youth participation in ACS?		
6	Social capital influence youth participation in ACS?		

b. Indicate your level of agreement with the statement that related the influence of socio-economic factors on youth participation in Agricultural co-operative societies.

Key words: **1**=Strongly agree, **2**= Agree, **3**=Neutral, **4**= Disagree, **5**= Strongly Disagree

S/N	Statement about factors influencing youth participation in ACS	1	2	3	4	5
1	Access to market influence youth participation in ACS					
2	Access to credit influence youth participation in ACS					
3	Profitability influence youth participation in ASC					
4	Access to land influence youth participation in ACS					
5	Access to fertilizer influence youth participation in ACS					
6	Educational level influence youth participation in ACS					
7	Marital status influence youth participation in ACS					
8	Gender influence youth participation in ACS					
9	Household size influence youth participation in ACS					
10	Social capital influence youth participation in ACS					

Appendix II: Key informant Interview checklist guides

1. Do you provide training to youth on agricultural co-operative societies?
2. What are the types of agricultural co-operative activities in which youth are involved?
3. From your experience what are the economic activities in which youth generate income? What are the factors influencing youth participation in agricultural co-operatives?
4. From your experience do you consider agricultural co-operatives societies as business activities? Estimate how much money does a member of ACS generate and how much money he or she can spend per month?
5. According to your experience, are there policies and supports for youth who participate in agricultural co-operative societies?
6. What are the challenges that you face in agricultural co-operative societies?

7. Do youth participate in leadership of agricultural co-operative societies?

Appendix III: Focus group discussion checklist guides

1. What do you understand about agricultural co-operatives societies?
2. What motivated you to join the agricultural co-operative societies as a youth member?
3. In what ways has your involvement in the co-operative society contributed to your personal growth and development
4. Have you experienced any challenge or drawbacks as a result of being part of the co-operative? How did you manage or overcome them?
5. Can you share examples of collaborative efforts or teamwork from your involvement in the co-operative society?
- 6 What positive impacts have you observed on the community or environment through the co-operative' initiative or projects?

Appendix IV: Matrix of data analysis

Objectives	Research questions	Types of Variables and their indicators	Methods for Data analysis	Measurement Scale	Tools
Assess the level of awareness among youth regarding ACS in the northern region of Burundi	What is the level of awareness among youth regarding ACS in northern region, Burundi?	I.V Youth Awareness on ACS: Awareness of ACS existence Access to information Youth educational forum on ACS Knowledge of forming ACS	Descriptive statistical analysis	Nominal Five-point Linkage scale	Questionnaires
Examine the cultivation related co-operative activities in which youth are involved in the northern region, Burundi.	What are the cultivation related co-operative activities in which youth are involved in the northern region, Burundi?	I.V : Cultivation related co-operative activities in which youth are involved: Vegetable Cultivation Rice cultivation Beans cultivation Maize cultivation Banana cultivation Irish Potatoes Livestock keeping Coffee cultivation	Descriptive statistical analysis	Nominal Five-point Linkage scale	Questionnaires and interview guide
Establish comparable costs and benefits of youth participating in agricultural co-operative societies.	What are the costs and benefits of youths participating in agricultural co-operative societies in northern region of Burundi?	I.V : Costs and benefits of youth participating in ACS: Salary generated, Income generated Food availability, Membership fees, cost of capital for investment, Administrative and overhead cost,	Benefit-Costs analysis	Nominal Ratio	Questionnaires and focus group discussion
Socio-economic factors influencing youth participation in agricultural co-operatives societies	What are socio-economic factors influencing youth participation in agricultural co-operative societies.	I.V : Socio-economic factors: Access to market, Access to credit, Profitability, Access to lands, Access to fertilizer, Gender, Household size, Education, Marital status, Social capital	Binary logistic regression	Nominal Five-point Linkage scale	Questionnaire and interview guide
-	-	D.V : Youth participation in ACS: number of youths participating in ACS (Participating in ACS or not participating in ACS)	Binary logistic regression.	Categorical scale	Questionnaire

Appendix V: Research permit



In reply, indicate:

Ref. No.: MoCU/UGS/3/41

Date: 5th May, 2023

To Whom It May Concern

RE: REVERIEN NDEREYIMANA

Please refer to the above heading.

I am writing to introduce Mr. Reverien Ndereyimana who is a bonafide student persuing Masters of arts in Co-operative and Community Development (MA-CCD) at Moshi Co-operative University in Tanzania

As part of the requirements for his studies, the named candidate is planning to undertake a research project titled "Factors Influencing Youth Participation in Agricultural Co-operative Societies in the North Region, Burundi"

Any assistance accorded to his will be highly appreciated. Please do not hesitate to contact the undersigned for any information you may require.

Sincerely,

Prof. John Safari

FOR: VICE CHANCELLOR

REPUBLIQUE DU BURUNDI

Bujumbura, le *MOSHI* 2023

Ministère de l'Education Nationale
et de la Recherche Scientifique
Commission Nationale de la Science, la Technologie et l'Innovation

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

This letter confirms that **Mr Reverien NDEREYIMANA**, a **Master's Student at MOSHI CO-OPERATIVE UNIVERSITY, TANZANIA**, will be conducting his research work in Burundi in the framework of his Master's programme with the permission (**Validity**: Six months) of the National Commission for Science, Technology and Innovation, Burundi.

The research proposal is entitled "**Factors Influencing Youth Participation in Agricultural Co-operative Societies in the North Region, Burundi**".

In respect of this research, the candidate is due to collect relevant data from a number of selected sites.

Therefore, we would be grateful if you could facilitate **Mr Reverien NDEREYIMANA** access to any relevant documentation at your disposal. Of course, the researcher abides to behave and act in full accordance with the laws and rules governing access to public archives and or any particular laws and rules governing academic research at your institution.

Sincerely,

Prof. Tatien Masharabu,

Permanent Executive Secretary

P.O. Legal Advisor

Adrienne NIYINDEREYE

(Signature)



Commission Nationale de la Science, la Technologie et l'Innovation
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FACTORS INFLUENCING YOUTH PARTICIPATION IN AGRICULTURAL CO-OPERATIVE SOCIETIES IN THE NORTHERN REGION, BURUNDI

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ABSTRACT

Agricultural Co-operative Societies (ACS) is crucial for social economic development of young people. However, their involvement in ACS remains limited. This study aimed to assess the factors impacting youth participation in ACS in the northern region of Burundi. Specifically, the study sought to assess the level of awareness among youth regarding ACS in the study area. The research adopted a cross-sectional research design, involving a sample of 332 respondents selected through simple random sampling, purposive sampling and convenience sampling. Both quantitative and qualitative data were collected using questionnaires and interview guide techniques. Content analysis was employed for qualitative data, while descriptive statistics analysis was used for quantitative data. Findings indicated low awareness levels among youth regarding ACS with mean awareness level of 2.23 and standard deviation of 1.35 which leads to low membership profile at 42.2%. In conclusion, youth's limited membership in ACS stemmed from lack awareness, negative perceptions, adherence to traditional co-operative models. The study recommended that stakeholders in ACS should conduct ACS awareness campaigns and forums in all regions of the country including northern region. There is a need to change from traditional co-operative model to entrepreneurial co-operative models by stakeholders. Also establishing Co-operative University and Ministry of Small and Medium Enterprise in the Country.

Key words: Youth, Youth participation, Agricultural Co-operative Societies

1.0 INTRODUCTION

Agricultural co-operative societies have a long history of reducing poverty and increasing employment opportunities across the globe (Sultana, 2020). In Canada, the United States of America and across Europe, agricultural co-operatives have helped small-scale farmers to link up with the export market (Mdluli, 2019). Co-operatives, particularly in Africa, were also seen as mediating agencies of livelihood assets, including financial capital, natural capital, physical capital and social capital (Mdluli, 2019).

According to the Food and Agriculture Organization (FAO) and the International Fund for Agricultural Development (IFAD) (2012), youth account for a large percentage of the rural population and face unemployment or underemployment. Despite potential opportunities in agricultural co-operative societies, youth often do not consider them as remunerative activities and they are not attracted to such economic opportunities in urban areas (CICOPA, 2018). However, equitable and efficient agricultural co-operatives can play an important role in helping youth overcome specific challenges and engage in such societies (FAO, 2012).

In the East African Community (EAC), youth participation in agricultural co-operative societies is still a challenge. For example, in Uganda, youth participation in agricultural co-operatives has shown a decline, with participation dropping from 73.2% to 24.2% between 2005-2006 and 2009-2010 (Ahaibwe, 2013). In Tanzania, agricultural co-operative societies have been key players in the co-operative and agricultural sectors. However, the sector is predominantly rural-oriented and mostly carried out by elders with an average age of 50 years (Anania *et al.*, 2020). In Kenya, it is argued that youth are the major drivers of change and the foundation of the country. Mobilizing youth for national development through their participation in agricultural co-operatives is considered crucial (Situma, 2021 and Kissing, 2016).

In Burundi, there has been an increase of agricultural co-operatives in rural areas. However, youth participation in agricultural co-operative societies is limited and they prefer engaging in other economic activities such as mining, industry sectors and small businesses (Yami *et al.*, 2019). Youth face challenges in elaborating, designing, implementing, monitoring and evaluating youth empowerment strategies in agricultural co-operative development (Mapango, 2012). Local community participation has been poor and there are issues with inadequate allocation, poor farming processes and weak

monitoring of co-operative societies (Buthelezi, 2020). Lack of awareness about agricultural co-operative societies among youth and the small number of youths joining such co-operatives have been criticized. Insufficient access to information, knowledge and education contribute to the lack of awareness. Access to knowledge, information and addressing economic challenges is crucial for youth engagement in agricultural co-operative societies.

Various initiatives and policies have been established by the government and stakeholders in an effort to promote and support co-operative societies, for instance, the National Agency for Promotion and Regulation of Co-operative Societies (ANACOOOP 2017) was established to increase the number of viable co-operative organizations that are owned and democratically controlled by their members. Furthermore, programs like the Sangwe Co-operatives Programme, Investment Bank for Youth (BIJE) and Youth Economic Empowerment Program (PAEEJ) have been specifically designed to empower youth and provide them with opportunities for agricultural macro-credit, along with education and information on herbal resources. Despite the intentions of these initiatives to enhance youth engagement and involvement in co-operative societies, they have not succeeded in effectively integrating youth into agricultural co-operative societies (Manirakiza, 2020).

Despite the existing literature, there remains a lack of clear clarification and empirical justification concerning the issue of inactive youth participation in agricultural co-operative societies in the north region of Burundi. Previous research has inadequately addressed factors that influence youth participation in agricultural co-operatives, often concentrating on individual farming activities or specific types of agricultural co-operatives with small sample size (Cheleni, 2016; Kimaro *et al.*, 2015; Anania *et al.*, 2016). Additionally, there exists limited knowledge about the level of awareness of agricultural co-operative societies among youth, as scholars recommend (Damas and Chikoyo, 2023). Therefore, this paper aimed to analyse factors influencing youth participation in agricultural co-operative societies in the northern region of Burundi. The specific objective was to assess the level of awareness among youth regarding agricultural co-operative societies in the study in the northern region, Burundi. In the context of this study, the term "youth" pertains to all individuals between the ages of 18 and 35 years, both members and non-members of agricultural co-operative societies in the study area.

2.0 Theoretical Literature Review

Social Exchange Theory

This study takes a scientific approach guided by Social Exchange Theory (SET), which furnishes a comprehensive framework for comprehending the motivations behind individuals' involvement in social groups and how their interactions are shaped by the associated benefits and costs. Discovered by sociologists George Homans and Peter Michael Blau in 1961, this theory emerged from an interest in the psychology of small groups, focusing on understanding interpersonal relationships within communities and dyadic interactions (Cropanzano *et al.*, 2017). It was initially presented in Homans' essay "Social Behaviour as Exchange" in 1958.

Social Exchange Theory posits that individuals make rational decisions based on the anticipated outcomes of their actions. Within the context of youth participation in agricultural co-operative societies, this theory implies that the likelihood of their engagement is influenced by their perception of whether the benefits outweigh the associated costs (Cropanzano *et al.*, 2017). The objectives of this study align with the principles of Social Exchange Theory. The study aims to assess the level of youth awareness regarding their participation in agricultural co-operative societies. This assessment is crucial for understanding perceived benefits and costs based on available information, youth training in agricultural co-operative societies and their experience with such societies.

By employing Social Exchange Theory, this study endeavours to illuminate youth behaviours and attitudes toward agricultural co-operative societies, while also analysing how perceived benefits and costs impact their participation. The study underscores the importance of fostering supportive and inclusive environments, offering incentives and rewards, providing training opportunities and streamlining administrative processes to increase youth engagement and support the sustainability of agricultural co-operative activities. The theory proved relevant to the study by viewing agricultural co-operative societies as avenues for improving youth well-being. Moreover, the theory identified elements that should be considered when building and managing agricultural co-operative societies to attract youth as members.

3.0 Research Methodology

The study employed a cross-sectional research design, which facilitates data collection at a specific moment in time (Ali-Azzam *et al.*, 2020). The choice of this design was driven by the study's objective to assess factors influencing youth participation in agricultural co-operative societies. The study comprised both members and non-members of agricultural co-operative societies in the northern region of Burundi. The study used a sample size of 332 respondents. The study utilized simple random sampling, convenience sampling and purposive sampling techniques. Simple random sampling was employed to select youth members of ACS under the north region of Burundi. Convenience sampling was employed to select youth non-members of agricultural co-operative societies who were easily accessible within the study area. This approach was chosen due to the availability of respondents, the study also applied purposive sampling. This method was employed to specifically select government officials with expertise in co-operative societies, including old farmers and co-operative officers. These individuals were chosen because of their first-hand experience with co-operative societies. Interview and survey techniques were employed in data collection. Data was analysed using descriptive statistics and Likert scale to evaluate youth awareness of agricultural co-operative societies in the study area. Respondents were asked to rate their level of awareness on a scale of 1 to 5 where 1=fully not aware, 2=not aware, 3=neutral, 4=aware and 5= fully aware. The responses were interpreted based on a mean index adopted from Kalatya and Moronge (2017) where a mean of 1.0 to 2.5, show not agreed (lower level of awareness), a mean of 2.6 to 3.4 identify neutrality (moderate level of awareness) while a mean of 3.5 to 5.0 indicated agreement (high level of awareness). The utilization of descriptive analysis facilitated the conversion of raw data into meaningful averages, enhancing comprehension. These visual representations not only illustrated patterns and trends but also identified areas requiring intervention to enhance knowledge and understandings.

4.0 FINDINGS AND DISCUSSION

4.1 Socio-Demographic Characteristics of Respondents

Regarding the socio-demographic information of the respondents. The findings indicate that 82.8% of respondents were male, while the remaining 17.2% were female. In terms of age distribution, 44% fell within the 26 to 29-year-old bracket, 28.6% were aged between 22 to 25 years, 21.7% ranged from 30 to 35 years, and 5.7% were between 18 to 21 years old. Regarding marital status, 81.3% of respondents were married, 12% were single, 4.8% were divorced, and 1.8% were widowed. As for educational levels, 59.3%

completed primary school, 19.9% completed secondary school, and 10.8% had no formal education. Findings concerning household size revealed that 30.1% had three household members, 27.1% had two members, 20.5% had four members, 10.8% had only one member, 7.8% had five members, and 3.6% had more than six members. Lastly, the findings showed that 42.2% were members of agricultural co-operative societies, while 57.8% were members of ACS.

4.2 Level of youth awareness regarding agricultural co-operative societies

The first research question of this study was to assess the level of youth awareness regarding agricultural co-operative societies in the northern region of Burundi. Respondents were asked to rate their level of awareness on a scale of 1 to 5 where 1=fully not aware, 2=not aware, 3=neutral, 4=aware and 5= fully aware. The responses were interpreted based on a mean index adopted from Kalatya and Moronge (2017) where a mean of 1.0 to 2.5, show not agreed, a mean of 2.6 to 3.4 identify neutrality, while a mean of 3.5 to 5.0 indicate agreed upon. The Response from the Table 8 below present Likert scale response for each theme undertaken by youth in their respective area.

As revealed in table 1, the general level of awareness among youth regarding agricultural co-operative societies in the northern region of Burundi is very low with an average mean of constructs of 2.23 and an aligning standard deviation of 1.35. This as per Kalatya and Moronge mean index implies that respondents indicated that they were not aware of the existence of ACS, the process or procedure of forming ACS, the requirements for registering ACS and they have attended few ACS educational forums. These findings imply that many youths may not be able to participate in ACS if they are not aware of its existence. Secondly, lack of understanding about requirements and registering procedure is a major hindrance to increasing the number of youths in ACS. The same finding was reported by Ochan (2017) who found that only 15.73% of youth in Ethiopia, Gamballa districts were aware about agricultural co-operatives which show a low level of awareness among youth regarding agricultural co-operative societies.

According to the findings presented in Table 1, respondents were asked if they are aware about the existence of agricultural co-operative societies. It was found that only 42% of respondents indicated that they were aware about the existence of agricultural co-operative societies, while 40% of respondents were not aware about the existence of agricultural co-operative societies and 13% were fully not aware about the existence of

ACS. The finding also show that the existence of agricultural co-operative had a mean of 2.84 and standard deviation of 1.52 indicating that there was very high variance in responses from participants.

In regards to whether they understand the process of forming agricultural co-operative societies 44% of respondents reported that they understand the process of registering agricultural co-operative societies. Additionally, 27% of respondents were fully not aware about the process of forming agricultural co-operative societies while 26% of respondents do not understand the process of forming agricultural co-operative societies. The finding also indicated that understanding the process of forming agricultural co-operative societies had a mean of 2.66 and standard deviation of 0.80 indicating that there was very high variance in responses from participants. This means that almost a half of respondents understand the process of forming agricultural co-operative societies.

Furthermore, respondents were asked if they are aware about agricultural co-operative societies educational forum. The findings revealed that 35% of respondents reported that they were aware about agricultural co-operative societies educational forum while 32% of respondents reported that they were not aware about agricultural co-operative societies forum, 22% of respondents indicated that they were fully not aware about agricultural co-operative societies educational forum. The finding also indicated that educational forum about ACS had a mean of 1.37 and standard deviation of 1.31 indicating that there was small variance in responses from participants.

Regarding the understanding of registering requirements, 42% of respondents reported that they were aware about all registering requirements. 18% of respondents were not aware about all registering requirements. Additionally, 28% of respondents were fully not aware about the all registering requirements of agricultural co-operative societies. The findings also indicated understanding the registering requirements had a mean of 1.30 and standard deviation of 1.87 indicating that there was small variance in responses from participants which indicates a lower of knowledge about the requirements of registering ACS. Furthermore, respondents were asked if they are aware about the benefits of agricultural co-operative societies. The findings indicated that 56% of respondents reported that they are aware about the benefits of agricultural co-opertive societies, while 18% of respondents reported that they were fully not aware about the benefits of agricultural co-operative societies. The finding also indicated that the benefits of agricultural co-opertive societies had a mean of 3.01 and standard deviation of 1.28

indicating that there was high variance in responses from participants. These findings are not consistent with Kissing's *et al.* (2016) study on factors influencing youth participation in agricultural co-operative projects in Kenya, particularly the case of Kathiani subcounty, Machakos County. The study found that 80% of youth joined agricultural co-operative projects due to their awareness of these initiatives. This implies that in Kenya, youth are more informed about about agricultural co-operative societies compared to youth in Burundi.

Table 1: Level of awareness among youth regarding ACS (332)

Statement about level of awareness on ACS	1		2		3		4		5		Mean	Std. Dev
	N	%	N	%	N	%	N	%	N	%		
I am aware of the existence of ACS	13	13	40	40	1	1	42	42	4	4	2.84	1.52
I understand the process of forming ACS.	27	27	26	26	2	2	44	44	1	1	2.66	0.80
I am aware of ACS educational forums	22	22	32	32	2	2	35	35	9	9	1.37	1.31
I understand all the registering requirements.	18	18	28	28	7	7	42	42	5	5	1.30	1.87
I am aware about the benefits of ACS	18	18	10	10	5	5	56	56	11	11	3.01	1.28
Average											2.23	1.35

Key words: **1**=fully not aware, **2**=not aware, **3**=Neutral, **4**=aware, **5**= fully aware

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

The conclusion was drawn based on the study's objectives and research questions. The findings revealed a lower level of awareness among youth regarding agricultural co-operative in the study area which leads to lower membership profile for youth in that sector. Training, education and information play a big role in increasing number of youths in agricultural cooperative societies.

5.2 Recommendations

There is a need to put more emphasis on increasing awareness among youth regarding agricultural co-operative societies. Stakeholders in agricultural cooperative, ANACOOOP and PAEEJ should conduct ACS awareness campaigns and forums in all regions across the country including North region. There is a need to change from traditional co-

operative model to entrepreneurial co-operative. Additionally, the study recommends to government establishing a Ministry of Co-operative and Small and Medium Enterprises. This ministry can play a pivotal role in promoting youth participation by increasing the number of youth in agricultural co-operative societies, fostering sustainable agriculture and rural development offering financial incentives such as grants, low-interest loans, subsidies, or tax breaks to encourage youth involvement, facilitating access to land and agricultural resources through dedicated land leasing programs and technical support, investing in tailored agricultural training and education programs to equip youth with modern farming techniques and business skills and improving digital infrastructure in rural areas to attract youth to co-operative participation.

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