

Examining Success Factors for Sustainable Rural Development
through the Integrated Co-operative Model

Section Three

Uganda Country Research Report

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1. Purpose of the Study

This study explored the added value of an integrated approach to co-operative development as a tool for rural development, in excess of the benefits offered by development of a single co-operative. The research assessed whether rural development through co-operatives works better when the co-ops are integrated, and if so, under what conditions this integration works best.

1.1 Objectives of the Research Study

1. To assess the Integrated Co-operative Model as it is currently employed in Uganda, identifying strengths, weaknesses, and recommended modifications.
2. To explore selected other models of co-op integration to seek new knowledge that could be applied to the integrated co-op model.
3. To compare the livelihood assets, satisfaction, and social capital of farmers who are involved in the integrated co-op model with those of farmers who are not. Also compare development at the co-op level (considering business linkages, access to inputs and market, presence of warehouse receipt system, etc.) of the co-op businesses involved.
4. To identify key elements of an enabling environment that allow the model to achieve rural development results (in terms of poverty reduction, increased economic activity, etc.)

1.2 Research Questions

- Does the Integrated Co-operative Model lead to the achievement of particular (specified) rural development goals?
- Under what conditions does the Integrated Co-operative Model lead to achievement of these rural development goals?
- Does the model contribute to both the expected co-op outcomes and rural development outcomes?
- How do levels of satisfaction with co-ops compare in the Integrated Co-op Model vs. in other locations? How does rural development compare?
- What is the difference in member experience between being a member of only one co-op and being a member within an Integrated Co-op Model (financially, socially, etc.)?
- Are there important knowledge gaps between farmers who are co-op members in an Integrated Co-op Model and those who are not (e.g. in terms of knowledge of the farming business)?

2. Co-operatives in the Uganda Context

2.1 History of Co-operatives in Uganda

In Uganda, co-ops were organized in a vertical, top-down structure for decades, but when the country's economic liberalization began in 1987 (Bazaara 2001), co-ops, having been heavily state supported, began to crumble. The co-operative sector in Uganda went through a dynamic process of restructuring and adjusting to the conditions of a liberalized economy (Afranaa-Kwapong 2012). In the late 1990s, the Uganda Co-operative Alliance (UCA) and primary co-ops came together to try to develop a new model that would serve farmers' needs in the new context, and the Area Co-operative Enterprise (ACE) was born. The ACE, a marketing co-op, meets the needs of the farmers by specializing in the marketing of multiple crops (as distinct from its predecessors).

2.2 Economic Policy on Co-operatives in Uganda

Agricultural marketing began in Uganda as early as 1913. Co-operatives were formed in response to disadvantageous terms of trade imposed on smallholder farmers by traders who monopolized the domestic and export markets (Kwapong and Korugyendo 2010). These co-operatives enjoyed considerable success and rapid growth both before and after independence in 1962. In 1971, the government introduced state marketing boards—namely the Coffee Marketing Board (CMB), Lint Marketing Board (LMB) and Produce Marketing Board (PMB)—thus centralizing the processing and marketing of export produce, particularly for coffee and cotton. These state-controlled marketing boards had a monopoly over the buying and retailing of cotton and coffee, and greatly influenced the inflow of foreign revenue generated from the trading of these export cash crops. Bunker (1984) asserted that the introduction of state-controlled mechanisms resulted in the loss of autonomy and suppression of local co-operative organizations. This assertion proved to be true for co-operatives in Uganda after the introduction of these marketing boards, as there was extensive interference by the government in co-operative activities (Msemakweli 2008). This was consistent with much of the literature of 1980s', which argued that state interference in co-operatives' activities resulted in the failure of a number of co-operatives, thus necessitating the call for a liberalized economy that promoted autonomous member-controlled co-operatives (Wanyama 2009).

The liberalization of markets promoted by the World Bank in the early 1990s encouraged economic reforms and had a major impact on co-operatives. In the case of Uganda, these economic policies were introduced at a time when the country was just emerging from years of political instability; the co-operatives' business activities were also expanding following the end of the "Bush War" in 1986, which brought the National Resistant Movement (NRM) to power. Liberalization of the market meant that government control over the co-operatives was reduced and that the state-controlled marketing boards, which were under strict government supervision, were to be abolished. As a result, co-operatives were to enjoy autonomy with little or no interference from government. Lindenthal (1994) in particular points out that trade liberalization implied that co-operatives and their member farmers were put in a position where they could make use of their competitive advantage over producers in other countries. In addition, the import of necessary goods and materials was facilitated for all who relied on a certain type, quality or quantity of spare part, means of production, etc. that was locally unavailable. This positive advantage was beneficial mostly to the large-scale co-operatives with links to the

international markets. With the abolition of state-controlled boards, which served as an international linkage, many small co-operatives could not benefit from the effect of the trade liberalization policy.

Trade liberalization also had the effect of cutting tariffs that subsidized the transaction costs incurred by the co-operatives. Such tariffs were provided by the government in the form of crop financing, provision of equipment and items such as coffee processing machines, drying trays, packaging bags, etc. In a liberalized market, the large number of buyers was expected to push prices up. Cutting tariffs was expected to stimulate the improvement of economic performance in order to become or remain competitive in the marketplace (*ibid*). This policy, however, exposed smallholder farmers to competitive markets in which they could not compete with other traders due to financial constraints; many co-operatives were not prepared to compete in the new, more liberalized market (Kyazze 2010). As such, many co-operatives experienced a decline in their performance in the second and third decades after Uganda's independence (Mugisha et al. 2005). The decline of agricultural co-operatives continued through the 1990s. For instance, Kyazze (2010) reported that the export market share of co-operatives fell from 22 percent in 1992/3 (28,585 tons out of 130,098 tons) to 2 percent by 2001/02 (3,868 tons out of 180,164), declining further to approximately 1 percent in 2006/07 (2,104 tons out of 162,254 tons). As the number of co-operatives decreased, a higher proportion of privately owned companies began to take over the market.

The factors that led to the decline of the agricultural co-operatives can be classified as both internal and external. Internal factors were related to the mismanagement and embezzlement of funds, misuse of co-operative assets and a lack of trust of management, which led to the withdrawal of many members. The external factors identified concerned wars and political instability, which led to a loss of assets (Mukasa 1997). According to Msemakweli (2008), other characteristics of the system included inadequate membership participation, mismanagement, focus on few enterprises and debt caused by borrowing for the pre-financing of members' produce purchasing. With such changes taking place within the market and co-operatives on the decline, farmers were once again exploited by middlemen who had infiltrated and dominated the markets. The original problem that had necessitated the establishment of co-operatives had returned once again. In 1998, the Uganda Co-operative Alliance sought measures to restructure the co-operative marketing sector and address the challenges of the many smallholder farmers who were former members of the collapsed co-operatives. A new approach to co-operative marketing called the integrated co-operative model, which sought to avoid past mistakes by addressing weaknesses and was much more efficient in addressing farmers' needs, was introduced. This saw a structural transformation of the agricultural co-operatives and a diversification of their activities in response to a growing interest in reviving them.

2.3 Public Policy of Co-operatives in Uganda

The full potential of the co-operative enterprise in fostering development was yet to be harnessed due to internal problems related to governance and leadership, poor capitalization, inadequate knowledge, management information systems and expertise in managing co-operatives. The legal and regulatory framework was inadequate to ensure that the co-operatives function in the best interests of the members and the entire country. The absence of the policy also undermined the current co-operative law and efforts towards the development of the co-operative movement.

Thus, there was a need for government to create a more conducive environment for the co-operatives to expand, and diversify their activities. This has been achieved through a number of interventions:

- consultative formulation of a co-operative development policy
- amendment of co-operative laws and regulations
- reform of warehouse receipt system and commodity exchange
- support to financial services co-operatives
- agricultural extension services
- value addition support
- promotional activities to popularise co-operatives
- co-operatives capacity building

Clear Policy Guidelines for Co-operatives

The reformed co-operative system focuses on providing clear policy guidelines to guide the operations of the co-operatives. At the national level, the national co-operative development policy (2011) outlines strategies to develop and strengthen the co-operative movement in order to play a leading role in poverty eradication, employment creation and socio-economic transformation of the country. This shall be realized through:

- instituting the necessary legal reforms to promote good governance that will facilitate rebuilding and revitalizing the co-operative movement
- strengthening the MTIC and local government co-operative offices for effective service delivery
- diversification of co-operative enterprises
- enhancing productivity and competitiveness
- co-operative training and education
- promoting gender balance, fair representation of marginalized groups and good environmental practices within co-operatives
- mitigating the spread and effects of HIV/AIDS and malaria using the co-operatives network
- improving coordination within ministries, departments and agencies, and private-public partnerships

A public–private partnership arrangement is applied for the implementation of the policy. In developing this policy, due consideration has been made to the various government programs aimed at eradicating poverty through commercialization of agriculture, provision of rural finance, improved market access, employment creation and industrialization. The policy is also a result of the wide consultative process involving government officials, private sector executives, co-operators, academia, donor community and mass media. The Consultative process that has been followed in developing this policy has helped to identify the priority areas for co-operative development and relate it to national development policies (MTIC 2011). Strategic actions to help achieve these priorities have also been arrived at through a consultative process mechanism. A National Co-operative Development Plan has been developed to guide implementation of this policy. Monitoring and impact assessment of Policy implementation shall be carried out on a regular basis using appropriate sets of indicators and shall involve full participation of the key

stakeholders. The Policy Analysis Unit of the Ministry shall coordinate the overall monitoring, evaluation and review of the policy.

At the grassroots level, members of co-operatives have been made more aware by their leaders and staff of UCA of the principles of co-operatives and their roles and responsibilities as co-operative members. All the co-operatives have by-laws that guide their activities and their required oversight and internal controls. The ministry is also amending the Co-operative Societies Act (Cap. 112 — Laws of Uganda) and the Co-operative Societies Regulations 1992/10 to support the implementation of the National Co-operative Policy (MTIC 2011). This will enable the co-operative movement to be responsive to operational environments.

2.4 The Integrated Co-operative Model in the Uganda Context

In the early 2000s, CCA helped to introduce the component of finance, an innovation that responded to co-op members’ needs. Since 2004, the Uganda Co-operative Alliance (UCA) has been working with CCA to develop and support an integrated co-operative model for sustainable rural development. UCA also worked with the Swedish Co-operative Centre to support the model in the western part of Uganda. These partners have been supporting UCA and the co-ops to which it is a national umbrella in building their own tools and solutions for sustainable livelihoods, through owning and operating their own co-operative enterprises. One model that has emerged helps improve the livelihoods of rural farmers in the developing world through the integration of three functions: Agricultural production; Marketing; and Access to financial services. It is this integration that has been referred to as the “Integrated Co-operative Model.” These three areas of co-operation are essential ingredients of this holistic approach to rural development. The model can be illustrated as follows:



In this model for sustainable rural development, production, marketing support, and financial services are integrated, yet separate. Rural Producer Organizations (RPOs) are made up of individual smallholder farmers, who join together to increase their agricultural production and productivity, and to bulk, or aggregate, their production for sale. Area Co-operative Enterprises (ACEs) are second-tier co-ops focused on marketing, typically made up of six to ten production co-ops working together to take advantage of economies of scale. These co-ops provide market information, source agricultural inputs in bulk, assist with strengthening of market linkages, and

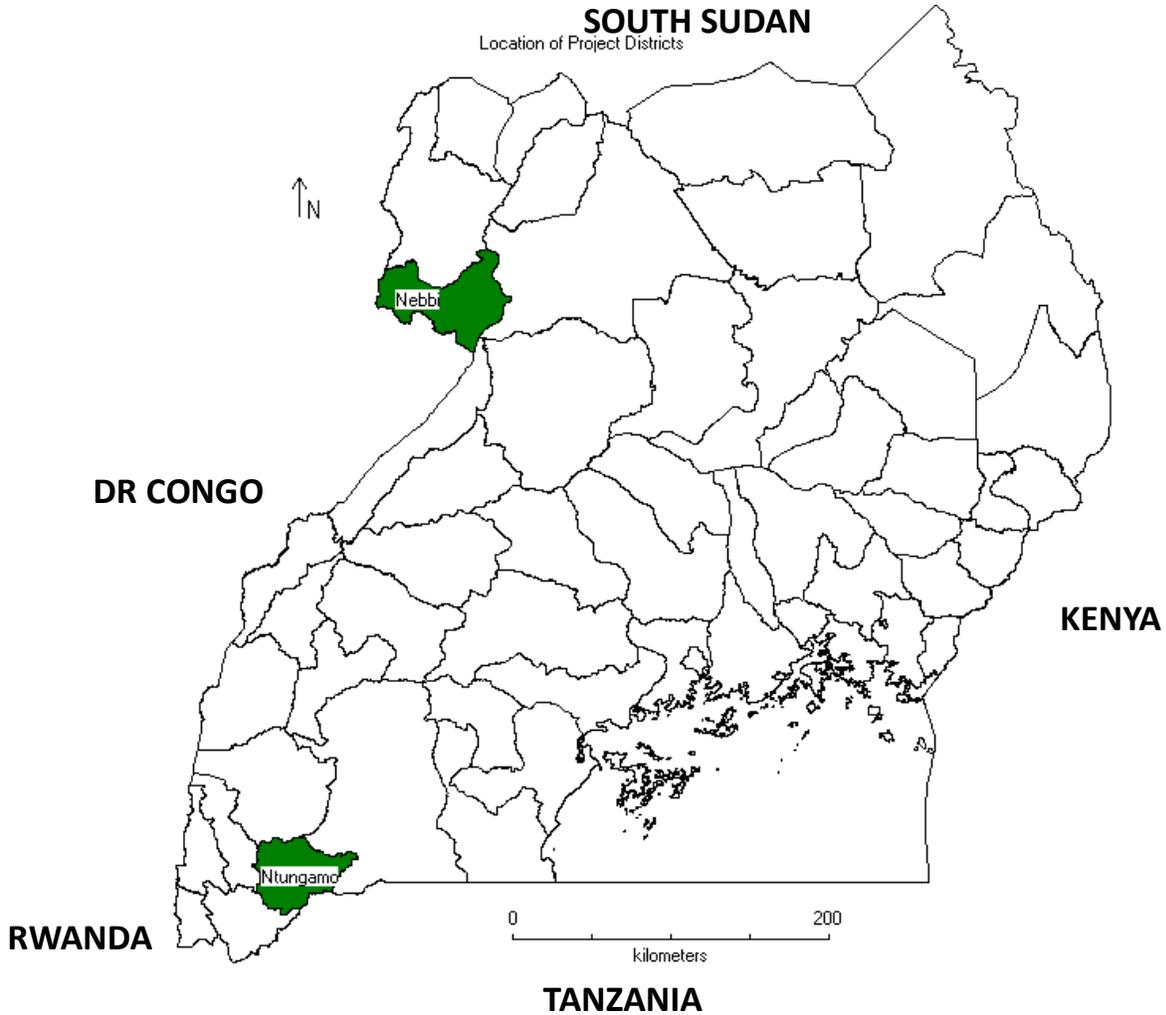
help to negotiate bulk sales at good prices. They also help to supply training, and offer various other services to members. Savings and Credit Co-operative Associations (SACCOs) are the third element of the model: co-operative financial institutions that act as engines for the development and growth of the two other types of co-operatives involved. SACCOs are the life blood of the other co-operative enterprises, as they provide the finance that is needed in order to enhance agricultural production and productivity and run sustainable farm businesses.

Working within this integrated model, co-op members identify opportunities and make choices, working together to attain both individual and collective goals that increase food production and productivity, create linkages to larger markets and access to better prices, and provide access to affordable financial services. Accumulated research and experience show that while small farmers acting alone do not always benefit from higher market prices, those acting collectively in strong producer organizations and co-operatives are better able to take advantage of market opportunities and mitigate the negative effects of food and other crises (FAO 2012). Whereas much co-op development focuses on supporting a single co-operative or group of co-ops at a time, this integrated model supports the joint development of three distinct but inter-connected, networked co-operatives (production, marketing, and finance), for a holistic and integrated approach to rural development.

3. Research Methods

3.1 Research Area and Approaches Used

The research involves household of both Integrated Co-operative Model (ICM) and Single Co-operative model (SCM) in Ntungamo district, located in southwestern Uganda, and Nebbi district, located in northwestern Uganda. To get a clear understanding of the situation regarding how co-operatives were structured organized and managed, the research team from Makerere University first had an exploratory visit to Nebbi district 20–22 December 2013, before conducting a main household survey. The purpose of the visit was to familiarize themselves with the key interventions on co-operatives in Uganda; the Integrated Finance and Agricultural Production Initiative (IFAPI) project, which was providing a holistic approach of community controlled co-operative services. The team had meetings with project officers, leaders of Savings and Credit Co-operative Associations (SACCOs), Rural Producer Organizations (RPOs), and Area Co-operative Enterprises (ACEs).



The exploratory visit was followed by a household survey of members of Integrated Co-operative Model and Single Co-operative Model. In both regions, household members belonging to Integrated Co-operative Model and Single Co-operative Model were selected and interviewed. The target was to interview a total of 400 households as follows: 200 (50 urban and 50 rural) households in Integrated Co-operative Model in Ntungamo, and 200 (50 urban and 50 rural) households in Single Co-operative Model in Nebbi district. The actual numbers interviewed were 281 households in Integrated Co-operative Model and 119 households in Single Co-operative Model. The household interviews involved introduction of the project to the respondents and verbal consent was required. The interviews were face to face interviews with household heads or their spouse. The questions were read and answers filled in questionnaire.

Furthermore, focus group discussions were conducted in both regions. A total of 55 participants were targeted in each district. These consisted of 7 policy makers, 8 ACE leaders, 7 SACCO leaders, and 8 RPO leaders. In addition to this, 12 RPO members, both with and without SACCO accounts, were interviewed. In order to allow views from both genders, the meetings were organized in such a way that half the participants in each discussion were female. The RPO member discussions for example, comprised 6 males and 6 females. The actual number of

participants in the FGDs in both districts was 96 out of the expected 110, which was a good number that helped in getting the relevant information. A predetermined checklist was used to guide the flow of each focus group discussion. The main issues discussed included; how each co-operative is formed, services and trainings offered, the strengths, opportunities and challenges faced by each group, and more importantly, how the Integration of the three co-operatives has contributed to the development of the community.

The final activity that was done after the research was the validation workshop. The purpose of the workshop was to present preliminary results of the study to the research communities and to seek feedback from them. The workshop participants included staff from Uganda Co-operative Alliance (UCA), leaders of Savings and Credit Co-operative Associations (SACCOs), Rural Producer Organizations (RPOs), and Area Co-operative Enterprises (ACEs), policy makers, selected members of the single and integrated co-operatives and those not in co-operatives. The total number of participants from Nebbi district and Ntungamo district was 49 participants and 44 participants respectively.

3.2 Data Analysis

The collected data were coded, entered in SPSS software, and cleaned. The household survey data were analyzed using descriptive statistics including means, percentages, and standard deviation. T-test and Chi-square statistics were used to measure the mean and percentage differences between respondents who were part of the Integrated Co-op Model (ICM) and part of the Single Co-op Model (SCM). The study used assets owned by the households as a key indicator of welfare. The assets are physical, financial, and human, including durable and semi-durable items. An asset index was therefore constructed using Principal Component Analysis (PCA) as presented by Filmer and Pritchett (1998). Asset indices were then used to classify and compare the welfare status among the household in the ICM and SCM as well as the non-co-operative members. Theoretically, principle component analysis (PCA) is a statistical technique that can determine the weight as a factor score for each asset variable. It seeks a linear combination of variables such that the maximum variance is extracted from the variables. Using the asset index, each household was assigned into quintiles, the first quintile being described as the poorest, while the fifth was the richest.

To analyze the determinants of level of agricultural commercialization by members of the different co-operative models, a Tobit model was used. The proportion of produce sold to the co-operative was used as a dependent variable. The OLS could not be applied since on the whole sample or just the uncensored sample it would provide inconsistent estimates of β (Greene, 2003). The Tobit also answers two questions; the participation question (binary) and the extent (how much), hence making it more appropriate. In addition, a Probit model was used to determine the factors influencing farmer involvement and activity in co-operatives and integrated co-operative model. The dichotomous nature of the dependent variable of whether a farmer belongs to a co-operative or not and whether a farmer is a member within the integrated co-operative model or single co-operative guided the use of the Probit model. This is because it could easily capture the factors that influence such decisions to belong to any of the organizations (Greene 2003).

To understand what drives farmers' choices of credit source, a multinomial Logit (MNL) regression model was used. This model is based on the random utility theory. The utility to a household which selects a certain marketing channel (U) is specified as a linear function of the individual and farm specific characteristics (β), the attributes of the alternative channel and other institutional factors (X) as well as the stochastic component (ℓ). The advantage of the MNL is that it allows the analysis of decisions across more than two categories, allowing the determination of choice probabilities for different categories (Wooldridge 2002). Koch (2007) adds that this model is useful due to the ease of interpreting of estimates from it.

4. Results and Discussion

This chapter presents and discusses the findings of the exploratory visit to Nebbi district, application of the household survey, focus group discussions, community profiles, case studies of co-operatives, individual member profiles and validation workshops. Some results are summarized as means and percentages in tables.

4.1 Findings of the Exploratory Visit to Nebbi District

Development of Co-operatives in Nebbi: Discussion with project officers revealed that the development of SACCOs in the region was initiated by the Private Sector Foundation in the late 1990s. Their initial idea was to form private village banks. For regulatory purposes and to reach many people, they changed to co-operatives. The first SACCO to be established was Pakwach Nam SACCO in 1998. The first phase of IFAPI project began in 2005. The project team had to go through the district co-operative development office. The project took charge of village banks under the private-sector initiative.

Effect of Changing Government Policies: Changes in government policies have presented problems in co-operative development. For instance, *bona ba gagawale* (Prosperity for all) as a pillar of economic empowerment led to politicization of the process of co-operative development. This greatly undermined the voluntary nature of co-operatives. The fundamental tenets of co-operatives such as self-help were undermined. People began to expect hand-outs from the government instead. This killed initiatives of members to mobilize internal resources. Support from the Ministry of Finance, Planning and Economic Development through the Microfinance Center was construed to be free. This is frustrating co-operative development. Members are not self-driven. They are instead looking for working or startup capital.

Types of SACCOs: There are three categories of SACCOs in the district depending on who formed them. The first category refers to those formed by the private sector foundation. The second category refers to those formed by Uganda Co-operative Alliance (UCA). The last category consists of those co-ops formed by the government. In addition to these, there were informal village savings and loan associations (VSLAs). The main disadvantage with VSLAs is the lack of regulation. Dispute resolution in VSLAs is very difficult which explains why all sorts

of malpractices happen within VSLAs. Another key negative is their lack of office space where they can meet.

A few of the SACCOs were strong and thriving. Many of those formed by the government were failing. Operations of many of them have been associated with particular politicians, especially area members of parliament. If such a member of parliament loses his or her seat, a SACCO associated with him or her dies.

UCA was doing well in Nebbi. The strength of co-operatives in the district was attributed the strong private sector initiatives in developing co-operatives in the region. There were about 15 strong SACCOs in Nebbi and only five in the Arua district. The strongest SACCO was the Pakwach Nam SACCO. All the ACEs in Nebbi were linked to this SACCO. This SACCO had participated in all UCA activities from the beginning. There were also those SACCOs formed under UCA.

For the government SACCOs, there was no integration. For some of them, money for registration came from the sub-county local government. In most cases, most of the government formed SACCOs lacked policies for efficient functioning. UCA in collaboration with co-operative officers at the district provided guidelines for developing by-laws within such SACCOs. UCA also provided guidance on formation of other policies. UCA accomplished this through organizing training workshops and developing templates that can be adapted to suit their needs. Visiting Canadians have also provided coaching on savings and lending.

Stated Impact of ICM: According to the UCA field officers, on the stated impact of the Integrated Co-operative Model, a few issues were highlighted. First, the ICM was said to be inculcating a savings culture. Many rural residents who were previously unbanked were now saving through VSLAs. Most VSLAs within the ICM had accounts with SACCOs. Secondly, many households were reportedly acquiring household assets such as bicycles, motorcycles and are constructing better homes. Others have reportedly been able to pay school fees and medical bills. Some have had the opportunity to expand their businesses through earnings from their involvement in RPOs, SACCOs, VSLAs, and ACEs. There was also a greater participation of women in income generating activities. For instance, they were some making money out of mushroom growing and fish farming. They were also actively involved in group lending. Financial literacy, especially among women, increased. Farmers were also benefiting through training in best practices such as row planting and use of superior varieties. Lastly, according to the field officers, the integrated co-op model was leading to improved nutrition and food security. Because of their involvement in various enterprises, many participating farm households were able to get a variety of foods and afford to eat three meals a day and still have a modest surplus for the market.

Challenges in Implementing the ICM: There were challenges reportedly associated with ICM identified by the field officers. One of them was low levels of financial literacy. Making people keeping their money in SACCOs was reported as a big challenge. Many people were used to keeping money in their houses. The negative attitude towards co-operatives resulting from previous experiences was a significant challenge. In the past, there was a major leadership problem. Co-operative leaders did not have the capacity to manage the co-operatives, resulting in

gross mismanagement. To make matters worse, there was over-regulation by the government. government was giving money to co-ops through co-op finance. The minister responsible would make appointments in some positions within co-operatives. The co-ops became partisan affairs, with membership being dominated by the ruling party, that time the Uganda People's Congress (UPC). This undermined autonomy and independence, the key principle of co-operatives. As a result, corruption became widespread within the co-ops. Such a history of abuse and mismanagement within co-ops provided a formidable obstacle in developing new co-operatives. It had particularly been a challenge in forming RPOs and promoting bulking for collective marketing. People didn't want to be associated with the previous co-op problems. "We had to run away from the word primary co-operative and use RPO instead." In terms of collective marketing, delays in payments by ACEs are re-enforcing the previous bad image of co-ops.

ACEs, RPOs, and SACCOs in Nebbi District: An ACE is a secondary co-operative made up of a minimum of three RPOs. The main role of the ACE is to enhance production and productivity through bulk procurement of improved inputs and to increase marketability through value addition and joint marketing. SACCOs provide finances for farmer's activities and to the RPOs and ACE. Under the integrated model, when there is an RPO in a parish, there has to be a SACCO to serve the RPO. ACEs are established at sub-county level. There were three ACEs in Nebbi, namely Nebbi, Wadelai-Pakwinyo, and Panyamur-Dei ACE. Nebbi ACE had six RPOs and six SACCOs. Panyimur-Dei ACE had 5 RPOs and one SACCO called Panyamur SACCO. Wadelai-Pakwinyo ACE had 4 RPOs and one SACCO called Wadelai SACCO.

Nebbi ACE was heavily involved in input procurement and value-addition. The ACE received financial support from Packwach Nam SACCO. It had the following RPOs and the associated SACCOs: Erussi RPO served by Erussi SACCO, Kuchwinyi RPO served by Kuchwinyi SACCO, Panyango RPO served by Panyango SACCO, Zeu RPO served by Zeu SACCO, Kango RPO served Kango SACCO, Nyaravur RPO served by Dikiri Kabu Chan SACCO.

Wadelai ACE was spearheading marketing and value addition of rice, Maize and sesame. The ACE was also linked to Packwach Nam SACCO, although it was served by Wadelai SACCO. It had the following RPOs: Pakwinyo North, Pakwinyo Central, Wadelai Farmers and Ochayo Waribtam RPO. Panyimur-Dei ACE was also a member of Packwach Nam SACCO. It had the following RPOs: Dei Farmers, Juba Merber, Bidokomit Luli, Nyakagei Farmers and Peranwim Fish Farmers. All the RPOs have accounts in Panyimur SACCO.

Meetings with Leaders of SACCOs, RPOs, and ACEs
(a) Erussi SACCO and RPO

This is a summary of the key issues discussed with the leadership of Erussi SACCO and RPO. See Figure 1 for the meeting at Erussi SACCO offices.



Figure 1. Meeting with leadership of Erussi SACCO and RPO at the SACCO offices

The SACCO began in 2005. In terms of management structure, it has a manager, an accountant, a loans officer, cashier and one support staff (a security guard). The management reports to the board, composed of representatives of the shareholders who own the SACCO. Each share costs Ugandan shillings 10,000 (USD 4). Membership, payable once, is valued at shillings 15,000 (USD 6). Savings and withdrawals are free. The SACCO provides the following services: agricultural loans at an interest rate of 3 percent, school fees loans at an interest rate of 3 percent, savings and commercial loans at an interest rate of 4 percent. In addition to share price and membership fee, other kinds of fees paid to the SACCO include accounts opening at shillings 10,000 and members pass book at shillings 2,000.

During the Annual General Meeting (AGM), dividends are paid to the members with shares depending on whether there has been a boom in the business or not. Erussi RPO as a group has borrowed 1.5 million shillings once from Erussi SACCO. However, members of the RPO often borrow from the SACCO. Much of the money borrowed from the SACCO is used for facilitating agricultural production and payment of school fees. The repayment rate varies from 85 percent to 99 percent.

At that time, the SACCO had total savings of shillings 125,712,200 (USD 50,285). Membership as of September 2013 consisted of 625 males, 209 females, and 157 groups, including the RPO, schools, churches and other smallholder farmers' groups.

On lending policy, members should have 30 percent of what they would like to borrow. It also depended on the member's resources which were determined by the loans officer during appraisal. Although the default rates were very low, there was a policy in place to handle such cases. When a member defaults payment, the member is called by the loans officer and asked to explain why he or she has failed to repay. If the person is unavailable, his or her guarantors are called upon to explain the position of the member. If that still fails, the case is brought before the board for a decision, which includes among others taking legal action to recover the money.

Benefits and Challenges: There were a number of benefits derived from ICM. RPOs were mobilizing more members to join the SACCO. This had greatly increased the customer base and had in turn resulted into greater earning and better service delivery. The increased membership

had been possible because the model enabled the SACCO to reach women through women groups formed by the RPOs. One of the main challenges was political interference. There was also stiff competition from more established financial institutions such as banks. Some of the leading banks including Centenary and Stanbic are adjusting their products to suit the rural folks. For instance, Centenary Bank, through provision of mobile banking services, had taken up many of the clients that originally banked with the SACCO. In response, the SACCO scrapped banking charges and was beginning to receive more customers. Past mistakes by previous leaders were a challenge. Mismanagement of funds by the earlier management made most of the members to lose confidence in the SACCO. Membership was still low compared to the number of people in the community. The SACCO had very few staff compared to the workload. For instance, the loans officer was responsible following up repayments from 291 clients! Cultural attitudes that discourage savings, especially for women, have affected the performance of the SACCO. However, it was noted that the number of women saving with the SACCO is growing. Though not very serious at the moment, repayments rates have been dropping. This is beginning to affect service delivery.

On whether there were unexpected outcomes, the leaders said they were glad to receive more trainings than expected from different organizations such as Uganda Investment Authority on entrepreneurship. Other trainings were on fish farming and gender mainstreaming by UCA. A growing interest in savings came as a surprise given the initial difficulty encountered moving to different villages encouraging farmers to join the SACCO. The RPO also benefited from an extension agent posted by ACE. The extension agent taught farmers on agronomy and farm management. He or she has to visit the RPO once a week. In terms of support from Nebbi ACE to Erussi RPO, the leaders said the ACE has helped the RPOs in value addition on honey and coffee (See Figure 2 for the coffee processing facility).



Figure 2: A coffee processing facility belonging to Erussi RPO

They have helped in proper harvesting, storage and packaging of honey and processing of coffee. Some of the RPOs have been involved in fish farming and mushroom growing (see Figures 3 and 4). One main challenge identified in fish farming is the access to feeds for the fish. They have had to source fish feed from Kampala.

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Figure 3: Fish pond belonging to one of the groups in Erussi RPO



Figure 4: Structure for mushroom growing belonging to a women's group in Erussi RPO

(b) Meeting with Leaders of Dikiri Kabu Chan (DKC) SACCO and RPO

The research team met with 10 members of the management of Dikiri Kabu Chan (DKC) SACCO and Panyamur RPO at the SACCO offices (See Figure 5).



Figure 5: Office of DKC SACCO

DKC was formed on 24 August 2008 by Nyaravur RPO. The RPO used savings, shares and registration fee to begin the SACCO. DKC SACCO offers the following services: agricultural, business/commercial, salary, asset, emergency and school fees loans. The SACCO also assists in training farmers. The membership as of October 2013 consisted of 374 males, 131 females, 20 groups, and 6 institutions (a school and a hospital). There was a compulsory saving of at least 10 percent of what of the amount a member would like to borrow. Opening an account was charged at shillings 30,000. Some of the challenges facing the SACCO included: low percentage of RPO members acquiring loans, RPOs not being organized to borrow as a group, and the low number of women in the SACCO, yet they have the highest repayment rates and make prompt payments.

In terms of the activities carried out by Nyaravur RPO, there are youth programs such as that for tree growing and women programs. The RPO was promoting savings through the VSLA and encouraging members to use the money from VSLA for facilitating their agricultural activities. Membership in the RPO consisted of 60 percent men, 21 percent youth and 19 percent women. With support from ACEs, members are participating in wine making from fruits, notably oranges and grapes (See Figure 6).



Figure 6: Wine making by members of Nyaravur RPO

(c) Meeting with Leaders of Pawach Nam SACCO

The meeting at Pakwach Nam SACCO was attended by the chairperson and three members of the management team (See Figure 7).



Figure 7: Inside the office of Pakwach Nam SACCO

As a historical background, the chairperson explained that Packwach Nam SACCO Ltd., also referred to as Packwach Nam Village Bank, was the first SACCO to be formed in the entire northwestern region with support from the Private Sector Foundation. It was commissioned by the first lady of Uganda, Mrs. Janet Museveni, on 19 August 1998. Its operations are concentrated mainly in the counties of Jonam and parts of Padyere and Okoro. The SACCO has nine members of the board who have constituted themselves into three functional committees with specific mandates. These committees were the finance, human resource and loans committee. The committees execute their work for and on behalf of the entire board with an independent supervisory committee appointed by the AGM. The composition of the membership as of 31 March 2012 consisted of: (1) Individuals — 1,619 males and 569 females; (2) 3,000 individuals belonging to groups; (3) 40 institutions; and (4) 407 youth.

In terms of product range, the core business of the SACCO is the provision of savings and credit services to the members. Basically, the product range is as follows:

- savings, including individual, joint, minor, fixed, collection, and rural household savings
- provision of credit/loans, including commercial, services, school fees, fisheries, solar energy, low salary earners, assets financing, credit for upland rice, and agricultural loans
- organizing training, including that for members on entrepreneurial skills and loan management and for staff on quality performance and quality service delivery to member customers
- provision of market information
- provision of advisory services
- facilitating linkages to other organizations

In the meeting, some of the key achievements of the SACCO highlighted included:

- the growth in membership from 40 (in 1998?) to over 5,600 members by September 2011
- expansion of outreach from Pakwach town council to 17 sub-counties in Nebbi district
- increment in institutional total assets valued at over Ugandan shillings 1.2 billion (USD 480,000)
- introduction of new loan products such as credit for upland rice growing, which may contribute to transformation of the farming system from predominantly subsistence to commercial; there is also the introduction of the solar energy loan product that has

improved household livelihood of the people who cannot afford to buy generators and fuel them; the solar energy loan includes a solar lantern and installation of solar plates

There were a number of challenges noted:

- a small loan portfolio to serve an increasing number of loan requests
- the low literacy rates in financial matters and a poor savings culture
- inadequate funds for capacity building through continuous trainings for members
- production and marketing hampered by poor roads and bridges; this greatly affected marketing of produce, especially rice, in Dei, Panyimur and Wadelai ACEs
- occurrence of extreme weather conditions, especially drought and floods, which destroy the produce of farmers

On the benefits of the ICM, it was observed that integration has led to increased membership and savings. It has also boosted morale and led to increased loan portfolio. However, the repayment rate, according to management is very low at 50 percent. The low rate was blamed on marketing challenges, drought and floods.

(d) Meeting with Leaders of Panyango SACCO

The meeting was attended by eight members of SACCO and RPO leadership at the SACCO offices. See outside the SACCO offices Figure 8.



Figure 8: In front of the office of Panyango SACCO

A summary of the issues discussed indicated that Panyango SACCO started 1 April 2006. The SACCO began with a little share capital from the members and membership fees with support from UCA. It began as a solidarity group in 2003 with support from UCA in form of stationery, bicycles, and salary for the manager and two other members of staff.

The SACCO provides a number of services. The main services offered were savings and credit i.e., keeping members' deposits and giving loans. Others services included agricultural, commercial, school fees, emergency and salary loans with an interest rate of 3 percent. The precondition for borrowing is that one needs to save at least a third of the amount being requested. The membership as of 31 October 2013 had 697 men, 258 women, 144 groups, and 9 institutions (schools and churches).

On the benefits and associated challenges within integration, there was generally very good repayment rate. The SACCO was making profits. The RPO brought in more customers, thus increasing membership of the SACCO. Furthermore, the VSLAs that were formed under the RPO were being linked with the SACCO. As far as challenges were concerned, savings were still low. There was also the challenge of competition from other financial service providers such as FINCA and BRAC that were providing equally good services. The SACCO was losing clients to these competitors.

In terms of unexpected outcomes, there was very high demand for loans that the SACCO could not afford. RPOs were benefiting from loans for bulking. As a result, RPOs were able to pay their loans with more interest. They were also able to get money from the SACCO to pay the ACE for inputs. Extreme weather conditions, especially too much rain has led to flooding. Members of the SACCO have experienced problems in drying crops during such periods.

In terms of services to the RPO, the SACCO provided loans for bulking produce which is encouraging members to bulk. They also used some of the loans to buy produce from other farmers in the community. The SACCO also facilitated the RPOs to buy inputs from the ACEs. Other challenges included lack of storage for the bulked produce, bureaucracy in the SACCO making RPOs to wait for some days before getting the money and having inadequate funds at the time the RPO needs money.

The manager of the SACCO identified two critical areas to address through research: (1) How can the RPOs be better linked to SACCOs and ACEs? (2) How can links between Panyango SACCO and other organizations be strengthened?

(e) Meeting with Leaders of Wadelai-Pakwinyo ACE

The meeting was attended by five members of management of the Wadelai-Pakwinyo ACE. See outside their office in Figure 9.



Figure 9: Outside the office of Wadelai-Pakanyi ACE

A summary of the information indicates that the ACE began in 2007 but was registered in 2010. The ACE is composed of four RPOs, three old and one new. There were 11 groups in the first

three RPOs with a membership of about 25–30. Groups under the newest ACE, Ocaya Wangtan, had not been registered.

At that time, the membership of the ACE consisted of 261 males and 234 females. The key services provided included training on savings and use of credit, marketing by linking buyers to RPOs. The ACE had a rice mill which helped in processing farmers' rice (See Figure 10). The ACE also provided bulking and seed production services for farmers.



Figure 10: Rice mill belonging to Wadelai-Pakanyi ACE

On the benefits the ACE gets from ICM, it was observed that SACCOs provided trainings to different committees of the ACE. They also helped the ACE in their planning, monitoring and evaluation of activities of ACEs. The ACEs participated in exchange visits to other ACEs performing well. The ACE teamed up with ABI Zonal Agricultural Research and Development Institute (ABIZARDI) and the Integrated Seed Sector Development (ISSD) program for seed business to produce quality seeds of Nerica 4 and sesame 2 for the market.

Some of the challenges facing the ACE included: (1) difficulty in mobilizing members because they were located in distant places; (2) poor accessibility of funds because most of the SACCOs were very distant (Pakwach is over 50km away) and the VSLA often had little or no money; (3) because they borrowed as group members, if one member defaulted, all the members were affected; (4) low demand and prices for produce; (5) expensive transportation of produce to distant markets; (6) lack of storage facilities and price fluctuations; and (7) extreme conditions in weather. On unexpected outcomes, the ICM has increased access to financial services. For instance, all members had access to VSLAs unlike before. The association with ISSD created opportunities for RPOs to become seed suppliers in the region, creating greater business opportunities. Furthermore, the exchange visits to different ACEs improved commitment of members to the ACE.

Reflections on the Emerging Issues

Our general impression from the various meetings during this exploratory visit is that ICM seems to have increased access to agricultural knowledge, financial services and marketing among participating households. Through training for farmers within the RPOs, farm households have had greater exposure to good agricultural knowledge and practices. Their access to good quality

seeds of superior varieties and other agricultural inputs has been increased through bulk purchasing by ACEs. Bulk purchasing of inputs by ACEs has enabled farmers to get these inputs at affordable prices. From the high membership in SACCOs, we can safely say that SACCOs and VSLAs within farmers' groups greatly increased access to financial services among farm households that were previously unbanked. More importantly, previously marginalized groups such as rural women can freely save with and borrow from VSLAs and SACCOs within their villages. In addition to input supply, the ACEs promoted value addition in coffee and fruits. They supported RPOs in constructing appropriate processing units for coffee, especially in Erussi. There was also promotion of wine production from fruits. Promotion of less labour demanding enterprises such as fish farming and mushroom growing has greatly increased participation of women in income generating activities. These initiatives are mostly taking place at the group level. It was not clear if these were being translated into better nutrition, improved food security and better quality of life among the participating households. Our discussions indicated that these initiatives probably have but the extent to which they have improved quality of life was not known.

4.1.1 Characteristics of Single and Integrated Co-operatives

Formation of Co-operatives: SACCOs are formed when a group of individuals with a common financial objective get together and express a need to work together. They design bylaws which spell clearly the name of the SACCO, location, committee members and the share capital contributed. The minimum number of people required to form a SACCO is 30. To form an RPO, farmers unite with the aim of selling their produce in bulk. Interested farmers specialized in a particular enterprise come together under specific terms and conditions to form a group and they later register the group at the Sub-County Local Government headquarters under the registrar of co-operatives. There is no minimum and maximum number set for RPO membership. ACEs on the other hand, are formed when various RPOs involved in one or more enterprises join together with defined objectives. The members of these RPOs must be fully registered and each RPO registered with the ACE. Unlike SACCOs, there is no minimum or maximum number of RPOs required to form an ACE.

Co-operative Membership: In order to be a SACCO member, one must contribute share capital to the co-operative and start saving upon joining. When necessary, the SACCO provides these members with a pass book and an identity card. Membership is open to both individual farmers and to those farmers who wish to open an account as a group. RPO membership requires that one pays membership fee and has shares. Although membership is open to everyone, trustworthy people are preferred. On the other hand, ACE membership is comprised of RPOs which pay membership fees. In addition to this, the ACE must be registered by UCA. ACE membership ceases when RPO is no longer registered. Failure to submit produce as required by the ACE is one of the major reasons for termination of RPO membership to ACE.

SACCOs on the other hand have a number of reasons for membership termination including: voluntary withdrawal put in writing, dishonesty, loan defaults and account dormancy.

Gender Preference and Composition: There are no gender preferences during service delivery in all the three co-operatives in both regions. In each co-operative, 33 percent of the leaders are female, 66 percent are male and the remaining 1 percent consists of the youth.

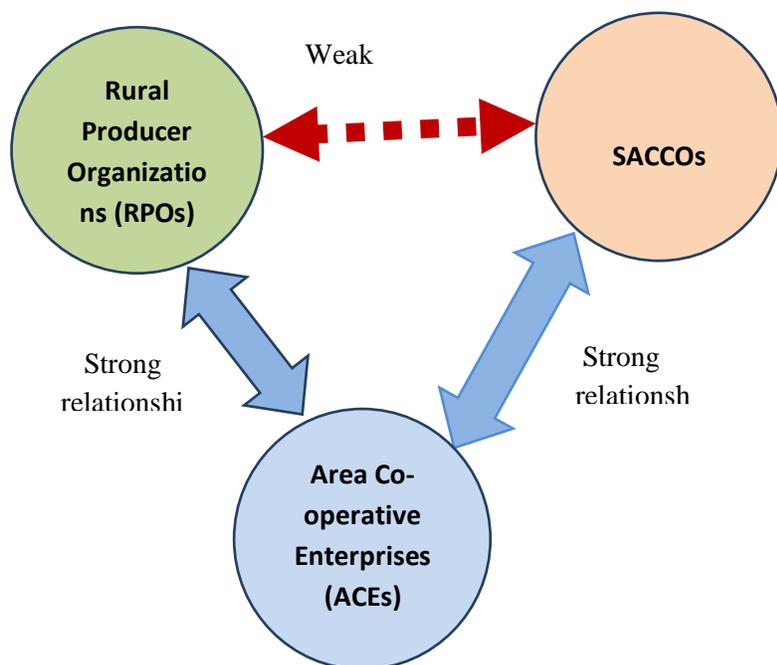
Relationship between SACCOs and RPOs: RPOs access credit directly from SACCOs for various purposes. Some RPOs, however, have no linkage with SACCOs due to the high interest rates that are charged. They indirectly access credit by taking their produce to ACEs and accessing funds at lower interest rates. This is done by filling ACE forms for credit access. The ACE then submits these forms to SACCOs to access funds. Upon receiving the funds, the ACEs disburse them to the respective RPOs. One advantage of this relationship is that RPOs can use their produce as collateral.

Relationship between SACCOs and ACEs: The linkage between SACCOs and ACEs appears to be strong in Ntungamo district, and relatively weak in Nebbi. Some SACCOs are formed by ACEs hence have a very strong relationship, while others are formed independent of the ACEs. Like RPOs, ACEs can access loans from SACCOs to use in their day to day operations. At least 5 of the 10 ACEs that exist in both districts borrow money from SACCOs and disburse the funds to RPOs, who in turn pay back after selling their produce.

Relationship between ACEs and RPOs: The relationship is through ACEs providing marketing opportunities for RPOs. When money is collected from the sale of produce, it is saved in SACCO accounts. Unlike the other relationships between RPOs and SACCOs, and ACEs and SACCOs, this relationship is guided by a contract/agreement.

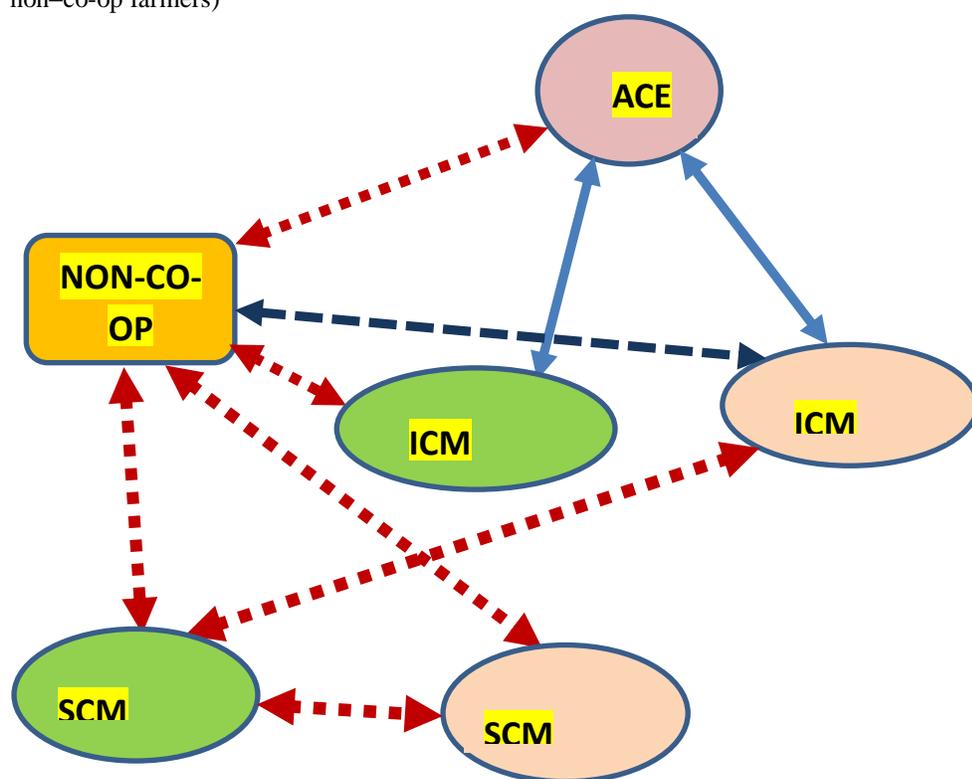
Integration of SACCOs, RPOs, and ACEs: In Ntungamo district, there exists a stronger relationship between SACCOs and ACEs than there is between RPOs with SACCOs (Figure 11). ACEs can easily access services from SACCOs yet RPOs find it technically challenging to access services directly from SACCOs. In Nebbi, a weak relationship between ACEs and SACCOs was reported.

Figure 11: Illustration of the Integrated Co-operative Model



Owing to the fact that nonmembers can also access services from these co-operatives, and the fact that that some RPOs can directly access services from SACCOs without necessarily going through their respective ACEs, the focus group discussions revealed a bigger integration as shown in Figure 12. This integration is a result of the relationship that exists among the three co-operatives and the services that nonmembers do access. Non- members can access marketing and financial services from ACEs and SACCOs, respectively. Although both members and nonmembers benefit from ACEs, priority is given to members. As shown in the model above, RPOs can equally access credit from SACCOs without necessarily being integrated in the model. In other words, the integrated co-operative model is not only limited to developing the livelihoods of the co-operative members but the greater community.

Figure 12: Illustration of the Integrated Co-operative Model including nonmembers (single co-operative model and non-co-op farmers)



4.2 Household Surveys

4.2.1 Comparison of Characteristics of Household Members of Integrated and Single Co-operatives

The characteristics of household members of integrated and single co-operatives include age of household head, expenditure on school fees, size of land owned, exchange of labour in farm activities and wage rate, distance to nearest urban market, saving and borrowing in Village Savings and Lending Associations (VSLAs) and SACCOs, and proportion of income from crop sales (Table 1).

Table 1: Demographic characteristics of households in different co-operative models

Variable	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op members (n=200)	Chi ²	P-value
Gender of household head (%)				1.34	0.51
Male	81.85	81.51	85.50		
Female	18.15	18.49	14.50		
Marital status of household head (%)				10.16	0.25
Never married	1.42	2.52	4.00		
Married monogamous	69.75	63.03	67.00		
Married polygamous	13.88	10.92	13.50		
Divorced/separated	3.20	7.56	3.00		
Widow/widower	11.74	15.97	12.50		
Main occupation of the household head (%)				15.03	0.058
Farming	88.97	94.96	84.00		
Salaried employment	2.85	0.00	6.00		
Self-employment	5.69	5.04	8.50		
Off-farm activities	2.14	0.00	1.00		
Casual labour	0.36	0.00	0.50		
Type of primary school attended by children (%)				3.66	0.45
Go to universal primary education	65.56	74.04	65.32		
Go to private primary school	23.65	18.27	26.61		
Both	10.79	7.69	8.06		
Type of secondary school attended by children (%)				6.93	0.14
Go to universal secondary education	41.67	49.02	51.28		
Go to private secondary school	55.00	41.18	38.46		
Both	3.33	9.80	10.26		

Integrated co-operatives and single co-operatives had household heads that were males and were married. Those not in co-operatives had mostly household heads that were males and were married. Nugussie (2009) showed that the probability of male headed households to become member of the co-operatives were 22 percent higher than female headed households. Results further indicate that household heads in the integrated co-operatives and single co-operatives have farming as their main occupation compared to those not in co-operatives. This result is in conformity with the national household survey findings where 78.8 percent of all households are engaged in farming as the main income earning activity (UBOS 2006).

Regarding labour capacity of the households, a majority of integrated co-operative members participate in labour exchanges (Table 2), while most of the households who are not members of co-operatives had males working on other household's farms for income. Another factor that was found significantly different ($P \leq 0.01$) between integrated co-operatives, single co-operatives and nonmembers of co-operatives was hired labour, with most of the households in integrated co-operatives using hired labour. The hired labour was mainly used for cultivation, weeding, ploughing, and harvesting. Table 2 further shows that not all the co-operative members sell their crops through co-operatives. In particular, the majority of the members of single co-operatives sell outside co-operative arrangements. This is because there are no restrictions to members to

sell through a co-operative, and in some cases the market conditions outside a co-operative are better.

Table 2: Labour cluster and crop marketing in different co-operative models

Variable	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op members (n=200)	Chi ²	P-value
Education level of household head (years of schooling)				4.56	0.34
0 to 7 years	71.89	66.39	65.00		
8 to 14 years	23.49	30.25	31.50		
15 years and above	4.63	3.36	3.50		
Hired labour	67.62	66.39	45.00	27.52	0.00
Household men working in someone else's land	8.90	10.92	39.00	74.62	0.00
Participate in labour exchange (%)	20.28	19.33	13.78	3.51	0.17
Experience severe constraints in crop production (%)	91.81	94.96	88.50	4.09	0.13
Sold crops in the previous year (%)	94.66	94.12	87.50	9.08	0.01
Sell produce through a co-operative (%)	22.42	21.01	2.50	38.84	0.00

The study also made a comparison of dependency ratios among the different households. Total dependency ratio (TDR) was computed as:

$$\text{TDR} = \frac{\text{Number of children (0-17)} + \text{number of adults (Elders above 59)}}{\text{number of adults (18-89)}}$$

Differences in child dependency ratio and total dependency ratio in Table 3 were statistically significant at 1 percent (Prob >F= 0.01). Both ratios were higher in integrated co-operative households. Households in integrated co-operatives had more children and elders they were looking after.

Table 3: Dependency ratio among the different co-operatives

Dependency ratio	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op (n=200)	F-statistics	P value
Child dependency ratio	1.79 (1.53)	1.76 (1.64)	0.91 (1.52)	21.09	0.00
Total dependency ratio	1.95 (1.57)	1.90 (1.72)	0.94 (1.53)	26.26	0.00

Results also show significant difference regarding access to financial services by members of integrated co-operatives, single co-operatives and non-co-operative members (Table 4). Most of the households in the integrated co-operatives saved money in the Village Savings and Loan Association (VSLA) compared to those in the single co-operatives. Saving money in the VSLA is easier because of easier access and short procedures for borrowing loans compared to SACCOs and banks. Households in single co-operatives borrow money from VSLA compared to those in integrated co-operatives and nonmembers of co-operatives.

Similarly, more households in integrated co-operatives borrowed from SACCOs because most of them were members of the SACCOs so it was easy for them to borrow money. SACCOs also provide loans at cheap cost. This is in line with findings by Oloyede (2008) who reported that informal finance providers provide their savings and loan services on favourable terms and at cheaper cost. Members of the single co-operatives mainly borrowed from friends and relatives because they offer loans at no cost. Though Kashuliza et al. (1998) reported that loan borrowing among friends and relatives is another prevalent mechanism but is on the decline because of the increasing dishonesty and lack of trust among many people.

Table 4: Access to financial services by households in different co-operative models

Variable	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op members (n=200)	Chi ²	P-value
Save in VSLA (%)	70.46	52.10	14.50	147.49	0.00
Borrowed money from VSLA (%)	35.94	40.34	15.50	30.80	0.00
Borrowed money from SACCO (%)	25.62	19.33	8.50	22.60	0.00
Borrowed money from Relatives and friends (%)	11.74	14.29	25.00	15.39	0.00
Borrowed money from commercial bank (%)	3.91	11.76	5.00	9.76	0.01

The households reportedly face challenges in marketing their produce including low demand for the produce, poor roads and high transport costs, lack of storage facilities, low prices and lack of market information. Table 5 shows that most households not in co-operatives faced these challenges compared to the co-operative members.

Table 5: Constraints in producing crops faced by farmers in the different co-operatives

Variable	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op (n=200)	Chi ²	P-value
Poor roads (%)	19.22	21.01	45.50	43.67	0.00
High transport costs (%)	41.28	56.30	48.50	7.98	0.02
Low demand for produce (%)	9.25	12.61	35.00	54.79	0.00
Poor storage for produce (%)	13.52	23.53	25.00	11.54	0.00
Lack of market information (%)	5.34	3.36	16.00	22.12	0.00

4.2.2 Welfare of Households in Different Co-operative Models

a. Productive Assets

Table 6 outlines the type of assets analyzed, the category of capital that it belongs to, and the specific components that make up its index.

Table 6: Type of assets used in computing household asset welfare

Asset type	Asset index category	Index components
Physical capital	Housing	- roof material, wall material, lighting source - floor material, toilet type
	Consumer durables	- television, radio, computer, etc. - bicycle, motorcycle
Financial/ productive assets	Labour security	- type of employment: self-employed, gov't employee - temporary worker
	Productive durables	- refrigerator, car, sewing machine, etc.
Human capital	Level of education	- level of education: illiterate, primary school, secondary school, tertiary education

The asset indices derived by the Principal Component Analysis (Table 7) were used to examine how individual households across the different co-operative models make “portfolio” choices between types and amounts of assets to accumulate. Number of rooms of houses owned by a household was the asset that had the highest index score across the three models namely ICM, SCM and non-co-operative. Households that belonged to the ICM had the highest asset index (2.989), indicating that they preferred to invest more in houses with many rooms.

Having local cows had high asset index score, with the highest score (1.868) among the household that belonged to the ICM. The index for mobile phone (0.782) was also relatively high, and highest among the ICM households. Having a mobile phone was reportedly important in the marketing of produce. Other asset indices such as having a sofa in living room, having bicycles, type roof of the house owned, keeping cross-bred pigs, goats and cows were highest among the households that belonged to the ICM. Household that belonged to the ICM also owned more land (over 5 acres) with the highest asset indexes. Overall, the index for ICM households was the highest (0.585), followed by that of SCM households (0.543) with the non-co-operative households registering the lowest (0.448).

Table 7: Asset indices of asset variables across ICM, SCM, and non-co-operative households

Asset	Integrated co-op	Single co-op	Non-co-op
Type of wall of house owned	0.281	0.218	0.310
Type of roof of house owned	0.580	0.537	0.590
Type of floor of house owned	0.206	0.218	0.200
Number of rooms of house owned	2.989	2.714	2.255
Sold livestock	0.241	0.302	0.185
Sold crops	0.730	0.811	0.758
Food secure	0.629	0.647	0.625
Proportion of crop sold through co-op	0.576	0.588	0.080
Mobile phone	0.782	0.722	0.720
Number of cross-bred pigs	0.099	0.058	0.010
Number of cross-bred goats	0.128	0.050	0.035
Number of cross-bred cows	0.234	0.008	0.005
Number of local cows	1.868	1.680	1.095
Water source	0.711	0.722	0.625
Ox-ploughs	0.049	0.008	0.010
Bicycles	0.704	0.663	0.515
Motorcycles	0.007	0.025	0.000

Sofa sets	0.480	0.428	0.380
Household owning < 2 acres of land	0.309	0.294	0.620
Household owning 3–5 acres of land	0.274	0.302	0.220
Household owning > 5 acres of land	0.416	0.403	0.160
Average asset index	0.585	0.543	0.448

The key indicators of wealth in both Nebbi and Ntungamo districts are size of land owned and used, as well as livestock owned. In this study, cattle and small ruminants (sheep and goats) are the major livestock kept. A livestock index was computed expressed in tropical livestock units (TLU; Cattle=0.7 TLU and small ruminants=0.1 TLU) as described by Jahnke (1982). Grazer densities for cattle, sheep and goats were converted into TLUs and summed them. Table 8 shows livestock index among the households belonging to different co-operatives. The table also compares their land own as well as the livelihood index. Simpson index was used to compute the livelihood index because of its computational simplicity, robustness and wider applicability. The formula for Simpson index is given as:

$$S.I = 1 - \sum_{i=1}^N P_i^2$$

Where, N is the total number of income sources and P_i represents income proportion of the i^{th} income source. Its value lies between 0 and 1. The value is zero when there is a complete specialization and approaches one as the level of diversification increases.

Table 8: Mean wealth indicators among households in different co-operatives

Wealth indicators	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op (n=200)	F-stat	P-value
Average total land owned (acres)	7.02 (17.67)	6.10 (7.77)	2.90 (4.50)	6.19	0.00
Average land (acres) in use	4.17 (5.59)	3.51 (2.36)	2.5415 (2.80)	8.43	0.00
Average livestock unit	2.00 (4.24)	1.77 (3.86)	1.06 (2.24)	4.06	0.02
Average livelihood index	0.26 (0.32)	0.23 (0.30)	0.26 (0.33)	0.27	0.76
Average household income (millions)	1.50 (3.76)	1.05 (1.96)	0.99 (3.12)	1.45	0.23

In Table 8, a one-way ANOVA test revealed that there is a statistically significant difference among the integrated co-operatives, single co-operatives and nonmembers of co-operatives in terms of the average total land owned and acres currently in use. Households in the integrated co-operatives own and are currently using large acres of land. This was mostly seen among male household heads compared to the female household heads (see Table 54 in the appendixes). Livestock index was also significant at 5 percent among integrated co-operatives, single co-operatives and those not in co-operatives. Households in the integrated co-operatives had the highest livestock index. This was mostly seen among male household heads compared to the female household heads (see Table 54 in the appendixes).

Differences in livelihood index were not statistically different among different types of respondents, but was significant between women and men of single co-operatives and

nonmembers (see Table 54 in the appendixes). In terms of land ownership and use, most of the households in the integrated co-operatives own land for production. Approximately half of the non-co-operative members own land for production. Over a third of nonmembers hire land compared to a fifth of ICM members (Table 9).

Table 9: Ownership land by households in different co-operatives

Wealth indicators	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op (n=188)	Chi ²	P-value
Ownership of land				28.01	0.00
Owens land (%)	69.75	64.71	47.87		
Both owns and hires land (%)	9.61	8.40	9.57		
Hires land (%)	20.64	26.89	42.55		

b. Basic Needs Cluster

Like anywhere else, food, water for domestic use, and shelter were considered as some of the key basic needs in Nebbi and Ntungamo districts. As regards access to food, a larger percentage of households in single co-operatives were able to eat three meals a day during the period of plenty while most of the households in the integrated co-operatives were able to eat two meals a day during periods of scarcity. Households in the integrated co-operatives reported that they used most of their household incomes to take their children to expensive schools so they did not bother the number of meals they ate a day. Most households not in co-operatives had two meals a day during the plenty period and one meal a day during period of scarcity (Table 10). The single co-operatives had a perception that they were always food insecure compared to about 39 percent of the integrated co-operative members who believed they were food secure.

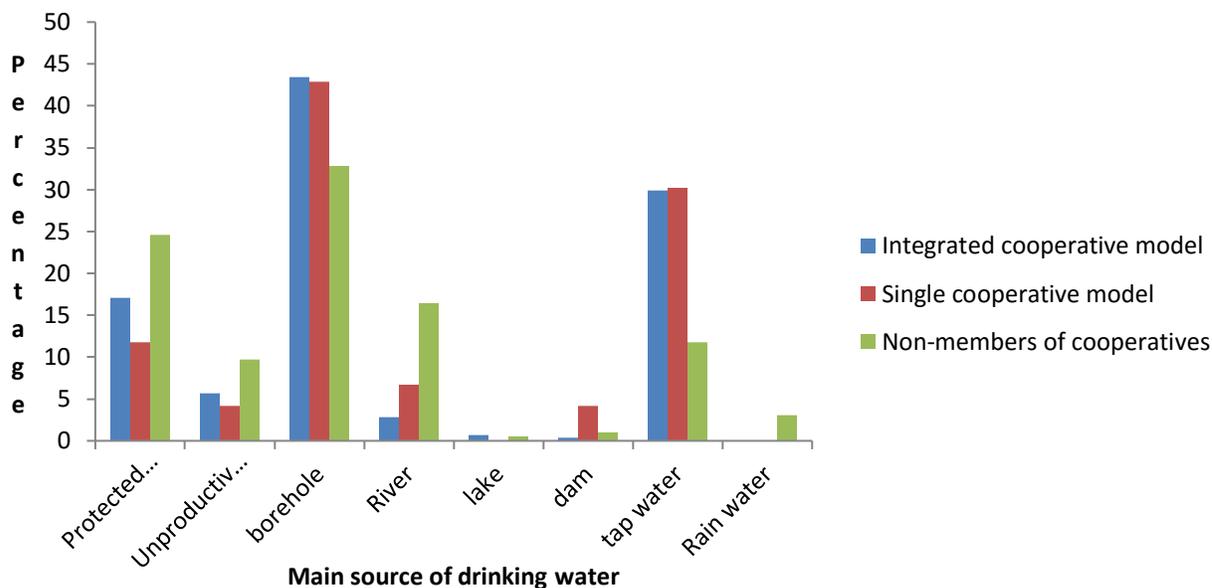
Table 10: Number of meals consumed and farmer perception in terms of food security

Variable	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op (n=200)	Chi ²	P-value
Number of meals consumed in times of plenty (%)				16.82	0.00
One meal	0.71	0.00	5.00		
Two meals	53.02	47.06	54.00		
At least three meals	46.26	52.94	41.00		
Number of meals consumed in times of scarcity (%)				16.90	0.00
One meal	47.33	43.70	63.50		
Two meals	47.33	42.86	29.50		
At least three meals	10.68	26.67	23.33		
Perception of household in terms of food security (%)				6.48	0.17
Always food insecure	8.19	5.88	11.56		
Sometimes food secure	57.30	55.46	60.80		
Food secure	34.52	38.66	27.64		

The chi-square test show significant differences ($P \leq 0.01$) among integrated co-operatives, single co-operatives and nonmembers of co-operatives in terms of the main source of drinking water. The majority of the households got their drinking water from boreholes as shown in Figure 13. Compared to households in the single co-operative and those not in co-operatives, more

households in the integrated co-operatives had access to borehole and tap water, which is considered cleaner than most of other waters.

Figure 13: Main source of drinking water among different co-operatives



Considering household food availability, having months without enough food was significantly different at 1 percent among household in integrated co-operative, single co-operative and those not in co-operatives as shown in Table 11. On average households in single co-operatives experienced more months without enough food compared to those in the integrated co-operatives and the non-co-operative households.

Table 11: Number of months in year with enough food for households in different co-operatives

Monthly food status	n	Integrated co-op	Single co-op	Non-co-op	F-stat	P-value
Average number of months without enough food	600	5.35 (5.10)	6.44 (5.09)	2.45 (2.03)	39.66	0.00
Average number of months with enough food	600	6.65 (5.10)	5.56 (5.09)	9.55 (2.03)	39.66	0.00

In terms of the type of residential houses, there is a significant difference among the integrated co-operatives, single co-operatives and those not in co-operatives (Table 12). Brick walls not plastered, mud poles plastered and mud poles not plastered were significant among households in the integrated co-operatives, single co-operatives and those not members of co-operatives. Households in the integrated co-operatives, single co-operatives and non-co-op members had walls of their houses made of mud and plastered.

Table 12: Housing quality of household members of different co-operative models

Housing quality	Integrated co-op model (n=281)	Single co-op model (n=119)	Non-co-op members (n=200)	Chi ²	P-value
Type of walls (%)					
Brick walls plastered	17.79	18.49	18.97	0.11	0.95
Brick walls not plastered	10.68	3.36	12.82	7.74	0.02
Mud poles plastered	41.64	48.74	52.82	6.02	0.05
Mud poles not plastered	29.89	29.41	15.38	14.42	0.00
Type of roof (%)					
Iron sheets	58.01	53.78	57.73	0.66	0.72
Grass thatched	41.99	46.22	42.27	0.66	0.72
Type of floor (%)					
Cement floor	20.64	21.85	21.03	0.07	0.96
Rammed earth floor	79.36	78.15	78.97	0.07	0.96

c. Social Participation and Financial Capacity

Social participation shows how many social institutions the household participates in. Table 13 shows that households mainly participated in the activities of Village Saving and Loan Associations (VSLAs) and exchange of labour in various farm activities. VSLA is a self-selected group of people (usually unregistered) who pool their money in to a fund (the savings). It is an improvement to the traditional savings clubs, and requires no external funding. Its foundation, operation and strength is entirely based on the savings contributions made by its members and operates within the informal sector. Members of the VSLA can borrow from the savings pool and the money is paid back with interest, causing the money to grow. The regular savings contributions to the association are deposited with an end date in mind for distribution of all or part of the total funds (including interest earnings) to the individual members, usually on the basis of a formula that links payout to the amount saved by each member. Results in Table 13 indicate that saving in VSLA was significantly ($P \leq 0.01$) different between integrated co-operatives, single co-operatives and non-co-operative members. Integrated co-operatives had most households saving in VSLA. Being integrated to SACCOs, they were expected to be saving less in VSLAs. This could be an indication that they participate more in social activities.

Borrowing money and acquiring income from remittances was also statistically and significantly ($P \leq 0.01$) different among the households belonging to different co-operatives. Households in integrated co-operatives and single co-operatives borrowed money from formal and informal sources. The majority of the integrated co-operatives also acquired income from remittances from other people, mainly relatives.

Table 13: Social participation and financial capacity among the different co-operatives

Variable	n	Integrated co-op (%)	Single co-op (%)	Non-co-op (%)	Chi ²	P-value
Social participation						
Save in VSLA	600	70.46	52.10	14.50	147.49	0.00
Have an account in a SACCO	600	25.62	19.33	8.50	22.60	0.00
Participate in labour exchange	596	20.28	19.33	13.78	3.51	0.17
Financial capacity						
Borrow money	600	68.33	69.75	51.00	18.06	0.00
Acquire income from remittances	413	9.21	0.00	1.00	18.52	0.00

4.2.3 Influence of Co-operatives on Enterprise and Social Class

Table 14 shows the type of influence farmers had from rural producer organizations. Social class was in terms of whether farm households borrowed from money lenders or not. Results show that influence of the rural producer organization (RPO) was statistically significant ($P \leq 0.01$) among the households belonging to the different co-operatives. Single co-operatives had most households that were influenced by the RPOs in terms of what crops to grow by providing them cheaper seed. Most of the influence was mainly providing cheap inputs and trainings on agronomical practices though the integrated co-operatives provide more services like providing equipment in terms of hoes, rice mills used for milling rice, and warehouses for storage, which the other households could not access. The integrated co-operatives have marketing co-operatives whose main function is to provide trainings and equipment to the member RPOs. The marketing co-operatives are supported by the SACCOs in terms of credit provision.

Table 14: Influence of co-operatives on enterprise among households of different co-operatives

Variable	n	Integrated co-op (%)	Single co-op (%)	Non-co-op (%)	Chi ²	P-value
Influence of RPO	600	63.35	64.71	0.00	221.80	0.00
Type of co-op influence	256				16.37	0.01
Provide cheap inputs		31.84	35.06	0.00		
Provide advanced payment		0.56	2.60	0.00		
Provide equipment		29.05	9.09	0.00		
Provide market		8.94	6.49	0.00		
Provide soft loans		2.79	3.90	0.00		
Provide training on agronomical practices		26.82	42.86	0.00		
Social class						
Borrow money from money lender	600	3.20	1.68	0.50	4.43	0.11

4.2.4 Community Changes Related to Co-operatives

This study made an assessment of community changes related to existence of co-operatives. The changes focused on are in terms of land under farming, foods that were not eaten but are now eaten and changes in farming generally. In both Nebbi and Ntungamo district communities, households belonging to single co-operatives were farming more land compared to 5 years back (Table 16), which they attributed to the support they got from their co-operatives to acquire more land. The support was mainly in the form of soft loans, and provision of market for their produce. Nonetheless, again most of the households in the single co-operatives were farming less land compared to last 5 years back. Some reportedly gave part of it away to their children and some was sold off.

Table 16: Changes in the community among the different co-operatives

Community changes	n	Integrated co-op (%)	Single co-op (%)	Non-co-op	Chi ²	P-value
Farm more land last 5 years	600	65.84	68.91	19.50	121.39	0.00
Belonging to co-op helping acquiring more land	599	23.49	26.05	0.00	57.99	0.00
Farm less land than last 5 years	600	33.45	38.66	15.00	27.38	0.00

Have foods eaten last 5 years and no longer eat them	596	29.39	28.21	8.00	34.37	0.00
Have foods eaten now and did not eat last 5 years	594	58.27	68.10	20.50	91.16	0.00
Had good changes in farming last 5 years	599	79.29	78.15	58.00	29.02	0.00
Had bad changes in farming last 5 years	599	77.14	70.59	53.50	30.42	0.00

Changes were also reported in the kinds of food households were eating. Foods like potatoes and rice were no longer eaten in some communities because they had stopped growing them. There are also significant changes in foods households eat currently but never used to eat 5 years back like meat and fish. Single co-operatives had the highest number of households that currently eat food they never used to eat before. Some of those foods include meat which they never used to afford.

Furthermore, more households in the integrated co-operatives experienced good and bad changes in their farming compared to members of the single co-operatives and the nonmembers. The good changes include increased production and productivity which is due to the trainings they get from marketing co-operatives on good agronomical practices. The bad changes include bad weather (drought and floods) which destroyed their farms leading to low yields. Some of the farmers in Ntungamo district experienced an outbreak of banana bacterial wilt that destroyed most of their bananas leading to low yields. Households that were affected did not get help from the co-operatives.

4.2.5 Determinants of Level of Agricultural Commercialization within the Co-operatives

The level of commercialization by a household is an important parameter to measure welfare of that household. The assumption here was that farmers who are highly commercialized also enjoy a higher welfare status because they earn higher incomes. For this study, this level was measured as the proportion of the produce sold through the co-operatives.

Results in Table 17 show that income from crop sales was a significant factor (at 1 percent) that promoted farm commercialization. This is due to the fact that most of the co-operatives are crop based promoting the production and marketing of crops. However, borrowing from VSLA negatively and significantly ($P \leq 0.05$) impacted on the level of commercialization. This is due to the fact that VSLAs usually give short term loans unlike the SACCOs or commercial banks, and some charge much higher interest rates. Therefore, farmers do not use such loans for long term investment in production but rather in routine expenditures. Borrowing from a SACCO (though not significant) had a positive sign which gives more evidence of the ICM model positively influencing farmer commercialization.

Table 17 also shows that being a member of ICM positively and significantly influenced the level of farm commercialization. This is because ICM members benefit holistically in terms of production, marketing and financing. They also get better prices for their produce because they can prolong the storage waiting time as they wait for better prices and bulk buyers. This is in line with the view of Barret (2007) that facilitating smallholder organization, reducing the costs of intermarket commerce, and increasing access to improved technologies and productive assets are

vital in stimulating poorer farmers' market participation, a pathway to escape from semi-subsistence poverty traps.

What came out as counter intuitive was the education level of the household head which had a negative effect on the level of commercialization. This can be attributed to the fact that many of the farmers with relatively higher levels of education have alternative sources of income such as salaried employment. As such they are less likely to subscribe to co-operatives.

Table 17: Determinants of level of farm commercialization by co-operative households

Variable	Coefficient	Std. err	P-value
Proportion of produce sold through the co-operative			
Sex of household head	10.406	8.974	0.247
Repayment period in SACCO	8.328	8.877	0.349
Borrowed money from SACCO	7.083	22.651	0.755
Age of household head (years)	0.108	0.251	0.667
Income from Livestock sales (UGX)	1.069	0.561	0.057
Amount of school fees paid (UGX)	1.793	0.647	0.006
Household size	-1.122	0.884	0.205
Proportion of income from crop sales (%)	0.419	0.110	0.000
Borrow from VSLA	-14.836	6.805	0.030
Average output of crop1(kg)	0.002	0.002	0.397
Integrated co-operative member	48.262	6.751	0.000
Had months without enough food	1.346	7.507	0.858
Days of labour exchange	0.213	0.179	0.235
Education level of household head	-1.676	0.851	0.049
Experience problem of lack of improved varieties	-6.691	8.987	0.457

R²= 0.0507, Prob>chi2 = 0.0000, Number of observations = 598

4.2.6 Factors Affecting Involvement of Households in Different Co-operatives

Table 18 presents results of a multinomial logistic regression of factors likely to influence households' involvement in co-operatives. Age of household head positive and significantly (P<0.01) influenced the involvement of households in co-operatives. Holding other factors constant, increase in the age of household head increases the likelihood of a household head to join a co-operative.

Table 18: Multinomial logit regression estimate on the factors affecting farmer involvement in the different co-operative models

Integrated co-operative	Coef.	Std. err.	P-value	Single co-operative	Coef.	Std. err.	P-value
Sex of household head	-0.27	0.34	0.43	Gender of household head	-0.10	0.38	0.79
Age of household head (years)	0.03	0.01	0.00	Age of household head (years)	0.03	0.01	0.01
Education level of household head (years)	-0.05	0.03	0.15	Education level of household head (years)	-0.04	0.04	0.25
Average day pay of hired labour	3.74E-05	1.1E-05	0.00	Average day pay of hired labour	3.81E-05	1.12E-05	0.00
Experience a problem of low price	0.76	0.26	0.00	Experience a problem of low price	0.28	0.29	0.34
Experience a problem of lack of market	0.23	0.29	0.43	Experience a problem of lack of market	0.44	0.33	0.19
Amount of money a farmer saves with VSLA (UGX)	1.38E-04	0.00	0.00	How much a farmer saves with VSLA (UGX)	1.0E-04	3.0E-05	0.00
How much a farmer borrows from a SACCO (UGX)	9.95E-07	0.00	0.01	How much a farmer borrows from a SACCO (UGX)	3.44E-07	4.63E-07	0.46
Days of labour exchange	0.02	0.02	0.23	Days of labour exchange	-0.06	0.06	0.25
Household size	0.15	0.04	0.00	Household size	0.08	0.04	0.06
Proportion of income from crop sales (%)	0.01	3.71E-03	0.00	Proportion of income from crop sales (%)	0.02	0.00	0.00
Amount of income from livestock sales	-5.23E-07	2.52E-07	0.04	Amount of income from livestock sales	-3.63E-07	2.42E-07	0.13
Annual expenditure on school fees (UGX)	9.46E-07	2.20E-07	0.00	Annual expenditure on school fees (UGX)	9.86E-07	2.26E-07	0.00

Base outcome: Nonmembers of co-operatives, Log likelihood = -483.3706, Number of observations = 600, Prob > chi2 = 0.0000, Pseudo R² = 0.2271

Average pay per day for hired labour was also significant ($P < 0.01$) and had a positive sign. An increase in the pay per day for hired labour increases the likelihood of a household joining the co-operatives. The increase in wages for hired labour encourages more workers to provide labour which increases farmers' production hence encouraging farmers to join the co-operatives. The integrated co-operatives reduce transaction costs and provide market for the large production which in turn increases incomes of farmers (Fiscer and Qaim 2011). Other significant and positive factors include: experiencing low price challenges; amount of money a farmer saves in a Village Saving and Loans Association (VSLA); household size; proportion of income from crop sales; and expenditure on school fees.

4.2.7 Factors That Determine Households' Choice of a Credit Source in A Co-operative

Results in Table 19 indicate that age of the farmer positively and significantly influenced choice of a commercial bank as a source of credit. This could be because older farmers have larger asset and capital base compared to younger farmers, which commercial banks ask for as collateral. Much as many co-operative members accessed credit from the SACCOs, they also accessed it from other sources like microfinance institutions and commercial banks, which give longer term and larger loans. However, this result indicates that older farmers have an advantage to access credit from these institutions because of their larger asset and capital base compared to younger farmers because banks ask for collateral before one can access the credit.

Being a co-operative member positively and significantly influenced choice of a SACCO as a lending source. Table 19 results show that being a co-operative member regardless of whether you are in an integrated or single co-operative increased a household's chance to access credit from a SACCO by 12.9 percent. This is because many SACCOs can attach a household's produce as collateral, and in other cases, fellow members guarantee one's loan. Interest rate on the borrowed money also influenced household's choice of credit source. An increase in the interest rate on credit from VSLAs and SACCOs significantly reduced chances for a household to choose them as credit sources.

Table 19: Multinomial logistic regression of credit and sources of credit in the Integrated Co-operative Model

Variable	VSLA			dy/dx	SACCO			dy/dx	Microfinance			Bank		
	Coef.	Std. err	P-value		Coef.	Std. err	P-value		Coef.	Std. err	P-value	Coef.	Std. err	P-value
Gender of household head	0.12	1.29	0.93	0.043	-0.259	0.320	0.420	-0.031	-0.118	1.288	0.927	-0.315	0.525	0.548
Age of household head (years)	-0.02	0.04	0.55	-0.001	0.004	0.008	0.569	0.0004	0.215	0.036	0.552	0.019	0.011	0.093
Total annual crop acreage	-0.03	0.13	0.80	0.0002	-0.003	0.004	0.406	-0.0004	0.336	0.130	0.796	0.003	0.004	0.406
Household size	-0.02	0.05	0.65	0.001	0.018	0.029	0.520	0.003	0.024	0.052	0.658	-0.061	0.065	0.345
Co-operative-non-co-operative	22.89	51.70	0.44	-0.108	1.140	0.314	0.000	0.129	-22.894	51.704	0.614	0.424	0.379	0.263
Amount of income from livestock sales ('000 UGX)	0.00	0.00	0.61	-0.005	1.83e-07	1.72e-07	0.288	0.003	-3.16e-07	6.27e-07	0.403	2.19e-07	1.1.62e-07	0.177
Amount of income from crop sales ('000 UGX)	0.00	0.00	0.40	-7.58e-10	-2.02e-08	5.05e-08	0.690	-2.80e-9	-1.95e-07	2.32e-07	0.000	6.65e-08	4.74e-08	0.161
Interest rate	-0.14	0.03	0.00	0.009	-0.100	0.029	0.001	-0.014	0.135	0.030	0.016	0.086	0.034	0.012

$R^2 = 0.0950$, $\text{Prob} > \chi^2 = 0.0000$, Number of obs = 600

4.2.8 Gender Equity/Women's Empowerment

Gender inequality is defined as a hierarchical view of gender relations, with men above women, and women regarded as inferior and less valuable by virtue of their sex. Results in Table 20 show significant differences in terms of who collect water, beneficiaries of income from both crops and livestock among household belonging different co-operatives. In households of the integrated co-operatives, water was mostly collected by wife of the household head. Beneficiaries of income from crop and livestock sales were all members of the household head that is, the women, children, and men among non-co-operative households.

Table 20: Gender equity/women's empowerment among households in different co-operatives

Gender equity	n	Integrated co-op (%)	Single co-op (%)	Non-co-op (%)	Chi ²	P-value
Household member who mostly sells crops	558				1.72	0.79
Man		40.79	36.28	35.12		
Woman		36.10	39.82	39.29		
Both		23.10	23.89	25.60		
Household member who collects water	597				21.42	0.01
All		6.76	5.04	3.55		
Children		22.78	22.69	36.04		
Household head		7.47	9.24	10.66		
Labourers		2.14	5.04	5.08		
Wife		60.85	57.98	44.67		
Beneficiaries of income from crop sales	561				52.12	0.00
Men		1.85	6.84	6.36		
Women		1.85	6.84	9.83		
Children		36.90	51.28	20.23		
All household members		59.41	35.04	63.58		
Beneficiaries of income from livestock sales	139				18.67	0.01
Men		1.47	0.00	2.86		
Women		1.47	0.00	5.71		
Children		50.00	63.89	17.14		
All household members		47.06	36.11	74.29		

There are also significant ($P \leq 0.10$) differences in number of male children between 13 and 17 years not going to school was significant (Table 21). Households in the integrated co-operatives had on average more male children between age 13 and 17 years not attending school. Integrated co-operative households had on average more children compared to those in single co-operatives and nonmembers of co-operatives.

Table 21: Gender equity among the different co-operatives

Gender equity	Integrated co-op (n=281)	Single co-op (n=119)	Non-co-op (n=200)	F-stat	P-value
Number of males between 5 and 12 years not going to school	0.05 (0.33)	0.00	0.05 (0.26)	1.77	0.17
Number of females between 5 and 12 years not going to school	0.04 (0.21)	0.03 (0.22)	0.05 (0.26)	0.22	0.80
Number of males between 13 and 17 years not going to school	0.08 (0.35)	0.01 (0.09)	0.04 (0.31)	2.44	0.09
Number of females between 13 and 17 years not going to school	0.04 (0.22)	0.03 (0.22)	0.02 (0.17)	0.36	0.70
Number of children	5.17 (3.37)	4.52 (2.50)	3.26 (2.64)	24.08	0.00

4.2.9 Resilience in Integrated Co-operatives

Richardson et al. (1990) contended that resiliency is “the process of coping with disruptive, stressful, or challenging life events in a way that provides the individual with additional protective and coping skills than prior to the disruption that results from the event.” Results on food security status of the households were not statistically significant as shown in Table 22 though the results reveal that most households in the single co-operatives were food secure. Studies have been shown that households in co-operatives have a lower probability of being poor compared to households that are not members (Omonona 2001).

Table 22: Resilience among the households of different co-operatives

Resilience	n	Integrated co-op (%)	Single co-op (%)	Non-co-op (%)	Chi ²	P-value
Food security status	599				6.48	0.17
Always food insecure		8.19	5.88	11.56		
Sometimes food insecure		57.30	55.46	60.80		
Food secure		34.52	38.66	27.64		

4.2.10 Members' Experience on Benefits from Co-operatives

From the household survey, focus group discussions, and interaction with key informants in the study areas, various services and benefits offered to co-operative members, nonmembers and the general community were noted. The main ones are summarized below.

- RPO members access collective bulking and marketing facilities (better markets and prices), credit, and training services. RPO members also acquire skills (enterprise, planning, record keeping, value addition, processing and marketing skills) that nonmembers may not access. Members have developed improved capacities in proposal writing and adopted improved technologies and management practices, which has led to maximum and quality production.
- Nonmembers are advised on quality control and good management practices. This has reduced incidences like occurrence of banana bacterial wilt, stigma and discrimination of

HIV/AIDS patients. As a result, they have also adopted improved farming technologies and practices in addition to benefiting from transport services offered for their produce.

- ACEs market produce on behalf of the RPOs, advise farmers on the benefits of collective marketing, and offer credit to members at low interest rates. Nonmembers are offered value addition and training services in order to attract them to the co-operatives.
- SACCOs offer the following services to ACEs and RPOs:
 - savings and credit in form of loans (school fees, business and home improvement loans); group acts as collateral security; for nonmembers, collateral to access credit
 - advice on other banking services available in other commercial institutions
 - training on collective bulking, marketing, and savings
 - safe custody of member documents such as academic papers
 - monitoring and evaluation of projects started with the loans, which ensures progress
 - grace periods and adequate time intervals within which to repay their credit; for nonmembers, the grace periods are shorter
 - access to advance payments for the produce, which are bought by ACEs at prevailing market prices upon harvests; no advance payments for nonmembers

Members of the co-operatives reported various experiences on the benefits accruing from their co-operative membership (Table 23). Households in the integrated co-operative had most of the households getting prompt payment as a payment related benefit. Prompt payment is a payment done on time mostly during the transaction. Households in single co-operatives received advance payment which enabled them to settle any emergencies they had like paying school fees.

Table 23: Benefits to household members of the different co-operatives

Benefits	N	Integrated co-op (%)	Single co-op (%)	Non-co-op (%)	Chi ²	P-value
Quantity benefit	76				3.35	0.19
Buys large quantities		96.88	100.00	88.46		
Can buy any quantity		3.13	0.00	11.54		
Quality benefits	39				0.15	0.93
Buy only quality produce		45.00	37.50	45.45		
Carry out quality control trainings		55.00	62.50	54.55		
Marketing cost related benefits	87				0.14	0.71
No marketing costs		95.92	97.37	0.00		
Lower marketing costs		4.08	2.63	0.00		
Storage related benefits	57					
Have storage facilities		100.00	100.00	0.00		
Market search benefits	108					
Offers markets		100.00	100.00	0.00		
Price related benefits	168					
Offers better prices		100.00	100.00	0.00		
Payment related benefits	145				10.32	0.02
Bonus payment		1.14	0.00	0.00		
Lump sum payment		6.82	3.51	0.00		
Pays in advance		17.05	40.35	0.00		
prompt payment		75.00	32.65	0.00		

4.3 Focus Group Discussions

4.3.1 Training by Co-operatives

The individual segments of the integrated co-operative model (SACCOs, RPOs and ACEs) organize trainings for their members. These training opportunities not only benefits members but also nonmembers. A brief of the trainings offered is indicated in Table 24. The trainings are usually conducted by committee and board members, extension workers and regional unions. In some cases, skilled individuals from organizations like Red Cross and National Agricultural Advisory Services assist in conducting these trainings.

Table 24: Training organized by SACCOs, RPOs, and ACEs

	NTUNGAMO	NEBBI
SACCO	<ul style="list-style-type: none"> ✓ Advisory services on income generating activities to engage in (e.g. brick laying) 	<ul style="list-style-type: none"> ✓ Benefits of savings and loans ✓ Training VSLA's on benefits of being in SACCOs ✓ Gender training
RPO	<ul style="list-style-type: none"> ✓ Quality control mechanisms for produce such as honey ✓ Record keeping ✓ Budgeting ✓ Work and business plan development ✓ Health and sanitation ✓ Pest/disease management ✓ Collective bulking and marketing ✓ Value addition ✓ Enterprise planning and selection ✓ Agronomic practices such as organic farming 	<ul style="list-style-type: none"> ✓ Bee keeping and processing ✓ Conservation farming practices ✓ Animal traction ✓ Agronomic practices ✓ Good leadership ✓ Gender training ✓ Organic fertilizer use ✓ Fruit processing ✓ Wine making ✓ Nursery management ✓ HIV/AIDS counselling
ACE	<ul style="list-style-type: none"> ✓ Post-harvest handling ✓ Agronomic practices ✓ Accountability issues ✓ Advisory services on savings 	<ul style="list-style-type: none"> ✓ Post-harvest handling ✓ Agronomic practices ✓ Fuel efficient stove building

Performance of Co-operatives: Leaders of the various co-operatives and policy makers reported improvement in the performance of all three co-operatives over the past 5 years. Areas of the improvements are summarized below:

<p>ACE</p>	<ul style="list-style-type: none"> •NTUNGAMO: Improvement in collective bulking and marketing of produce. Better market prices have encouraged farmers to increase the amount of produce. •NEBBI: Improvement in value addition initiatives due to the trainings provided.
<p>SACCO</p>	<ul style="list-style-type: none"> •NTUNGAMO: Credit is now easier to access. This is due to an improvement in the way SACCOs are managed. There is also improvement in provision of credit to non members. •NEBBI: Farmers now have easier access to credit than before.
<p>RPO</p>	<ul style="list-style-type: none"> •NTUNGAMO: Due to the various trainings that are offered to farmers, RPOs have become stronger and more organised. Production has also improved, motivated by organized marketing. •NEBBI: Improvement in the leadership and membership of RPOs due to trainings that are offered.

It was noted that the integrated co-operative model has evolved gradually in the two districts in the past 10 years due to a number of factors including:

- collective action (togetherness), favourable climate, and fertile soils that have favoured production of different types of crops
- strategic location of the two districts —Ntungamo is close to Rwanda and DR Congo thus access to markets in those countries; Nebbi shares a border with DR Congo and is very close to South Sudan; much of crop produce in these districts end up in the neighbouring countries
- good working partnership and performance, particularly between the ACEs and RPOs
- majority of the community members prefers Village Savings and Loan Associations (VSLA) to the SACCOs, which prompted the SACCOs to work hard to attract more farmers
- commitment of the staff of the ACEs and transparent leadership
- the saving habit of the members promotes the borrowing culture with a mind of investing it in business thus working through co-operatives
- political stability in Ntungamo has favoured the model evolution; In Nebbi, despite the instability in the region experienced a few years ago, the model is gradually taking shape through UCA support

Aspirations of the Co-operatives: Due to the trainings that are provided in Ntungamo, both leaders and members expect RPOs to improve and perform better in the next 10 years. RPO leaders expect SACCOs to come on board and train members in various finance areas, so as to

improve the overall performance. While RPO members with SACCO accounts expect an increase in input subsidies and research to help mitigate crop diseases, those without SACCO accounts expect an increase in trainings and advisory services. RPO leaders and members in Nebbi expect an increase in production, storage facilities and value addition initiatives while the ACEs expect an increase in farmer incomes and more youth to be involved in agriculture. ACE leaders on the other hand, expect operations to be affected negatively if the problem of limited capital persists. SACCOs in both districts expect to attract as many customers as possible ranging from co-operative and non-co-operative members. The co-operatives in both districts generally expect a significant improvement for better livelihood of the community members in the next 10 years.

Role of Government in Promoting Co-operatives: In Ntungamo district, the government has only played a role in promoting the formation and running of SACCOs and provision of funding through the micro-finance support centre. However, much more has been done by the government to promote co-operatives in Nebbi district. These include:

- routine auditing of SACCOs by the Commercial Department at the District Local Government offices
- collecting market data and disseminating of market information to the rural farmers through different channels
- mentoring/coaching of some of the SACCOs in good governance and accountability
- facilitating exhibitions through the commercial office with the main aim of exposing the products that RPOs are producing particularly for those engaged in value addition initiatives as well as act as a platform to motivate grassroots farmers
- funding through the Micro-Finance Support Centre, where funds have been channelled to the grassroots SACCOs and village banks
- re-structuring the commercial office, with support from the government and the Developmental Institute of Co-operatives (DICO); a new position of Principal Commercial Officer has been created, along with several other staff positions to enhance service delivery; the project has also equipped offices with new furniture, computers, and motorcycles for outreach

Ntungamo has yet to put in place policies that support co-operatives and their integration. In Nebbi, the local government is exploring ways of developing a policy on supervision of all SACCOs in the district to curb mismanagement and corruption. The ACEs are contemplating setting up their own SACCO with less interference from the traders, who they claim have taken up the control of majority of the originally farmer formed SACCOs. SACCOs have developed internal policies to guide their operations. Two of such policies are the Human Resources policy and Lending policies.

4.3.2 How Rural Producer Organizations in Integrated Co-operatives Are Working

The expected outcomes from RPOs include: maximum agricultural production and productivity, bulk/aggregate large amounts of produce for sale and borrow more finances from SACCOs through ACEs. The actual outcomes are: low production and productivity due to pests and diseases, reduced labour, small land plots, soil exhaustion and adverse weather, partial bulking or aggregation of produce, and less saving and borrowing from SACCOs through ACEs.

4.3.3 How Area Co-operative Enterprises Are Working

The expected Outcome from ACEs were: (1) Provision of marketing services in terms including market information, source agricultural inputs, strengthen market linkages, negotiate bulk sales at good prices; (2) provision of extension and education services; (3) warehouse storage facilities; (4) establishing a warehouse receipt system; and (5) activities to increase value of produce. The actual outputs from the ACEs were: (1) ACEs provided limited marketing services due to low quality products farmers do not practice the agricultural practices; (2) organized some trainings on agronomy; (3) limited warehouse storage facilities; (4) no warehouse receipt system; (5) fewer activities to enhance value of produce.

4.3.4 Strengths, Opportunities, Weaknesses, and Limitations of Integrated Co-operatives

Despite the benefits offered to the members, the integrated co-operatives model has a number of limitations and challenges faced at different pillars (RPO, ACE, and SACCO) of the model as indicated in the SWOT analysis (Tables 25–28).

Table 25: Strengths of co-operatives in improving the livelihoods of members and the community

RPOs		ACEs	SACCOs	
SCM - Flexibility in enterprise selection, which helps to switch to better paying enterprises in times of price fluctuations	ICM - Ownership of bank accounts - Collective bulking and marketing of the produce Linkage with SACCOs through ACEs, which eases credit accessibility - Better membership terms and conditions	- Presence of RPOs, which form the ACEs - Linkage with UCA and other stakeholders like World Food Program - Responsible and qualified staff members	SCM - Diverse sources of credit - Capacity to negotiate high interest rates on loan	ICM - Increasing membership - Capacity to disburse loans required by farmers - Strategic location - Arbitration system, which has reduced default rates - Qualified staff - Improved savings from members, which are given out as loans

Table 26: Weaknesses of co-operatives in improving the livelihoods of members and the community

RPOs		ACEs	SACCOs	
SCM - Poor coordination among the members - Poor market linkages - low saving rates - Poor leadership - Lack of access to trainings	ICM - Limited space for expansion - Short-term aspirations of the members like quick financial gains from conferences and meetings - Little patriotism characterised by poor attendance of meetings - Low saving rates	- Limited source of income (rely on only SACCOs for credit) - Mostly rely on RPOs for produce yet they may act otherwise - Poor leadership	SCM - Non-sustainable linkages to farmers - Fewer creditors - Poorly trained staff - Misappropriation of funds by staff	ICM - Poor customer care - Corruption (some board members are selfish in a way that they use their offices to access credit that would otherwise have been borrowed by other members) - Poor management and leadership skills - Bureaucracies in the banking system - Misguidance by the staff (false interpretation of balance sheets)

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	- Poor implementation of agreed plans			so as not to discourage members about poor performance of SACCOs) - Limited capacity to monitor members with multiple borrowing from different financial institutions
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Table 27: Opportunities that favour co-operatives in improving livelihoods of members and the community

RPOs		ACEs	SACCOs	
SCM - Access to flexible markets	ICM - Improved technologies like milk coolers, maize mills in Nyakyera, Ntungamo - Increased management trainings - Improved market access - Increased linkages with UCA and other development partners like world food program - Improved infrastructure such as road network, electricity - Increased government intervention in the provision of funds through SACCOs	- Various trainings - Donations - Linkages with other developmental organisations - Members of the community have a natural love for farming, which ensures steady supply	SCM - Adoption of integrated co-operative model that has increased the number of creditors	ICM - Government support of co-operatives gives hope to SACCOs - Timely payment of loans by clients (limited number of defaulters) - Support from developmental partners like microfinance support center - Customer attraction compared to other financial service providers

Table 28: Limitations/challenges hindering co-operatives from performing to their best

RPOs		ACEs	SACCOs	
<p>SCM</p> <ul style="list-style-type: none"> - Price fluctuations - Pests and diseases - Deterioration of soils - Climate change - Remote locations - Poor public relations - Lack of warehouses - Poorly trained staff - Poor markets - Limited funding 	<p>ICM</p> <ul style="list-style-type: none"> - Price fluctuation - Pests and diseases - Limited funding - Deteriorating soil fertility - Climate change - Reduced labour due to the youth shunning away - Political interference - Production of other products not in the interest of ACE - Low-quality products - Small volume of products 	<ul style="list-style-type: none"> - Climate change - Limited markets for produce - Limited storage facilities: sometimes supplies from RPO are very big compared to the existing ACE storage facilities, so the ACEs end up procuring less than what the RPOs can supply - Limited capital - Delayed payments - Pests and diseases - Middlemen exploiting farmers with poor prices because farmers are in need of direct cash - Some unions prefer to buy directly from RPOs rather than through the ACE 	<p>SCM</p> <ul style="list-style-type: none"> - Poorly trained staff - Low popularity in the area of operation - Low membership - Poor public relations - Competition from other financial institutions - Low loan recovery 	<p>ICM</p> <ul style="list-style-type: none"> - Ignorance by some members who take time to grasp explanations from SACCO staff - Competition from other players (VSLA, commercial banks) - Political interference/influence - Huge losses in harvests due to pests and diseases that make it difficult for members to repay their loans as this depend on sales from agricultural produce

4.4 Community Profiles and Case Studies in Ntungamo and Nebbi Districts

4.4.1 Introduction

Our community in the case studies is a sub-county, the smallest local government in the administrative set up of the country. The other local government is the district. Two sub-counties were selected per district from Ntungamo and Nebbi districts. Their selection was based on location (urban vs rural), type of co-operative (single vs integrated) and whether community members participated in household interviews and focus group discussions. The selected sub-counties were Nyakyera and Ntungamo Town Council in Ntungamo and Panyango and Panyimur in Nebbi and district. The key issues of interest were community name, location and size, social and economic characteristics of households, industries, business, historical/political contexts and existence of co-operatives as well as individual household profiles who are both under integrated and single co-operatives. Data were primarily collected through focus group discussions, key informant interviews by phone and e-mails. Secondary data mainly came from the reports of Uganda Co-operative Alliance (UCA) and Uganda Bureau of Statistics (UBOS).

4.4.2 Profiles and Cases in Ntungamo District

Background Information on Ntungamo District

Ntungamo District is located in south western Uganda bordering Mitooma and Sheema districts to the north, Mbarara district to the west, Isingiro to the east, Republic of Rwanda to the south, Kabala district to the south west, Rukungiri district to the northwest. The district headquarters located in Ntungamo Town Council is 66 kilometers from Mbarara, the biggest town in Ankole sub-region. The district is located approximately between coordinates; 00 53S, 30 16E. It covers 2,051.4 square kilometers of which approximately 0.2 percent is open water, 3.4 percent is wetland and about 0.01 percent is forest. The population is approximately 480,100 people with a density of 234 persons per square kilometer (UBOS 2015). The climate in the district is favorable for farming with an annual rainfall of approximately 100-2100 mm and annual temperature range of 12.5⁰c to 30⁰c. The main source of income for the people of Ntungamo district is agriculture, predominantly at subsistence level. The main crops grown in the area include bananas, beans, groundnuts, maize, millet, sorghum, sweet potatoes, pineapples, cassava and coffee. Pastures are also widely grown. Livestock farming is also widely practiced integrating diverse animals including but not limited to; cattle, goats, sheep, chicken, pigs, and bees. Other economic activities that supplement income of residents include; brick making and lumbering. Most finance and market linkages are through co-operatives which justifies the emergence of a number of co-operatives serving different purposes. About 60 SACCOS and 50 Marketing Associations have been registered and supervised from Sub-counties of Rubaare, Nyabihoko, Kibatsi, Bwongyera, Rweikiniro, Nyakyera, Itojo, Rugarama, Rweikiniro, Ruhama, Rukoni East and West Ngoma, Kayonza, Ntungamo and Ihunga. Among the co-operatives, 45 SACCOS and 35 co-operative societies have been audited. Some of the audited co-ops include Bujuzya Farmers Dairy Co-operative Society, Ruhara Dairy, Kajara Youth, Kashanda Credit and Savings Farmers' Co-operative, Rubaare ACE, Katojo Society, Nyakyera ACE, Rwentobo Savings and Credit, Obuyora Farmers Dairy Co-operative Society, Nyabihoko and Rugarama Financial Services (UCA, 2014).

Location and Size of Nyakyera Sub-County

Nyakyera Sub-County in Ntungamo district is located approximately 22km from Kahunga along Kahunga- Rukoni road, about 11km from Kitwe town council and almost 15km from Nyakatuntu parish. Nyakyera's neighbors are Rukoni, Itojo and Ruhaama Sub-counties. The sub-county occupies 515.7 sq km. It has 7 parishes comprising kagorora, kataraka, kibingo, kiyooro, kiziba, Ngoma and Ngomba. It has a total of 3,864 households with at least 300 from each parish. The total population of people above 5 years in the sub-county is approximately 16,384 (UBOS, 2012).

Social and Economic Characteristics of Households

Some social and demographic information about households in Nyakyera sub-county are presented in Table 29.

Table 29: Age, family size, educational attainment of adults, school attendance by children and wealth/household assets

Characteristic	Proportion (%)
Age (years)	
0-5	22.0
6-17	35.1
Over 18	42.9
Family size	
1-5 members	15.0
6-10 members	80.0
11-20 members	5.0
Educational attainment of adults	
P1-P7	64.2
S1-S6	10.3
Above S6	1.8
Never schooled	23.7
School — attendance of children	Proportion (%)
UPE	54.5
USE	65.0
Private primary school	45.5
Private secondary school	35.0
Not schooling	19.0
Wealth/income levels (Household assets)	Proportion (%)
Land ownership (at least two acres)	82.3
Semi-permanent house	80.7
Permanent house	19.3
Bicycle	72.0
Radio	31.3
Telephone	4.4
Employment	
Farming	
Wholesale and retail trade	80.0
Civil service	15.0
	5.0

Source: UBOS 2014/15, "District economic and environmental performance report"

Other Characteristics

Languages: Nyakyera sub-county is a Runyankole-Rukiga speaking area, given its location in the Ankole sub-region. English language is mostly spoken by those who went to secondary school.

Geographical Features: The sub-county is endowed with undulating hills containing volcanic soils, various grass species, shrubs and swamps with water content. This favours farming, including crop production (bananas, maize, beans, sorghum, and coffee among others) and, animal husbandry especially for cattle and goats.

Main Economic Activities: The main economic activities taking place in Nyakyera sub-county are presented in Tables 30 and 31 below.

Table 30: Major economic activities

Economic activity	Proportion of households (%)
Agriculture	85.7
Trade	11.9
Manufacturing	0.1
Services	2.3

Table 31: Distribution of livestock and crops

Livestock type	Proportion of households (%)
Cattle	41.0
Goats	38.6
Pigs	0.6
Chicken	14.8
Others	5.0
Crops	Proportion of households (%)
Coffee	20.0
Beans	23.5
Cassava	5.4
Sweet potatoes	4.6
Bananas	29
Maize	4.9
Finger millet	6.1
Sorghum	3.5
Irish potatoes	0.7
Others	2.3

Source: UBOS 2014/15, "District economic and environmental performance report"

Proximity to Rural and Urban Markets and Availability of Infrastructure: The households are 1-10 km away from the rural markets depending on the market station. The distance from households from the urban markets ranges between 10 and 20 km, about 3-4 hours on a bicycle, 2-2.5 hours on a motorcycle and 1- 1.5 hours in a car. The roads to the rural markets are relatively poor feeder roads that are sometimes shared by both humans and animals. The main road from Nyakyera to the main urban markets (Ntungamo town) is not tarmac, but a good dirt road, wide enough to accommodate vehicles and passable in all seasons. There is access to solar

and hydroelectricity and so use of computers and other electrical gadgets is possible. This facilitates operations in SACCO offices.

Historical/Political Context: The area has been politically stable since 1986 which has favored permanent settlement of humans and animals. Description of the co-operatives in the community. The sub-county has several co-operatives, consisting of Rural Producer Organizations (RPOs), Area Co-operative Enterprises (ACE) and SACCOs. Information on selected RPO, ACE and SACCO are presented in Tables 32, 33 and 34 respectively.

Table 32: Nyakyera Matookye RPO

Name	Nyakyera Matookye RPO
Year Founded	2005
# of women members	55
# of men members	46
# of youth members (also counted above)	13
Mission	To improve production of bananas in terms of quality and quantity through proper agronomic practices.
Lines of business	Mainly banana (Matooke) production and bulking. Beans are considered sometimes.
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	- Linked with ACE for marketing, training and education and, bulking while linkage with the SACCO enables easy access to credit. - Linked with the co-operative umbrella body, UCA through ACE
Volume of business (whatever measures are relevant)	Always bulks 30MT of bananas and sometimes 1045-2900kg of beans.
Nonmembers: why do they not join? (Too expensive? not relevant?)	Some non- members bulk with the RPO but do not join due to fear of not fulfilling commitments at some point.

Source: Nyakyera Matookye RPO seasonal performance report (2014)

Table 33: Nyakyera Farmers' SACCO

Name	Nyakyera Farmers' SACCO
Year Founded	2001
# of women members	533
# of men members	1449
# of groups	269 each with at least 30 members
# of institutions	14
Vision	To be a profitable and sustainable SACCO serving rich and prosperous membership.
Mission	To meet the savings and credit needs to members through provision of safe savings, deposits services as well as affordable and easily accessible credit facilities while we grow and expand to serve more people.
Lines of business	<p>Loan products: Agricultural loans; business loans; School fees loans; Emergency loans; Environmental loans; Solar loans; Rain water investment loans; Energy saving stove loans; Biogas loans; Home improvement loans</p> <p>Saving products: Voluntary savings; Fixed deposit savings compulsory savings for loan customers; Investment savings; Minor saving accounts for children below 18 years; School fees savings accounts; Health savings accounts;</p> <p>Other services: Mobile money transfer services; Training of members on financial literacy; Investment opportunities for shareholders; Training students from tertiary institutions; Provision of welfare and social services to members in case of natural calamities like death.</p>
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	Linked to with RPOs through ACE (Nyakyera) as their clients. Directly linked with UCA as the apex organization the SACCO is also affiliated to; the Micro Finance Support Centre Ltd, Uganda Central Co-operative Financial Services Ltd and Agriterra in the Netherlands
Volume of business (whatever measures are relevant)	Net surplus of over 90 million Ugandan shillings
Other business statistics (whatever is relevant)	Share capital 466,032,015 UGX Savings 265,886,348 UGX Total assets 1,105,147,680 UGX Total liabilities 422,291,036 UGX Total equity 683,856,644 UGX
Nonmembers: why do they not join? (Too expensive? Not relevant?)	Nonmembers also benefit from the co-operative but fear to join because of the fear of loss in investment in case of collapse of the SACCO. Some nonmembers still find it bureaucratic and expensive to join.

Source: Nyakyera farmers' SACCO yearly performance report (2014)

Table 34: Nyakyera Rukoni ACE

Name	Nyakera Rukoni ACE
Year Founded	2003
# of women members	498
# of men members	658
# of youth members (also counted above)	138
Mission	Increasing production and productivity through training programs, collective marketing and agro processing
Lines of business	Bulking beans, maize, coffee and milk
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	<ul style="list-style-type: none"> - Training on agronomic practices, post-harvest handling and accountability. - Linked with government by district production office for monitoring, advisory and advocacy. - Linked with apex organization (UCA) for capacity building, advocacy, advisory and lobby. - Formally linked with other co-ops (RPOs and SACCOs by UCA). - Linked with customer organizations/buyers like World Food Program, MUMA investments. - Linked with Nyakyera farmers SACCO for financial and advisory services. - Linked with other organizations like Agriterra (for capacity building, linkage facilitation and advisory services), Private Sector Consultancy and Development Centre (for training, consultancy, advisory and linkage facilitation), Kumanya Karakuzi and Co. cert. pub. Acc (for auditing), Microfinance Support Centre (for financial services), Itojo Agro input supplier for input and Enterprise Uganda for linkage facilitation.
Volume of business (whatever measures are relevant)	Always targets: 150MT of beans per season 120MT of maize per season 50MT of bananas 80MT of coffee per season 2000Ltrs of milk per day
Other business statistics (whatever is relevant)	Total turnover on sales of 170 million by 2016
Nonmembers: why do they not join? (Too expensive? not relevant?)	Nonmembers not involved because they are considered as free riders (enjoying benefits without much input). They don't join due to bureaucracy, fear of responsibilities and commitments.

Source: Nyakyera ACE yearly performance report (2014)

Individual Household Profile: Member of Nyakyera ACE, Nyakyera Matooky RPO (integrated co-operative): Bigombe Katuga is a 45 year-old-male with education up to primary 7. He has one wife, 3 boys and 3 girls (8 household members). The household's main occupation is farming focusing mainly on bananas (4 acres), maize and beans (intercropped under 2 acres) and, cattle keeping (10 cows). He joined the co-operative to access goods and services he couldn't get elsewhere including high income, market for produce and attendance of workshops for trainings and education. He has been an RPO member since 1994 and an ACE member since its inception (2003). Before joining the co-operative, he was poor but now he has a better standard of living as a result of his involvement with co-operatives, he narrates. He is positive

about the co-operative, due to good agricultural practices, field visits, access to credit and market due to co-operative membership. The household has lived in Nyakyera for 45 years and has watched how co-operatives have gradually changed the community. He mentions increased access to credit and market and that people can now afford construction of better houses, buy household assets like radios, telephones, garden tools, bicycles and even motorcycles.

Ntungamo Town Council

Location and Size of Ntungamo TC

The town council is the equivalent of a sub-county in an urban setting. Ntungamo Town Council (TC) is the main trading center of the district occupying a total area of 375.1 sq. km. Ntungamo TC has 6 wards (equivalent of villages) including; Kahunga, Central, Kikoni, Kyamate, Muko and Park wards. Each ward has at least 40 households, and the total population of the area is approximately 7,564 persons of 5 years and above (UBOS 2014).

Social Economic Characteristics of Households

Age, number of members in a household and level of education attained by individual members are some of the major characteristics that describe the social life of individuals, households and the community at large as shown in Table 35.

Table 35: Age, family size, educational attainment by adults, school attendance and wealth in Ntungamo Town Council (Source: UBOS 2014/15, "District economic and environmental performance report")

Age category (years)	Proportion (%)
0-5	10.0
6-17	37.0
Over 18	53.0
Family size	Proportion (%)
1-5 members	60.0
6-10 members	35.0
11-20 members	5.0
Educational attainment of adults	Proportion (%)
P1-P7	61.0
S1-S6	23.0
Above S6	4.4
Never schooled	11.6
School attendance by children	Proportion (%)
UPE	40.0
USE	37.5
Private primary school	60.0
Private secondary school	62.5
Not schooling	11.0
Wealth/income levels (household assets)	Proportion (%)
At least 1 acre of land	66.4
House	67.5
Bicycle	36.7
Radio	89.7
Telephone	66.9
Employment	
Farming	40.0
Wholesale and retail trade	35.0
Civil service	25.0

Other Characteristics

Languages: Ntungamo TC is a Runyankole- Rukiga speaking area. However, there is a mixture of other languages spoken in the town council, mostly English and Luganda, especially among business men.

Industries and or business, livestock and crops: The major economic activities in Ntungamo TC are not only limited to agriculture but also trade, public and private services at the district and local level. Agriculture is characterized by livestock (cattle, goats, poultry) and crop farming (bananas, coffee, beans, maize and millet among others) as shown in Table 36.

Table 36: Economic activities

Economic activity	Proportion (%)
Trade	62.8
Agriculture	30.2
Services (private and public)	6.8
Manufacturing	0.2
Livestock	Proportion (%)
Goats	26.8
Cattle	15.9
Chicken	5.7
Pigs	2.4
Crops	Proportion (%)
Beans	23.2
Bananas	20.0
Coffee	14.8
Sweet potatoes	13.9
Finger millet	12.5
Cassava	6.1
Maize	5.0
Others	1.6
Sorghum	1.5
Irish potatoes	1.4

Source: UBOS 2014/15, “District economic and environmental performance report”

Proximity to Rural and Urban Markets and Availability of Infrastructure: The households are approximately 2-5 km away from the rural markets and approximately 5-15 km away from urban markets. The road networks to both rural and urban markets are averagely good though not tarmacked. There exists both solar and hydro energy that favor electronic operations, like use of computers in banks and SACCO offices, printers and photocopying machines in printing shops. There exist private and government schools and hospitals that offer moderate to good services.

Historical/Political Context: The area has been politically stable since 1986 which has favored smooth running of businesses and permanent settlements.

Description of the Co-ops in the Community: Information on selected RPOs, ACEs, and SACCOs in Ntungamo TC are presented in Tables 37, 38, and 39.

Table 37: Abateganda RPO

Name	Abateganda (RPO)
Year founded	1950
# of women members	52
# of men members	67
Lines of business	Coffee production and bulking
Mission	To ensure high quality and large quantity of coffee production through education and training.
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	Training of members through ACE by government extension workers. Linked to UCA through the ACE.
Volume of business (whatever measures are relevant)	60,000 coffee trees
Other business statistics (whatever is relevant)	600 bags of dry coffee (65kg per bag) 1,000UGX per kg
Links between the co-ops – describe. Are they formalized with MOUs, etc.?	Strongly linked to Abateganda ACE as the main marketer for the products. Linked with Rukoni SACCO for financial support.
Nonmembers: why do they not join? (Too expensive? not relevant?)	Nonmembers don't sale through the RPO since the RPO dislikes free riders. They don't join due to fear of commitment that might not be honored at some point. Most nonmembers need quick money for fees and other home needs, which sometimes drives them to sale the anticipated product before harvest

Source: Abateganda RPO seasonal performance report (2014)

Table 38: Kajara People's SACCO

Name	Kajara People's SACCO-Ntungamo branch
Year founded	Founded in 2000 and fully registered with the registrar of co-operatives in December 2002.
# of women members	330 (28%)
# of men members	711 (30%)
Mission	To provide savings and avail credit to both members and nonmembers at negotiable rates.
Lines of business	Ordinary and Fixed deposit savings Loans (Business, School fees, home development and agricultural Loans).
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	Linked with UCA, AMFIA, Ankole Private Sector Promotion Center and CCA
Volume of business (whatever measures are relevant)	Loans-589mUGX (Loans 33%) Savings-345mUGX (Savings 81%)
Other business statistics (whatever is relevant)	Debt to equity ratio of 1.7:1, below the 2:1 ratio (an indicator of good)
Links between the co-ops – describe. Are they formalized with MOUs, etc.?	The co-operative is independent of other co-operatives. i.e., there are no formal links to ACEs and or RPOs.
Nonmembers: why do they not join? (too expensive?, not relevant?)	Nonmembers borrow from the SACCO provided they meet the requirements. However, they don't join to fear of failing to fulfill commitments.

Source: Kajara people's SACCO yearly performance report (2014)

Table 39: Abateganda Ntungamo Growers Co-operative Society Ltd. ACE

Name	Abateganda Ntungamo Growers Co-operative Society Ltd. (ACE)
Year founded	1950 and formally registered in 1960
# of women members	363
# of men members	1153
Number of groups	32
Vision	An informed, economically empowered membership served by a suitable profitable co-operative society.
Mission	A co-operative society, providing expert advice on best farming practices for better coffee production.
Lines of business	Coffee marketing
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	Training farmers in various disciplines. Linked with Stanbic bank Ntungamo branch as source of funding. Linked with development partners including; UCA, fair trade labeling organization (FTLO), Uganda National Agro input dealers association, Ministry of Tourism, Trade and Industry, Ankole Coffee Producers Co-operative Union (ACPCU).
Volume of business (whatever measures are relevant)	Total capital of 107,553,188.
Other business statistics (whatever is relevant)	Assets: 69,650,780 UGX Equity: 110,435,115 UGX Profits: 5,550,870 UGX Volumes purchased: 119,280 kg Volumes sold: 76,046 kg Number of members trained: 729
Links between the co-ops – describe. Are they formalized with MOUs, etc.?	Linked with RPOs as member suppliers.
Nonmembers: why do they not join? (Too expensive? not relevant?)	Nonmembers don't join because of fear of un fulfilled commitment.

Source: Abateganda Ntungamo Growers Co-operative Ltd. yearly performance report (2014)

Individual Household Profile: Member of “Bahingi tukore” RPO (single co-operative):

Atwiine Cryton is a 39-year-old male, with education up to senior 4. He is married to one wife with 1 boy and 4 girls (7 household members). He came from a poor family back ground. His father had only three acres of land, yet he was married to 3 women. As a result, they had many children hence he could not go far in education. They used to eat one meal a day composed of sweet potatoes, cassava with premature beans and greens.

He joined the co-operative in search for a better life through higher incomes from farming for better housing and school fees (wanted to join competition like taking children to private schools). Circumstances before joining the co-operative included: poor state /not having enough money, lack of market price awareness, never attended workshops and was never aware of SACCOs. Joining the co-operative has helped him practice mixed farming on a large scale with 25 chickens, 2 cows, 2 goats, coffee (4 acres). Maize, beans and banana are intercropped under 3 acres. It is 6 years since he joined the co-operative and has no regrets but recalls on positive achievements including; large scale production and access to the coffee market with better prices. Coffee is the only crop sold through the co-operative while others are sold through traders. It is better to sell through co-operatives than traders because co-operatives buy in bulk

and the large sums of money earned is used for school fees and re-investment in farming (inputs, labour). The small sum of money from traders is used for home maintenance (basic needs). Atwine perceives the community to be better off than before due to operations of co-operatives.

4.4.4 Profiles and Cases in Nebbi District

Background Information on Nungamo District

Nebbi district is located in the Northwest part of Uganda between 02, 27N and 31, 15E. The district covers a total area of 3,288 square kilometers of which arable land is 62 percent, game reserves are 29.1 percent, swamps and open water are 6.4 percent, and forest reserves are 2.5 percent. The district's population is approximately 346,200 people with a density of 194 persons per square kilometer (UBOS, 2012). Nebbi exhibits a purely tropical climate due to its location within the eastern topographical rainfall zone. Rainfall is bimodal with peaks in May and October. The first short rainfall is from late March to May, while the second longer rains fall is in July to October. The dry spells are experienced from June to July and December to early March. This climate favors both crop and animal husbandry including fishing. Crops grown include: Coffee, Tea, Cotton, Cassava, Potatoes, Sweet potatoes, Sorghum, Millet, Maize, Rice, Simsim, Sunflower, Soybeans, Cashew nut, Okra, Tomatoes, Cabbage, Onions, Green vegetables, Pineapples, Oranges, Mangoes and Chili peppers, while animals kept are mainly goats and pigs. Other economic activities in the area are stone quarrying and charcoal burning. Several co-operatives have been formed in the area to meet production, finance and market needs. In 2013/2014 financial year, 30 co-operatives were mobilized, strengthened and registered (15 Financial and 15 Producer Co-operatives). These are from the Sub-counties of Kucwiny, Nebbi TC, Nebbi, Erussi, panyango, panyamur and waldelai shown in Figure 2. In 2014/2015 financial year, 30 co-operative groups were mobilized and supervised from Wadelai, Panyango, Alwi, pakwach, Pakwach TC, Panyimur, Akworo, Parombo, Nyaravur, Atego, Kucwiny, Nebbi tc, Nebbi, Erussi and Ndhew. Among these, 4 local/rural producer organizations from Pakwach TC, Nebbi TC, Parombo TB and Panyimur TB were identified for collective value addition (District, Report, Mbabazi, and Ogamdhogwa, 2011)

Panyango Sub-County

Location and Size of Panyango Sub-County: Panyango Sub-County is located in northeast part of Nebbi district and it borders the Sub-counties of Pakwach town council to the east, Pakwach to the south east, Panyimur to the south, Nyaravur to the south west, Kucwiny to the west and Wadelai to the north. Panyango is the biggest sub-county in Nebbi district occupying approximately 425 sq. km. It is composed of approximately 6,068 households and a total population of approximately 38,572. Each house hold is composed of at least 5 members, with 69.5 percent male headed, 30.0 percent female headed, 0.5 percent child headed households.

Social Economic Characteristics of Households in Panyango Sub-County: The social economic characteristics that describe the individuals and household at large in the community are summarized in Table 40 below.

Table 40: Age, educational attainment of adults, school attendance by children, household size, and marital status

Age (years)	Percentage (%)
0-5 years	22.3
6-17 years	33.7
18-30 years	19.8
31-59 years	19.0
60 years and above	5.2
Educational attainment of adults	Percentage (%)
P1-P7	83.2
S1-S6	10.8
Above S6	1.3
Never attended school	4.7
School attendance of children	Percentage (%)
No schooling	25.0
Go to UPE	70.0
Go to USE	83.0
Go to private primary	30.0
Go to private secondary	17.0
Family size	Percentage (%)
1-5 members	4.0
6-10 members	80.5
11-20 members	15.5
Marital status (12 years and above)	Percentage (%)
Never married	42.0
Married	51.8
Separated married	6.2

Source: UBOS 2014/15, "District economic and environmental performance report"

Wealth/Poverty: Poverty is defined as the inability to meet the basic necessities of fine living including; access to clean water, shelter, clothes, food, education and health. Panyango is ranked the second after Wadelai among the high poverty areas category in Nebbi district (UBOS, 2012). Other areas in the category include; Pakwach, Nebbi, Akworo, Nyaravur and Kucwiny Sub-counties. Table 41 summarizes wealth indicators in the community in terms of household assets and the relevant economic activities including farming, trade and civil service among others. Farming involves both livestock and crops indicated in Table 42.

Table 41: summary of wealth attributes and employment/economic activities

Wealth/income levels (Household assets)	Percentage (%)
Land ownership (at least two acres)	64.3
Semi-permanent house	95.7
Permanent house	4.3
Bicycle	67.0
Radio	27.3
Telephone	2.4
Employment	
Farming	86.3
Wholesale and retail trade	10.0
Civil service	3.7

Source: UBOS 2014/15, "District economic and environmental performance report"

Table 42: Distribution of livestock and crops in Panyango Sub-County

Livestock type	Proportion (%)
Goats	19.0
Cattle	5.0
Pigs	0.6
Others	0.4
Chicken	75.0
Crops	Proportion (%)
Sesame	23.1
Cassava	20.0
Finger millet	11.9
Sweet potatoes	10.1
Beans	8.5
Cotton	7.5
Maize	5.5
Coffee	4.5
Sorghum	2.9
Vegetables	1.5
Others	0.5

Source: UBOS 2014/15, “District economic and environmental performance report”

Other Characteristics

Languages in Panyango Sub-County: The major language in Panyango Sub-County is Alur. However, English is also moderately spoken among those who at least went to school.

Relevant Geographical Features in the Sub-County: The main geographical features are wetlands of oseke and lobodegi in villages of pokweru E and Rimbu respectively in Pokweru parish. Among the wetland species, the area has swampy papyrus, shrubs, 'osi', acacia, shrub, reeds, igret, crocodile, monkey and alligator. The status of the wet land includes; bush burning, cultivation and low encroachment. The famous eclipse event of 2013 took place in the sub-county at Awiny primary school. Because thousands of people flocked the area to view the solar eclipse, the government invested in improvement of road network, leaving the roads nicely paved.

Proximity to Rural and Urban Markets and Availability of Infrastructure: The rural markets are approximately 5-20 km away from the households taking 2-3hours while walking, 2hours on a bicycle and at least 1 hour in a car. On the other hand, the urban market (in Nebbi town council) ranges from 15-45 km away from households taking up to 4 hours on a bicycle, 2-3 hours on a motorcycle and 1-2 hours in a car. There exist good road networks which were developed in 2013 during the former eclipse event. The roads are fairly passable by cars in all seasons.

Historical/Political Context: The area experienced instability for a very long time. First in the late 1970s and early 1980s and then between 1986 and 2006. These wars have had a devastating effect on livelihoods in the region. The war in the region increased human influx in the area as many people and animals were displaced from Gulu district to the neighboring areas in Nebbi district including Panyango Sub-County. This Influx affected food security and land access due to increased population.

Description of Some Co-operatives in Panyango Sub-County

Panyango as a sub-county has RPOs and a SACCO but with no ACE. However, the RPOS in the area market and bulk their produce with Nebbi ACE. Representative co-operatives in the area are included in Tables 43 and 44.

Table 43: Panyango RPO

Name	Panyango RPO
Year founded	2010
# of women members	105
# of men members	221
Vision	The Leading Producer of High Quality Agricultural Produce for the Benefit of Its Members
Mission	To Improve the Livelihoods of Members through enhanced Production and Productivity, Value addition and marketing
Lines of business	Sesame bulking
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	- UCA, NARO, FICA Seeds, Masindi Seed CO, ISSD (Integrated Seed Sector Development Project), Nebbi District Local Government
Volume of business (whatever measures are relevant)	- Sesame: 96 Tons per season
Links between the co-ops – describe. Are they formalized with MOUs , etc.?	Linked formally with Nebbi ACE
Nonmembers: why do they not join? (Too expensive? not relevant?)	Nonmembers are not involved because they are not fully sensitized on the benefits.

Source: Panyango RPO seasonal performance report (2014)

Table 44: Panyango SACCO

Name	Panyango Savings and Credit Society Limited
Year founded	Founded In 2003, officially opened in 2006
# of women members	457
# of men members	789
# of groups	159
# of institutions	09
Mission	To provide sustainable financial services based on sound business principles to economically activate poor engaged in micro and small enterprises in rural areas of Jonam county.
Vision	To Contribute to Poverty Eradication in Every Active Rural Household in the sub-county.
Lines of business	- Savings Products, e.g. Personal, Joint (Husband and Wife), Group, Minor, Institutions. - Loan Products, e.g. Group, Agriculture, Asset, Solar, School Fees, Emergency, Commercial, Salary. - Financial Literacy. -Provision of financial linkages -Provision of opportunity for marketing of members produce
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	Linked with development partners including; Uganda co-operative alliance (UCA) Canadian co-operative association (CCA) Uganda central co-operative financial services limited (UCCFS) Microfinance Support Center Limited (MSCL) Swiss hand foundation Nebbi district local government co-operative department WENIPS, UCSCU, MSCL, AMFIU Nebbi District SACCO Forum
Volume of business (whatever measures are relevant)	Share capital 36,365,000UGX savings 149,816,575UGX loan portfolio 167,968,271UGX repayment rate 81%
Links between the co-ops – describe. Are they formalized with MOUs, etc.?	Panyango is the only SACCO operating in Panyango Sub-county. It is linked with farmer groups (RPOs) and Nebbi ACE
Nonmembers: why do they not join? (too expensive?, not relevant?)	Nonmembers only borrow. They don't join because of fear of losing property /money to the SACCO in case it collapses.

Source: Panyango SACCO yearly performance report (2014)

Individual Household Profile: Member of “Pakwin” RPO (integrated co-operative with Nebbi ACE): Oryekwin John Baptist is a 55-year-old polygamous male with 3 wives and 16 biological children and 5 children from relatives living with him. The household has a total of 25 members (father, 3 wives, 15 boys and 6 girls) living in Panyango sub-county in Pakwinyo village. John Baptist is a farmer and is also supported by pension from an early retirement. He worked as a sub-county chief but retired after 14 years. Soon after retirement, he joined Loyds Forex Bureau and worked there for 3 years. He quit Loyds and moved to Tight Security as a human Resource Manager for 3 years.

The household is focused on producing cassava and sesame. They have chosen cassava for food security, and as a source of school fees due to a ready market both locally and internationally. John Baptist joined the co-operative movement in 2007 following the inspiration of his late father. He had wanted to follow up the mismanaged co-operatives, have access to market information and new agricultural technologies which he could not access before he joined. Before privatization of the unions e.g. West Nile Co-op Unions, the cotton produce was being used for paying his own school fees which motivated him to join.

He thinks there are positive changes from joining the co-operative. For example, he acquired knowledge through extension staff from UCA and the ACE including on record keeping, financial benefits, good agricultural practices, exchange of ideas from other co-operatives (e.g. through study tour by their ACE). However, the negative of being in a co-operative is that it has limited his political ambitions which are parallel to co-operative principles. He has lived in the area since childhood and comes from a relatively better off family background. His mother had been a farmer and his father had been a local government officer and a co-operative member. He thinks the community is relatively poor with the main source of income from fishing and farming. But of late, with government interventions and community education, diversification has taken place including involvement in businesses like bars and kiosks. He also thinks most community members are low income earners because of illiteracy, dependency on government interventions, quick hand outs and supplements from people.

Panyimur Sub-County

Location and Size

Panyimur is located at latitude of 2.4677 and longitude 31.13521 in Western part of Nebbi district. Panyimur borders Sub-counties of Parombo to the west, Okworo to the southwest, Pakwach to the northeast, Panyango to the north and Lake Albert to the east as the main physical features. The sub-county occupies approximately 199.5km² of the total district area of 1984km². It has a population of approximately 26,200 people from approximately 3571 households.

Social Economic Characteristics of Households

Table 45 summarizes the social economic characteristic of households in Panyimur Sub-County including: age, level of education of persons above 18 years, school attendance of children, household size and marital status.

Table 45: Age, educational attainment of adults, school attendance of children, marital status and household size

Age	Proportion (%)
0-5 years	22.3
6-17 years	31.8
18-30 years	23.2
31-59 years	19.0
60 years and above	3.7
Level of education of adults (18 years and above)	Proportion (%)
P1-P7	87.8
S1-S6	7.8
Above S6	0.6
Never schooled	3.8
School attendance of children	Proportion (%)
No schooling	35.0
Go to UPE	73.0
Go to USE	81.0
Go to private primary	27.0
Go to private secondary	19.0
Family size	Proportion (%)
1-5 members	12.1
6-10 members	80.9
11-20 members	7.0
Marital status (12 years and above)	Proportion (%)
Never married	42.5
Married	51.4
Separated	6.1

Source: UBOS 2014/15, “District economic and environmental performance report”

Wealth/Poverty

Panyimur is ranked among the middle poverty areas of the district. Key household assets, economic activities and employment which are summarized in Table 46. Table 47 shows the distribution of various crops and animals in the sub-county.

Table 46: Household assets and economic activities/ employment

Household assets	Proportion (%)
Land ownership (at least two acres)	59.0
Semi-permanent house	98.0
Permanent house	2.0
Bicycle	29.1
Radio	9.4
Telephone	6.7
Employment	
Farming	48.0
Fishing	30.0
Wholesale and retail trade	20.0
Civil service	2.0

Source: UBOS 2014/15, “District economic and environmental performance report”

Table 47: Distribution of livestock and crops in Panyango Sub-County

Livestock type	Proportion (%)
Goats	18.0
Cattle	2.0
Pigs	0.6
Others	0.4
Chicken	77.0
Crops	Proportion (%)
Simsim	24.1
Cassava	21.0
Finger millet	15.9
Beans	8.5
Cotton	6.5
Sweet potatoes	6.1
Coffee	5.5
Maize	4.5
Sorghum	1.9
Others	1.5
Vegetables	0.5

Source: UBOS 2014/15, “District economic and environmental performance report”

Other Characteristics

Languages: Panyimur is a Jonam and Alur speaking sub-county. However, some English and Kiswahili languages are spoken following intermarriages with Congolese.

Relevant Geographic Features: Panyimur is well endowed with wet lands of juba, Mututu, Akol, Awolo and Songager, which all originate from Lake Albert wetland system. among the wetland species in the area include; Papyrus swamp, sedges, crocodiles, 'ruda', Swampy water hyacinth, shrub, wild pigs, hippos, igret, fish, crocodiles, murabostock, snails, fish and birds. However, the great wet lands are currently under threat in response to high encroachment for settlement, cultivation and grazing activities.

Industries or Business: Fishing on Lake Albert is the main economic activity dominant in Panyimur, with over 20 percent of the households deriving their livelihood from it. There are 71 fish landing sites from Panyimur to Wadelai. Fish production levels have been stable at about 3,500 tons per year. The lack of increase fish catch has been attributed to the illegal fishing gears and practices that do not only allow for generation maturity but also disrupt the fragile breeding grounds.

Proximity to Rural and Urban Markets and Availability of Infrastructure: The rural markets are 7-15 km away from the households. The urban markets are 20-48 km away from the households taking almost 5 hours on foot, 3-4 hours on a bicycle and 1-2 hours in a car. The area generally has fair road networks. There is a cultural heritage (hot spring) called Amur pii.

Historical/Political Context: The sub-county experienced human influx as a result of the 2004 is urgency in Gulu. This instability affected food security due to looting and increased population. The area was also severely affected by cholera epidemic in the parish of Dei in 2012.

Description of Some Co-operatives in Panyimur

Several co-operatives exist in the area including RPOs, ACEs and SACCOs. Information on the selected co-ops in the community is included in Tables 48, 49 and 50.

Table 48: Dei Farmers RPO

Name	Dei Farmers Group
Year founded	2009
# of women members	130
# of men members	154
Vision	Promote Sustainable Agricultural Ventures For Improved Livelihoods.
Lines of business	- Bulking and marketing Maize - Input Supplies.
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	Linked with UCCFS, US-ADF, NARO, Masindi Seed CO, Nebbi District Local Gov't, FICA Seed through the ACE and UCA
Volume of business (whatever measures are relevant)	- Maize: 76.0Tons
Links between the co-ops – describe. Are they formalized with MOUs, etc.?	Linked with Panyimur- Dei ACE
Nonmembers: why do they not join? (Too expensive? not relevant?)	Nonmembers not involved. They don't join due to fear of commitments. For example, waiting for returns after bulking which is yet a longer process than quick returns from quick sales at the farm gate.

Table 49: Panyimur Rural Co-operative Savings and Credit Ltd.

Name	Panyimur Rural Co-operative Savings and Credit Ltd.
Year founded	2003
# of women members	712
# of men members	1395
Mission	To Produce a Sustainable Society that would Serve to eradicate Poverty among the community of Panyimur and Nebbi District at Large.
Vision	To Offer Effective and Flexible Demand Driven Financial Services that will enable Members Develop Positive Savings Culture and Promote Self- Reliance among the Active Rural Poor
Lines of business	- Savings Products, e.g. Personal, Minor, Group, Institutions. - Loan Products, e.g. Fishing, Agriculture, Commercial, Salary, and Cash Canteen. - Mobile Money. - Capacity Building Services for members.
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	Linked with UCA, WENIPS (West Nile Private Sector), UCSCU (Uganda Co-op Savings and Credit Union), MSCL (Micro Finance Support Centre Ltd), AMFIU (Association of Micro Finance Institutions of Uganda), Nebbi District Local Gov't, Nebbi District SACCO Forum.

Volume of business (whatever measures are relevant)	Loan range, 50,000-5,000,0000 at a repayment period of 6-12weeks all loans are charged at a flat rate of 3% except agricultural loans charged at 2.8%
Links between the co-ops – describe. Are they formalized with MOUs, etc.?	Formally linked with RPOs and ACE
Nonmembers: why do they not join? (Too expensive? not relevant?)	Nonmembers are served at higher rates than members. They don't join due to fear of commitments.

Source: Dei-farmers group seasonal performance report (2014)

Table 50: Panyamur Dei ACE

Name	Panyimur Dei ACE
Year founded	2010
# of women members	471
# of men members	736
Mission	To Provide Quality Support Services to Member RPOs and their Members on a Sustainable Basis
Vision	Promote Sustainable Agricultural Ventures for Improved Livelihoods
Lines of business	- Rice: 106.5Tons - Maize: 76.0Tons - Simsim:80Tons - In-put Supplies. - Value Addition.
Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)	- UCA, UCCFS, US-ADF, NARO, Masindi Seed CO, Nebbi District Local Gov't, FICA Seeds -Offers trainings to member RPOs on agronomic practices
Volume of business (whatever measures are relevant)	- Rice: 106.5Tons - Maize: 76.0Tons - Simsim:67.0Tons
Links between the co-ops – describe. Are they formalized with MOUs, etc.?	Formally linked with RPOs for produce supplies and with Panyimur SACCO for finance
Nonmembers: why do they not join? (too expensive?, not relevant?)	Nonmembers are also served but at lower prices than the members. They don't join due to fear of commitments since they sometimes want to sale at an early stage for quick income for fees and other needs.

Source: Panyimur Dei ACE yearly performance report (2014)

Individual Household Profile: Member of “Kapur RPO” in Panyimur Dei (single co-operative): Parape Teddy is a 31-year-old single mother who separated with her husband due to domestic violence. She has education up to senior 4. She owns a small drug shop after she had attended a nursing school for one semester. The household has 5 members (including her, 4 children of 14 years, 10 years, 5 and 4 years). Teddy has been a co-operative member for the last 3.5 years (since 2013). She got a message from a colleague who was better off because of being a co-operative member. She therefore joined to improve income, add value to her produce, get exposed, and expand farming and family as well. Teddy thinks joining a co-operative is a positive idea because she has now gained much more money through the co-operative, produces more than before, her children are able to join private schools, and she is able to buy her own land. In addition, by the end of February 2016, Teddy is going to start to build the foundation of

her household building from knowledge gained from the co-operative. She has lived in Panyimur since birth and came from a humble family who survived solely on farming, on a very small scale (0.5 acres of land). Her perception about the community is that it has moderate standards of living and lacks co-operation among most members. It is comprised of fisher men, farmers and business men.

Profile of a Nonmember Household in the Community

Rupin Robert is a 41-year-old monogamous male with one baby girl (three household members). He works with Red Cross as a focal person on disaster preparedness in the area and he also does research work on farming at a small scale. He stays in Nebbi town most of the times due to his kind of work but the family lives in Panyango Sub-County. Robert has some colleagues in a co-operative but he himself has not joined because of lack of knowledge about co-operatives and their benefits. He also thinks some of these co-operatives are for few and specific people especially the non-working class (basic farmers). However he is aware from his colleagues that there are some benefits from the co-operatives. For example; there are village savings loans associations (VSLAs) operating with support from UCA. Co-operative members are also exposed to trainings, capacity building and financial support. His general view on challenges community members are facing include: limited knowledge, conflicts, fewer or no disseminations so as to get more members into a co-operative, poor capacity development of leaders. His general view of the community is that it is poor focused on cassava growing yet there is limited market.

4.4.5 Report on Validation Workshops in Nebbi on 19th and Ntungamo on 22nd January 2016



Introduction

The validation workshops were conducted in the two study sites of Nebbi and Ntungamo districts on 19 and 22 January 2016, respectively. The purpose of the workshops was to validate results from the household survey and focus group discussion by involving the community members (previous participants in focus group discussions) including: Uganda Co-operative Alliance (UCA) officers, leaders of Savings and Credit Co-operative Associations (SACCOs), Rural Producer Organizations (RPOs), and Area Co-operative Enterprises (ACEs), policy makers,

members of the single co-operatives, integrated co-operatives and those not in co-operatives (attendance list included in appendix).

In both cases, the process unfolded as follows: arrival and registration by Mercy Nimusiima (Makerere), word of prayer by one of the members, welcome remarks and introduction by George Ladegi and Kizza Patrick (UCA representatives from Nebbi and Ntungamo respectively), overview of the study by Dr. Bernard B. Obaa (Makerere), tea break, results of household survey by Diana Namwanje (Makerere) together with Emmanuel Ovuruth and Mutabila Bosco (Interpreters from English to Alur and English to Runkole respectively), results of focus group discussions by Mercy Nimusiima (Makerere) together with Ovuruth Emmanuel and Mutambila Bosco (Interpreters from English to Alur and English to Runyankole), general discussion (question and answer / feedback session by all participants) and finally closing remarks from Hon. Opar Jackline and Mr. Canon Mugabi (Secretaries of production/policy makers from Nebbi and Ntungamo respectively).

The Workshop in Nebbi District

The workshop in Nebbi district was held on 19 January 2016. It was organized by the staff of UCA who invited the selected participants, booked the venue and organized refreshments. The participants are shown in the group photo (Figure 14).



Figure 14: Participants of the validation workshop held in Nebbi district

Agenda of the Workshop in Nebbi District

Key items on the agenda of the workshop included overview of the study, results of the household survey and Focus Group Discussions (FGDs) and closing remarks (See Appendix).

1. Arrival and Registration

Many of the invited members travelled from their homes a day before because their homes were very far from Nebbi town. On the day of the workshop they arrived between 9am to 9:30 am in time for the workshop.

2. Welcome Remarks and Introduction

Participants were welcomed by George, UCA officer in charge production. He thanked and commended the members for making the effort to be available for the workshop. He then made an introduction on importance of the workshop. He mentioned that the workshop was for disseminating the results from the focus group discussions, the household surveys, FGD with co-operative leaders in the different types of co-operative models (integrated co-operative model, single co-operatives and those who were not members of the co-operatives), as well as with political leaders.

3. Overview of the Study

The overview of the study was done by Dr. Bernard Obaa who first thanked the invited members for being good respondents during the data collection process. His presentation included the background to the study including what co-operative integration is all about, the Ugandan context in terms of co-operatives, the co-operative model as currently in use, key research questions, research objectives, how the research was done and the different research designs, location of the project areas, sample selection and sample size for the household survey, the exploratory phase, how the household interviews were done, how the focus group discussions were done, the perceived impact of the integrated co-operative model, and effectiveness of the integrated co-operatives in achieving rural development and associated challenges.

4. Tea and Coffee Break

With the help of the Uganda co-operative Alliance, tea and some snacks were served for the participants. During the tea break that took about an hour, members got time to chat about performance of their co-ops and other social issues. It was important to provide tea and snacks because many of the participants came for the meeting without breakfast.

5. Presentation of Results of the Household Survey

Results of the household survey were presented by Diana Namwanje in English and translated in the local language by Emmanuel, a staff member of the UCA. The presentation included: the demographics of the households in Nebbi district, household assets, access to financial services, constraints faced by households in producing crops and marketing produce, benefits households get from being a member of co-operatives, main conclusions and recommendations.

6. Presentation of Results from the Focus Group Discussion

Results of FGDs were presented by Mercy Nimusiima and translated in the local language (Alur) by Emmanuel Ovruth, a member of staff at UCA. The presentation included: background of co-operatives in Uganda, aim of the study, the findings which included the working structure of the integrated co-operatives, managerial structure of the Savings and Credit Co-operatives (SACCOs), managerial structure of the Area co-operative enterprise (ACE) and Rural Producer Organizations (RPOs), performance differences between the integrated co-operatives and single co-operatives, strengths and opportunities of the integrated co-operatives and single co-

operatives, weaknesses and threats of integrated co-operatives and single co-operatives, application of the findings, conclusions and recommendations.

7. General Discussion (feedback)

After all the presentations, participants were asked to give feedback on the main results, provide explanation of some of the findings, and to give some recommendations on how the co-operatives should be improved to meet their needs. The discussion took over one and half hours.

Feedback from Participants on Results Presented

Uganda Co-operative Alliance (UCA) officers, leaders of Savings and Credit Co-operative Associations (SACCOs), Rural Producer Organizations (RPOs), Area Co-operative Enterprises (ACEs), local council members, members of the single co-operatives, integrated co-operatives and those not in co-operatives appreciated the research team for coming back to share the results with them.

Feedback from the Local Council

- More men are involved in co-operatives because mobilization is usually undertaken by men for most programs introduced in the district. Such mobilization activities are usually held in places where people sell and drink alcohol. Fewer women than men tend to visit and hangout in such places. In the process, more men receive information about such opportunities and get recruited compared to women.
- Hon. Opar Jackline said that farmers do not borrow from SACCOs because SACCOs do not have the money to lend farmers. Farmers mostly borrow from Village Savings and Loan Association (VSLAs). She highlighted a big weakness of VSLA, i.e. the share out of the money at the end of one year cycle. Members share out all the money including their savings and accrued interest at the end of the cycle in December to enable members to use the money for Christmas shopping. Most of the farmers spend all of their money during Christmas time, leaving nothing for paying school fees and facilitating agricultural activities and purchasing agricultural inputs. However, some groups have become smarter. The saving cycle for the VSLAs have been modified so that the share out coincides with most busy times of the year where demand for labour hired labour is high. In that way, VSLAs have been able to finance their farming activities. Also they are not sharing all the money at the end of a cycle.

Feedback from RPO members

- Serving farmers has not been a priority for SACCOs. The group of people who have benefited most from SACCOs have been local businessmen and politicians. As a result, farmers are losing interest in borrowing from the SACCOs. Some farmers reported that small businesses have injected a lot of money in SACCOs in terms of savings. Owners of such businesses have become board members of these SACCOs, thereby exerting powerful influence on management of such SACCOs. In general, SACCOs are providing more loans to business men than farmers.
- Farmers are not informed on the how the SACCOs operate so they did not know that they had to first save in order to be able to borrow from the SACCOs.
- SACCO management always used terminologies that farmers did not understand during dissemination of the financial status of the co-operative.

- A member of an RPO reported that his RPO once wanted credit for transporting their bulked produce of soybean, potato and honey but the SACCO gave one condition of making sure that they were 1000 members if they wanted to borrow money as an RPO which was impossible for the RPO. One of the members decided to take the bulked honey to Kampala and did not come back. During that same period, the manager of the SACCO took the soybeans to Kampala and also never came back.
- Some members complained that they had saved money in SACCOs but were still denied the chance to borrow money from the SACCOs. That they were always told that there was no money to be lent to them.
- Most SACCOs encouraged farmers to get agricultural loans and told them that the loan had a low percentage but when they were paying back the loan, the SACCO leaders instead increased the interest rate of the loan so, most of the farmers got demoralized.
- Leaders mostly give loans to their relatives. Some of the leaders take very huge loans and fail to pay back. There is no one to force such leaders to pay back the loan.

Feedback from SACCO Leaders

- Commercial banks had lowered their interest rates so they ended up competing with the SACCOs in terms of lending more to farmers.
- SACCOs refuse to offer farmers loans because repayment is usually needed within 3 months and yet it may take up to 6 months to grow, harvest and sell crops to recover the loan. This meant that the leaders had to run the SACCOs with limited deposits making it hard for them to lend to other people. This problem made it hard for SACCOs to also give RPOs agricultural loans so most of them do not borrow from the SACCOs.
- Most SACCOs did not lend to RPOs because they had few members who were active which made it difficult to lend to only few members.
- Farmers have not understood how the SACCOs work. Farmers save their money in VSLAs and not in SACCOs yet they want to borrow from SACCOs.

Feedback from ACE Members

- ACEs only concentrated on increasing farmers' production and bulking but failed to look for market for farmers' produce.
- Farmers had poor storage facilities that led to loss of quality and quantity of yields. This led to low quantities of produce marketed.
- Most farmers usually bulked their produce because of the promise by the ACEs that prices will be high. At the end ACEs pay lower than expected prices for farmers produce.
- The leader of Wadelai ACE reported that farmers bulked produce that did not have market like rice and simsim. This led to most of their simsim going to waste and some was consumed by the family members.

Feedback from ACE Leaders

- ACEs had a challenge of leadership and governance; most of the staff members were not trained on how to look for markets for farmers' produce. This affected their effectiveness.

Feedback from RPO Leaders

- Farmers mainly rely on rain to water their crops so most of them do not consistently have increased production.

- RPOs members did not have enough food due to loss of yields from diseases, pests and poor storage.

Recommendations from Participants

Recommendations from the audience (Figure 4) included the following:

- They need to look for solutions for their challenges rather than waiting for people from outside to help them. This would help them own the intervention.
- Restructuring of SACCOs so that they prioritize farmers when they are serving communities.
- Politicians should not be involved in co-operative activities but should instead be members of the co-operatives so as to reduce their control over the co-operatives.
- Farmers should support their fellow farmers to become members of the board so as to reduce the number of businessmen on governing boards of SACCOs.
- Each co-operative should perform their roles that were laid out during their formation.
- Co-operatives should build irrigation systems for the farmers.

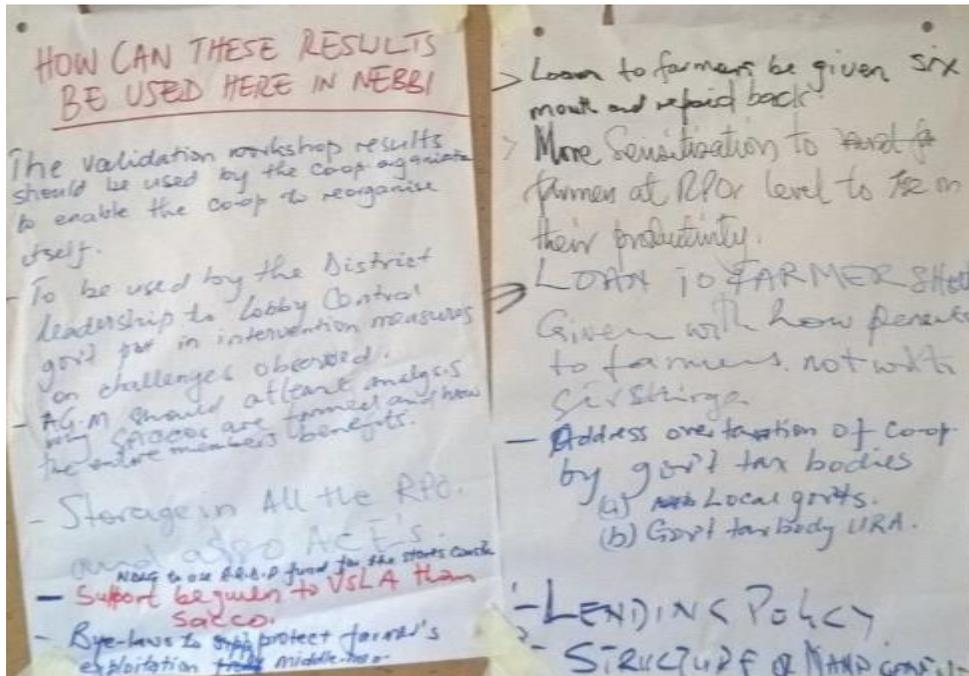


Figure 16: Suggestions from the audience on how results of the study can be used

8. Closure and Departure

- Closure of the workshop was done by the Local Council leader (Hon. Opar Jackline, secretary for production). She urged SACCO management to always serve the members who are the key contributors rather than serving themselves first through embezzling funds. This will create trust and harmony between the two key stakeholders and the SACCOs could stand to serve as expected.
- One participant thanked the Makerere team for honoring their promise of coming back to share the results with them. He mentioned that the results had helped them understand how their co-operatives were working and the different solutions they have to put in place

so as to improve the working of their co-operatives. They thanked Uganda Co-operative Alliance and the Canadian Co-operatives Association for being part of the study. The Makerere team thanked the invited members for participating in the study and UCA staff in Nebbi for the great reception and support in organizing the validation workshop. After the closing remarks, the members were provided a modest transport refund based on fares for public transport.

The Workshop in Ntungamo

The workshop in Ntungamo district was organized by the staff of the Uganda Co-operative Alliance. UCA staff members were involved in contacting the different stakeholders and some households that were involved in the research. They also booked the venue for the workshop and preparation of the refreshments. The Makerere team used a number of materials for disseminating the results including: a projector, flip charts, notebooks and pens and markers. The materials were purchased by the Makerere team prior to their arrival in Ntungamo district.

Agenda for the Workshop in Ntungamo District

The agenda for the validation workshop in Ntungamo (See Appendix) was hung at the entrance of the venue.

1. Arrival and Registration

Most of the invited members had to travel very early (6.00 am) in the morning because some of live far from Ntungamo town. Many managed to arrive between 9am and 9:30 am as requested by the workshop organizers. A few came late.

2. Welcome Remarks and Introduction

The welcome remarks were made by Patrick Kiiza, the UCA staff in charge of Ntungamo. He thanked participants for their support throughout the study and for honoring the invitation to attend the validation workshop. He mentioned that the workshop was for disseminating the results from the study that involved many of them in focus group discussions and household interviews.

3. Overview of the Study

The overview of the study was given by Dr. Bernard Obaa. He began by thanking all the participants not only for coming for the workshop but their support throughout the study. His presentation was largely the same as in Nebbi but with emphasis on Ntungamo. He introduced the study by highlighting context of co-op development in Uganda including the notion of integrated co-op development, the key research questions and objectives. Next he provided details of the research methods with emphasis on sample selection and size for the household survey and details of the FGDs. He ended his presentation with the main results of the exploratory phase of the study.

Tea and coffee break- Tea and some snacks were provided midway in the workshop.

4. Presentation of the Main Results from Household Survey

Presentation on results of the household survey was done by Ms. Namwanje Diana. Translation to the local (Runyankole) was by Mutambila Bosco. Key components are her presentation were: the demographics of the households in Ntungamo district, household assets of the households,

households who grew crops due to the influence of both the RPOs and SACCOs, income and food security status of the households, household access to financial services, constraints faced by households in producing crops and marketing produce, benefits households get from being a member of co-operatives, conclusions and recommendations.

5. Presentation of Results from FGDs

Presentation on results of the household survey was done by Ms. Nimusiima Mercy. It was translated in the local language (Runyankole) by Mutambila Bosco. She emphasized: the background of co-operatives in Uganda, the working structure of the integrated co-operatives, managerial structure of the Savings and Credit Co-operatives (SACCOs), managerial structure of the Area co-operative enterprise (ACE) and Rural Producer Organizations (RPOs), performance differences of the integrated co-operatives and single co-operatives, strengths and opportunities of the integrated co-operatives and single co-operatives, weaknesses and threats of integrated co-operatives and single co-operatives, application of the findings, conclusions and recommendations.

6. General Discussion (feedback)

After all the presentations, the workshop participants were asked to give feedback on the different findings in terms of whether the results presented showed the situation of the households, explanation of some of the findings, and their recommendations in terms of how the co-operatives should be improved so as to meet their needs. The discussion took over one and half hours.

Feedback from Members Invited in Ntungamo District

Uganda Co-operative Alliance (UCA) officers, leaders of Savings and Credit Co-operative Associations (SACCOs), Rural Producer Organizations (RPOs), Area Co-operative Enterprises (ACEs), Local Council members, members of the single co-operatives, integrated co-operatives and those not in co-operatives appreciated the research team for coming back to share the found results with them.

Feedback from Policy Makers

- Canon Mugabi (Secretary for production) said that being in a co-operative, especially in the integrated model, is an effective step towards development. Being in co-operatives is correlated with being religious, “most of the better off and organized families are church going implying that even once a family is in a co-operative, it more likely to be better off compared to those not in co-ops. This is because more lessons, knowledge and experiences are shared through co-operative gatherings that are later put into practice for development.”
- Mugarura Amon (District Commercial Officer) elaborated that exposure to the different trainings leads to quest for better living conditions, especially among members in co-operatives and more so in the integrated co-operatives. There is a kind of competition to attain better status that leads members into selling almost all the produce to be able to meet more of such needs. This action increases their incomes but reduces food security. This is because the high incomes are not fully planned for. For example members end up taking children to very expensive schools well above their meagre income levels.

- Recent research has also indicated 44 percent and 42 percent of the children in Karamoja and western respectively are malnourished. He said this is not because the households are poor but because they poorly plan for the food needs of the households. They sell almost all the produce, leaving very little for home consumption, and in the process undermining the nutrition status of children and other household members. He called for more research on how such a situation can be sustainably addressed.
- SACCOs have a general weakness that their management is the first to embezzle funds. Farmers can therefore no longer trust SACCOs. They have withdrawn most their savings leaving the SACCOs bankrupt. The policy maker/ secretary for production (Mr. Canon Mugabi) urged members to arrest any SACCO leader that is suspected to embezzle their funds to teach others a good lesson. He also advised members to save with VSLAs and micro finance organizations as some of the coping strategies.
- Patrick Kiiza (UCA representative) pointed out that one of the reasons why farmers complain of lack of market is due to over expectation. He narrated that one time a business man specializing in beans came during a harvesting period in Ihunga Sub-County offering 2000 Ugandan shillings per kilogram. Farmers anticipated higher prices and refused to sell the beans. At the end, prices dropped drastically. Instead of 2000 they ended up selling a kilogram at 1000 Ugandan shillings. Canon Mugabi also joined by adding that one of the reasons of lack of market is due to little produce as a result of land fragmentation. Farmers have small plots of land and thus bulk less produce with the ACE yet the potential buyer like world Food Program deals in large quantities of produce.

Feedback from RPO Members

- Elders are mostly involved in co-operatives because the youth only want quick money so they go to towns for better jobs and leave agriculture for the old.
- Farmers reported that they saved in SACCOs but when it came to borrowing money, they were told that there was no money to be lent to them.

Feedback from SACCO Leaders

- SACCO leaders reported that farmers want to borrow without savings in SACCOs.

Feedback from RPOs Members

- Most of them are doing better in terms of increased production because they are trained and also get exposure by visiting other farmers' farms which motivates them to perform better.

Feedback from ACE Members

- ACE members reported that the ACE staff members had failed to get market for their produce.

Feedback from ACE Leaders

- ACE leaders reported that getting a market was not a challenge. The problem was with the farmers who produce poor quality produce due to poor soils and pests and diseases. Most of the farmers did not take the initiative to learn from their fellow farmers who were producing good quality produce.

- They also reported that farmers sold through other channels rather than ACE because they wanted quick money to meet their needs such as paying of school fees.
- Production levels among most farmers is low due to land fragmentation and resultant poor quality soils. They grew different types of crops on these small pieces of land. ACEs had difficulty in buying small quantities of produce. For example, Nyakyera RPO that was contracted by the World Food Program failed to meet the targeted quantity and so the World Food Program had to outsource elsewhere.
- Most farmers did not bulk because they expected higher prices for their produce so most of them delay to bulk leading to loss of the available market. The ACE leaders reported that when production is high, traders tend to compete with the co-operatives by providing higher prices to farmers.
- ACE leaders reported that they were not able to get credit from SACCOs to pay farmers in advance which affected farmers' bulking.
- ACEs are given loans at high interest rates. This makes it difficult for them to pay back the loan.

Recommendations from the Members

- Since co-operatives operate on the principle of independence, members should be allowed to own the process and find ways of overcoming the challenges instead of letting people from outside to help them.
- Extension workers should assist them to overcome some of the challenges of producing their crops, such as how to deal with banana bacterial wilt.
- The final report for this study should be given to different stakeholders in different ministries that can help or even make policies that will support the co-operatives.
- The mentorship approach should be used where farmers learn from each other mostly from those that have been successful in their production. The mentorship approach can also be done in savings so as to encourage farmers to save their money in SACCOs and not only in VSLAs.

7. Closure and departure

Closing remarks were from one RPO member, followed by a UCA representative, the Makerere University team and Local Council leaders respectively.

- An RPO member thanked the Makerere team for honoring their promise of coming back to share the results with them. He said this practice needs to be emulated by other researchers.
- The representative of UCA (Patrick Kiiza) encouraged farmers to always contact the Local Government offices such as that of the District Production Officer for solutions of most threats like pests and diseases (Banana bacterial wilt and coffee wilt), fake seed supplies instead of just relaxing from home, waiting for calamity to occur.
- The Makerere team thanked all the participants for actively participating throughout the workshop and for their continued support. The team also thanked UCA for organizing the workshop.
- The policy makers appreciated the Makerere team for the wonderful initiative of sharing the results with the research community. This indicated that the researchers were not only working towards self-development but for the benefit of the community and the country at large.

- The District Commercial Officer of Ntungamo (Mutabarura Amon) encouraged farmers to stand strong and take advantage of the opportunities including trainings, education and experiences and be able to learn from the past mistakes for future development.
- The secretary of production of Ntungamo (Canon Mugabi) requested the research team to encourage other researchers to always carry out validation meetings so as to encourage farmers participate in future research.

After the closing remarks, the members were provided with a modest transport refund based on bus fares from their homes to the workshop venue.

5. Conclusions

In general, this study shows that the integrated co-operative model has great potential to improve livelihoods among smallholder farmers but has not been working as well as anticipated at the beginning. The marketing co-operatives (ACE) did not adequately address farmers' marketing challenges. The SACCOS failed in their anticipated role of financing activities of RPOs and ACEs. The following are specific conclusions from the study:

- Benefits of ICM extend beyond members to the entire farming community. As a result, there were fewer differences among participating households based on co-op membership.
- Co-op members within ICM experience fewer severe problems in production and marketing than those in single co-ops and non-co-op members.
- Co-operative integration fosters greater financial inclusion of smallholder farmers including women who have traditionally been avoided by financial institutions.
- There is greater financial literacy and access to credit among farmers as a result co-op integration.
- Shared knowledge, access to good quality inputs and mutual support are key benefits from participating in co-operatives. Co-operatives expose farmers to better farming practices, training opportunities, markets and financial services. There is also increased social capital among co-operative members.
- SACCOS and ACEs are not performing their roles in supporting RPOs adequately. As a result, the benefits of ICM are not being fully realized.
- Co-operatives have not significantly improved market access among smallholder farmers. Fewer than expected farmers sold their produce through the ACEs due to delayed payments, difficulties in transport, poor storage facilities and failure to secure markets. The warehouse receipt system meant to address the need for immediate cash to solve urgent financial needs such as school fees after farmers have bulked their produce failed to take off.

6. Recommendations

Based on these findings and conclusions, the following is recommended:

(1) To the Co-operatives and UCA:

- The different tiers in the integrated co-operative models, that is, the RPOs, ACEs and SACCOs should respond to their obligations by improving the services they offer to farmers. Farmers and their VSLAs should be encouraged to save in SACCOs so as to increase the deposits in the SACCOs so that they can have enough money to lend out to farmers.
- There is a need for training farmers on the roles of the different co-ops in the integrated model for improved understanding of how the model is supposed to work. There is a lack of understanding among farmers on the modus operandi of SACCOs.
- Strengthen the capacity of ACEs to provide the needed marketing services. Currently most ACEs lack human and physical infrastructure capacity to perform their roles effectively within the integrated model.
- Create awareness in communities about co-operatives and their potential benefits. Particular attention needs to be paid to forming a gender sensitive team and reaching out to places where both men and women have equal chances of getting the information.
- There is need to explore ways of attracting the youth to co-operatives. This can be done by broadening the focus to include activities of interest to the youth.
- Appropriate training of leaders, management staff and general membership.
- There is need to improve quality and quantity of farmers produce.

(2) To the Government of Uganda:

- Encourage co-operation and support from local leaders in co-operative development.
- Create favourable political and economic policies that promote co-operative development. Develop some legislation which specifies punitive measures for SACCOs to prevent loss of money through mismanagement and corruption.
- Improve the physical infrastructure including roads.

(3) To Scholars of Co-operatives:

- Undertake further studies to understand the mechanisms (path) through which co-operatives facilitate or impede improvement in livelihoods among smallholder farmers.

Appendix 1: Tables Presenting Data Disaggregated by Gender

Table 51: Labour cluster and crop marketing in different co-operative models by sex

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Nonco-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Education level of household heads			0.00			0.01			0.08
0 to 7 years	66.09	98.04		59.79	95.45		61.99	82.76	
8 to 14 years	28.26	1.96		36.08	4.55		33.92	17.24	
15 years and above	5.65	0.00		4.12	0.00		4.09	0.00	
Participate in labour exchange (%)	20.87	17.65	0.60	19.59	18.18	0.88	14.37	10.34	0.56
Hired labour (%)	69.13	60.78	0.24	73.20	36.36	0.00	41.52	65.52	0.02
Household men working in someone else's land (%)	10.87	0.00	0.01	12.37	4.55	0.28	40.94	27.59	0.17
Experience severe constraints in crop production (%)	91.30	94.12	0.50	93.81	100.00	0.23	87.72	93.10	0.40
Sold crops in the previous year (%)	95.22	92.16	0.38	93.81	95.45	0.77	86.55	93.10	0.32
Sell produce through a co-operative (%)	20.87	29.41	0.18	20.62	22.73	0.83	2.34	3.45	0.72

Table 52: Access to financial services of households in different co-operative models by sex

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Save in VSLA (%)	70.87	68.63	0.75	54.64	40.91	0.24	15.20	10.34	0.49
Borrowed money from VSLA (%)	34.78	41.18	0.38	44.33	22.73	0.06	15.79	13.79	0.78
Borrowed money from SACCO (%)	26.52	21.57	0.46	19.59	18.18	0.88	8.77	6.90	0.73
Borrowed money from Relatives and friends (%)	12.17	9.80	0.63	12.37	22.73	0.21	26.32	17.24	0.29
Borrowed money from commercial bank (%)	4.35	1.96	0.42	11.34	13.64	0.76	5.26	3.45	0.67
Borrowed money from money lender	3.91	0.00	0.15	2.06	0.00	0.49	0.58	0.00	0.68

Table 53: Constraints in producing crops farmers faced in the different co-operatives by sex

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Poor roads (%)	22.17	5.88	0.01	18.56	31.82	0.17	43.27	58.62	0.13
High transport costs (%)	45.65	21.57	0.00	54.64	63.64	0.44	47.37	55.17	0.43
Low demand for produce (%)	9.13	9.80	0.88	12.37	13.64	0.87	31.58	55.17	0.01
Poor storage for produce (%)	13.91	11.76	0.68	23.71	22.73	0.92	21.05	48.28	0.00
Lack of market information (%)	5.22	5.88	0.85	3.09	4.55	0.73	15.79	17.24	0.84

Table 54: Mean wealth indicators among households in different co-operatives by sex

Wealth indicators	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Average total land(acres) owned	7.85 (19.39)	3.24 (2.73)	0.09	6.61 (8.41)	3.84 (2.87)	0.13	3.02 (4.77)	2.10 (2.20)	0.30
Average land (acres) in use	4.55 (6.09)	2.45 (1.28)	0.02	3.65 (2.52)	2.89 (1.32)	0.17	2.60 (2.89)	2.19 (2.17)	0.46
Livestock index	2.27 (4.61)	0.78 (1.13)	0.02	2.00 (4.21)	0.68 (0.87)	0.15	1.16 (2.39)	0.40 (0.69)	0.09
Average livelihood index	0.25 (0.31)	0.27 (0.35)	0.75	0.26 (0.31)	0.12 (0.16)	0.05	0.28 (0.33)	0.13 (0.28)	0.03
Household income	1.69 (4.12)	0.45 (0.49)	0.03	1.20 (2.16)	0.59 (0.49)	0.22	1.00 (3.31)	0.93 (1.75)	0.90

NOTE: Household income is farm income plus own business minus wages

Table 55: Ownership land by households in different co-operatives by sex

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Ownership of land (%)			0.25			0.23			0.04
Own land (%)	69.57	70.59		68.04	50.00		50.60	27.27	
Both owns and hires land (%)	10.87	3.92		8.25	9.09		10.24	4.55	
Hire land (%)	19.57	25.49		23.71	40.91		39.16	68.18	

Table 56: Number of meals consumed and farmer perception in terms of food security by sex

	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
Food security status	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Number of meals consumed in times of plenty (%)			0.12			0.43			0.91
One meal	0.43	1.96		0.00	0.00		5.26	3.45	
Two meals	50.87	62.75		45.36	54.55		53.80	55.17	
At least three meals	48.70	35.29		54.64	45.45		40.94	41.38	
Number of meals consumed in times of scarcity (%)			0.18			0.39			0.78
One meal	45.65	54.90		42.27	50.00		62.57	68.97	
Two meals	42.17	41.18		42.27	45.45		30.41	24.14	
At least three meals	12.17	3.92		15.46	4.55		7.02	6.90	
Perception of household in terms of food security (%)			0.16			0.42			0.18
Always food insecure	8.26	7.84		5.15	9.09		12.35	6.90	
Sometimes food secure	54.78	68.63		53.61	63.64		62.35	51.72	
Food secure	36.96	23.53		41.24	27.27		25.29	41.38	

Table 57: Housing quality of household members of different co-operative models by sex

	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
Housing quality	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Type of walls (%)									
Brick walls plastered	18.70	13.73	0.40	21.65	4.55	0.06	18.93	19.23	0.97
Brick walls not plastered	10.87	9.80	0.82	4.12	0.00	0.33	11.83	19.23	0.29
Mud poles plastered	42.17	39.22	0.69	44.33	68.18	0.04	53.25	50.00	0.75
Mud poles not plastered	28.26	37.25	0.20	29.90	27.27	0.80	15.98	11.54	0.55
Type of roof (%)									
Iron sheets	56.52	64.71	0.28	52.58	59.09	0.58	58.93	50.00	0.39
Grass thatched	43.48	35.29	0.28	47.42	40.91	0.58	41.07	50.00	0.39
Type of floor (%)									
Cement floor	21.30	17.65	0.55	24.74	9.09	0.10	20.71	23.08	0.78
Rammed earth floor	78.70	82.35	0.55	75.26	90.91	0.10	79.29	76.92	0.78

Table 58: Social participation and financial capacity among households in the different co-operatives by sex

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Social participation (%)									
Save in VSLA	70.87	68.63	0.75	54.64	40.91	0.24	15.20	10.34	0.49
Participate in labour exchange	20.87	17.65	0.60	19.59	18.18	0.88	14.37	10.34	0.56
Financial capacity (%)									
borrow money	67.39	72.55	0.47	72.16	59.09	0.22	52.63	41.38	0.26
Acquire income from remittances	9.30	8.70	0.92	0.00	0.00	-	1.17	0.00	0.55

Table 59: Influence of co-operatives on enterprise among households of different co-operatives by sex

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	
Influence of RPO (%)	63.91	60.78	0.67	67.01	54.55	0.26	0.00	0.00	
Type of co-operative influence									
Provide cheap inputs	30.41	38.71	0.36	35.38	33.33	0.89	0.00	0.00	
Provide advanced payment	0.68	0.00	0.64	1.54	8.33	0.17	0.00	0.00	
Provide equipment	30.41	22.58	0.38	10.77	0.00	0.23	0.00	0.00	
Provide market	10.14	3.23	0.22	7.69	0.00	0.32	0.00	0.00	
Provide soft loans	2.70	3.23	0.87	4.62	0.00	0.44	0.00	0.00	
Provide training on agronomical practices	25.68	32.26	0.45	40.00	58.33	0.23	0.00	0.00	

Table 60: Changes in the community among the different co-operatives by sex

Community changes	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Farmed more land last 5 years (%)	66.09	64.71	0.85	69.07	68.18	0.93	21.64	6.90	0.06
Acquired more land due to belonging to co-op (%)	25.22	15.69	0.14	27.84	18.18	0.35	0.00	0.00	-
Farmed less land than last 5 years (%)	37.39	15.69	0.00	41.24	27.27	0.22	15.79	10.34	0.45
Foods eaten last 5 years and no longer eat them (%)	29.69	28.00	0.81	28.13	28.57	0.96	7.60	10.34	0.61
Foods eaten now and did not eat last 5 years (%)	60.09	50.00	0.19	67.37	71.43	0.72	19.88	24.14	0.60
Good changes in farming last 5 years (%)	80.35	74.51	0.35	81.44	63.64	0.06	54.39	79.31	0.01
Bad changes in farming last 5 years (%)	76.52	80.00	0.59	71.13	68.18	0.78	54.97	44.83	0.31

Table 61: Benefits to household members of the different co-operatives by sex

Benefits	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Quantity benefit (%)			0.06						0.50
Buys large quantities	100.00	85.71		100.00	100.00		86.96	100.00	
Can buy any quantity	0.00	14.29		0.00	0.00		13.04	0.00	
Quality benefits (%)			0.42						-
Buy only quality produce	38.46	57.14		37.50	0.00		45.45	0.00	
Carry out quality control trainings	61.54	42.86		62.50	0.00		54.55	0.00	
Marketing cost related benefits (%)			0.44			0.63			-
No marketing costs	97.22	92.31		96.77	100.00		0.00	0.00	
Lower marketing costs	2.78	7.69		3.23	0.00		0.00	0.00	
Storage related benefits (%)									-
Have storage facilities	100.00	100.00		100.00	100.00		0.00	0.00	
Market search benefits (%)									-
Offers markets	100.00	100.00		100.00	100.00		0.00	0.00	
Price related benefits (%)									-
Offers better prices	100.00	100.00		100.00	100.00		0.00	0.00	
Payment related benefits (%)			0.17			0.43			-
Bonus payment	0.00	4.35		0.00	0.00		0.00	0.00	
Lump sum payment	4.62	13.04		4.55	0.00		0.00	0.00	
Pays in advance	18.46	13.04		36.36	53.85		0.00	0.00	
prompt payment	76.92	69.57		59.09	46.15		0.00	0.00	

Table 62: Resilience among households in the different co-operatives

Resilience	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Food security status (%)			0.17			0.43			0.18
Always food insecure	8.26	7.84		5.15	9.09		12.35	6.90	
Sometimes food insecure	54.78	68.63		53.61	63.64		62.35	51.72	
Food secure	36.96	23.53		41.24	27.27		25.29	41.38	

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Table 63: Household assets of households in the different co-operatives by sex

	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Mean (Std. dev)	Mean (Std.dev)		Mean (Std.dev)	Mean (Std.dev)		Mean (Std. dev)	Mean (Std. dev)	
Household assets	Male	Female	Pvalue	Male	Female	Pvalue	Male	Female	Pvalue
Number of hoes	3.83 (2.40)	2.70(1.57)	0.00	3.62(2.17)	2.55(1.43)	0.03	2.66 (1.66)	2.62(2.21)	0.89
Number of pangas	1.75(1.04)	1.12(0.73)	0.00	1.79(1.19)	1.18(0.59)	0.02	1.35(0.80)	1.10(0.72)	0.12
Number of rakes	0.26(0.71)	0.09(0.36)	0.10	0.36(0.73)	0.27(0.70)	0.61	0.12(0.32)	0.14(0.35)	0.74
Number of spades	0.66(0.87)	0.29(0.50)	0.00	0.63(0.93)	0.23(0.42)	0.04	0.30(0.56)	0.28(0.52)	0.80
Number of axes	0.86(0.64)	0.56(0.57)	0.00	0.85(0.74)	0.59(0.50)	0.12	0.66(0.61)	0.58(0.62)	0.55
Number of slashers	0.60(0.89)	0.25(0.56)	0.01	0.69(1.02)	0.09(0.29)	0.01	0.40(0.69)	0.31(0.66)	0.50
Number of sickles	0.55(0.94)	0.33(0.58)	0.11	0.59(1.17)	0.41(0.67)	0.47	0.29 (0.66)	0.34(0.81)	0.71
Number of wheel barrows	0.20(0.49)	0.10(0.30)	0.13	0.22(0.59)	0.05(0.21)	0.19	0.06(0.26)	0.07(0.37)	0.93
Number of Ox ploughs	0.06(0.35)	0.00	0.22	0.01(0.01)	0.00	0.63	0.00	0.07(0.37)	0.01
Number of Radios	0.99(0.64)	0.63(0.52)	0.00	0.98(0.82)	0.45(0.51)	0.00	0.88(0.63)	0.59(0.63)	0.02
Number of watches	0.22(0.52)	0.09(0.36)	0.11	0.33(0.73)	0.04(0.21)	0.07	0.34(0.48)	0.31(0.71)	0.78
Number of clocks	0.27(0.50)	0.02(0.14)	0.00	0.25(0.52)	0.05(0.21)	0.06	0.22(0.46)	0.38(0.67)	0.11
Number of bicycles	0.77(0.71)	0.37(0.56)	0.00	0.76(0.77)	0.23(0.42)	0.00	0.55(0.67)	0.28(0.59)	0.04
Number of mobile phones	1.37 (1.08)	0.96(1.34)	0.02	1.29(1.11)	0.36(0.49)	0.00	1.02(1.05)	0.75(0.68)	0.18
Number of TVs	0.05(0.21)	0.08(0.27)	0.38	0.11(0.35)	0.00	0.13	0.05(0.21)	0.00	0.23
Number of motorcycles	0.16(0.38)	0.06(0.24)	0.05	0.22(0.52)	0.05(0.21)	0.14	0.11(0.31)	0.06(0.25)	0.49
Number of motor vehicles	0.01(0.09)	0.00	0.50	0.03(0.22)	0.00	0.52	0.00	0.00	-
Number of sofa sets	0.52(0.72)	0.31(0.50)	0.06	0.47(0.63)	0.23(0.42)	0.08	0.39(0.58)	0.31(0.54)	0.49
Number of lanterns	0.93(0.86)	0.64(0.74)	0.03	0.93(0.89)	0.59(0.66)	0.09	0.89(0.75)	0.72(0.53)	0.25

Table 64: Wealth indicators by households in the different co-operatives that sold through co-operatives

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Sold through Co-op	Did not sell through co-op	Pvalue	Sold through Co-op	Did not sell through co-op	Pvalue	Sold through Co-op	Did not sell through co-op	Pvalue
Household income (Million Ugx)	1.2 (2.2)	1.60 (4.10)	0.46	1.32 (3.23)	0.98 (1.47)	0.44	0.50 (0.10)	1.00 (3.17)	0.72
Total land (acres) owned	4.74 (5.72)	7.67 (19.79)	0.24	9.82 (11.12)	5.10 (6.31)	0.01	2.00 (0.70)	2.91 (4.55)	0.65
Asset index	-0.32 (0.92)	0.30 (2.02)	0.02	0.12 (1.15)	0.17 (2.06)	0.89	-0.77 (0.32)	-0.32 (0.98)	0.31

Table 65: Food security status by wealth indicators among the different co-operatives

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)					
	Asset index	Pvalue	Household income (Millions Ugx)	Pvalue	Asset index	Pvalue	Household income (Millions Ugx)	Pvalue	Asset index	Pvalue	Household income (Millions Ugx)	Pvalue
Number of meals consumed during plenty season (%)		0.12		0.04		0.05		0.05		0.23		0.17
One meal	-0.72 (.03)		0.40 (0.14)		0.00		0.00		-0.49 (0.47)		0.40 (0.35)	
Two meals	-0.03 (1.13)		0.95 (1.60)		-0.20 (1.08)		0.67 (1.13)		-0.42 (.99)		0.67 (1.30)	
Three meals	0.40 (2.42)		2.07 (5.21)		0.48 (2.37)		1.39 (2.44)		-0.19 (.97)		1.48 (4.63)	
Number of meals consumed during Scarcity season (%)		0.03		0.00		0.01		0.00		0.01		0.00
One meal	-0.08 (1.10)		0.74 (0.77)		-0.29 (.83)		0.58 (0.51)		-0.48 (.93)		0.59 (1.16)	
Two meals	0.28 (2.28)		1.86 (5.02)		0.29 (2.03)		0.89 (1.22)		-0.08 (.89)		1.09 (3.22)	
Three meals	0.86 (2.40)		3.12 (5.16)		1.25 (3.23)		3.13 (4.38)		0.05 (1.30)		4.21 (8.82)	

Appendix 2: Tables Presenting Data Disaggregated by District

Table 66: Labour cluster and crop marketing in different co-operative models by District

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Education level of household heads			0.01			0.06			0.00
0 to 7 years	64.75	78.87		59.02	74.14		54.00	76.00	
8 to 14 years	28.06	19.01		39.34	20.69		39.00	24.00	
15 years and above	7.19	2.11		1.64	5.17		7.00	0.00	
Participate in labour exchange (%)	24.46	16.20	0.09	27.87	10.34	0.02	22.00	5.21	0.00
Hired labour (%)	85.61	50.00	0.00	81.97	50.00	0.00	62.00	28.00	0.00
Household men working in someone else's land (%)	13.67	4.23	0.01	16.39	5.17	0.05	28.00	50.00	0.00
Experience severe constraints in crop production (%)	94.96	88.73	0.06	95.08	94.83	0.95	92.00	85.00	0.12
Sold crops in the previous year (%)	92.81	96.48	0.17	96.72	91.38	0.21	86.00	89.00	0.52
Sell produce through a co-operative (%)	16.55	28.17	0.02	18.03	24.14	0.41	0.00	5.00	0.02

Table 67: Access to financial services of households in different co-operative models by District

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Save in VSLA (%)	86.33	54.93	0.00	70.49	32.76	0.00	29.00	0.00	0.00
Borrowed money from VSLA (%)	45.32	26.76	0.00	45.90	34.48	0.20	26.00	5.00	0.00
Borrowed money from SACCO (%)	17.99	33.10	0.00	8.20	31.03	0.00	1.00	16.00	0.00
Borrowed money from relatives and friends (%)	11.51	11.97	0.90	14.75	13.79	0.88	36.00	14.00	0.00
Borrowed money from commercial bank (%)	5.04	2.82	0.34	4.92	18.97	0.02	2.00	8.00	0.05
Borrowed money from money lender	0.00	6.34	0.00	0.00	3.45	0.14	1.00	0.00	0.32

Table 68: Constraints in producing crops farmers faced in the different co-operatives by District

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Poor roads (%)	23.02	15.49	0.10	9.84	32.76	0.00	54.00	37.00	0.02
High transport costs (%)	61.15	21.83	0.00	60.66	51.72	0.32	68.00	29.00	0.00
Low demand for produce (%)	14.39	4.23	0.00	14.75	10.34	0.46	38.00	32.00	0.37
Poor storage for produce (%)	21.58	5.63	0.00	22.95	24.14	0.87	30.00	20.00	0.10
Lack of market information (%)	7.91	2.82	0.06	0.00	6.90	0.04	25.00	7.00	0.00

Table 69: Mean wealth indicators among households in different co-operatives by District

Wealth indicator	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Average total land(acres) owned	8.51 (13.49)	5.54 (20.91)	0.15	7.27 (8.63)	4.86 (6.58)	0.09	3.84 (5.91)	1.95 (1.97)	0.00
Average land (acres) in use	4.27 (3.46)	4.06 (7.09)	0.74	3.47 (2.22)	3.54 (2.52)	0.88	3.15 (3.36)	1.93 (1.92)	0.00
Livestock index	2.48 (5.61)	1.52 (2.07)	0.05	1.72 (4.23)	1.80 (3.45)	0.91	0.82 (1.78)	1.29 (2.61)	0.13
Average livelihood index	0.25 (0.31)	0.25 (0.33)	0.97	0.19 (0.24)	0.27 (0.34)	0.19	0.24 (0.32)	0.27 (0.34)	0.61
Household income	1.5 (4.45)	1.4 (2.95)	0.83	1.09 (1.94)	1.00 (2.00)	0.80	1.35 (4.28)	0.63 (1.04)	0.09

Table 70: Number of meals consumed and farmer perception in terms of food security by District

Food security status	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Number of meals consumed in times of plenty (%)			0.00			0.08			0.04
One meal	0.00	1.41		0.00	0.00		6.00	4.00	
Two meals	35.97	69.72		39.34	55.17		45.00	63.00	
At least three meals	64.03	28.87		60.66	44.83		49.00	33.00	
Number of meals consumed in times of scarcity (%)			0.00			0.27			0.01
One meal	58.27	36.62		50.82	36.21		65.00	62.00	
Two meals	34.53	49.30		37.70	48.28		23.00	36.00	
At least three meals	7.19	14.08		11.48	15.52		12.00	2.00	
Perception of household in terms of food security (%)			0.28			0.05			0.00
Always food insecure	5.76	10.56		4.92	6.90		18.00	5.05	
Sometimes food secure	60.43	54.23		45.90	65.52		66.00	55.56	
Food secure	33.81	35.21		49.18	27.59		16.00	39.39	

Table 71: Ownership land by households in different co-operatives by District

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Ownership of land (%)			0.00			0.25			0.04
Own land (%)	79.86	59.86		70.49	58.62		56.70	38.46	
Both owns and hires land (%)	7.19	11.97		4.92	12.07		8.25	10.99	
Hire land (%)	12.95	28.17		24.59	29.31		35.05	50.55	

Table 72: Housing quality of household members of different co-operative models by District

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Type of walls (%)			0.29			0.09			0.82
Brick walls plastered	20.86	14.79		14.75	22.41		19.00	18.95	
Brick walls not plastered	10.07	11.27		6.56	0.00		15.00	10.53	
Mud poles plastered	36.69	46.48		44.26	53.45		51.00	54.74	
Mud poles not plastered	32.37	27.46		34.43	24.14		15.00	15.79	
Type of roof (%)			0.00			0.00			0.00
Iron sheets	15.83	99.30		13.11	96.55		20.00	97.87	
Grass thatched	84.17	0.70		86.89	3.45		80.00	2.13	
Type of floor (%)			0.62			0.56			0.15
Cement floor	19.42	21.83		19.67	24.14		17.00	25.26	
Rammed earth floor	80.58	78.17		80.33	75.86		83.00	74.74	

Table 73: Social participation and financial capacity among households in the different co-operatives by District

Variable	Integrated co-op			Single co-op			Non-co-op		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Social participation									
Save in VSLA (%)	86.33	54.93	0.00	70.49	32.76	0.00	29.00	0.00	0.00
Participate in labour exchange (%)	24.46	16.20	0.09	27.87	10.34	0.02	22.00	5.21	0.00
Financial capacity									
Borrow money (%)	62.59	73.94	0.04	62.30	77.59	0.07	64.00	38.00	0.00
Acquire income from remittances (%)	0.74	81.25	0.00	0.00	0.00	-	1.00	1.00	1.00

Table 74: Influence of co-operatives on enterprise among households of different co-operatives by District

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)	
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo
Influence of RPO (%)	57.55	69.01	0.05	49.18	81.03	0.00	0.00	0.00
Type of co-operative influence								
Provide cheap inputs (%)	36.25	28.28	0.25	26.67	40.43	0.21	0.00	0.00
Provide advanced payment (%)	0.00	1.01	0.36	0.00	4.26	0.25	0.00	0.00
Provide equipment (%)	21.25	35.35	0.04	16.67	4.26	0.07	0.00	0.00
Provide market (%)	0.00	16.16	0.00	3.33	8.51	0.36	0.00	0.00
Provide soft loans (%)	1.25	4.04	0.26	0.00	6.38	0.15	0.00	0.00
Provide training on agronomical practices (%)	41.25	15.15	0.00	53.33	36.17	0.14	0.00	0.00

Table 75: Changes in the community among the different co-operatives by District

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Farmed more land last 5 years (%)	56.12	75.35	0.00	60.66	77.59	0.05	26.00	13.00	0.02
Acquired more land due to belonging to co-op (%)	18.71	28.17	0.06	22.95	29.31	0.42	0.00	0.00	
Farmed less land than last 5 years (%)	34.53	32.39	0.70	36.07	41.38	0.55	3.00	27.00	0.00
Foods eaten last 5 years and no longer eat them (%)	23.19	35.46	0.02	19.67	37.50	0.03	16.00	0.00	0.00
Foods eaten now and did not eat last 5 years (%)	64.49	52.14	0.04	68.85	67.27	0.86	41.00	0.00	0.00

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Good changes in farming last 5 years (%)	88.49	70.21	0.00	86.89	68.97	0.02	72.00	44.00	0.00
Bad changes in farming last 5 years (%)	71.94	82.27	0.04	60.66	81.03	0.02	38.00	69.00	0.00

Table 76: Benefits to household members of the different co-operatives by District

Variable	Integrated co-op (n=281)			Single co-op (n=119)			Non-co-op (n=200)		
	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue	Nebbi	Ntungamo	Pvalue
Quantity benefit (%)			0.43						0.22
Buys large quantities	100.00	95.00		100.00	100.00		100.00	83.33	
Can buy any quantity	0.00	5.00		0.00	0.00		0.00	16.67	
Quality benefits (%)			0.27			0.40			0.38
Buy only quality produce	28.57	53.85		42.86	0.00		66.67	37.50	-
Carry out quality control trainings	71.43	46.15		57.14	100.00		33.33	62.50	-
Marketing cost related benefits (%)			0.04			0.36			
No marketing costs	100.00	87.50		95.24	100.00		0.00	0.00	-
Lower marketing costs	0.00	12.50		4.76	0.00		0.00	0.00	-
Storage related benefits (%)									
Have storage facilities	100.00	100.00		100.00	100.00		0.00	0.00	-
Market search benefits (%)									
Offers markets	100.00	100.00		100.00	100.00		0.00	0.00	-
Price related benefits (%)									
Offers better prices	100.00	100.00		100.00	100.00		0.00	0.00	-
Payment related benefits (%)			0.00			0.00			
Bonus payment	0.00	2.00		0.00	0.00		0.00	0.00	-
Lumpsum payment	0.00	12.00		0.00	6.25		0.00	0.00	-
Pays in advance	0.00	30.00		0.00	71.88		0.00	0.00	-
prompt payment	100.00	56.00		100.00	21.88		0.00	0.00	-

Appendix 3: Household Survey Instrument

Questionnaire number: ----- Name of Enumerator -----
Date of interview: ----- District: -----
Sub-county: ----- Parish: -----
Village: -----

Section A: Household Demographic Characteristics

Q101. What is your name?

Q102. Gender of respondent: (*Circle one*) 1. Male 2. Female

Q103. What is your age? ----- years.

Q104. Are you the household head or not? (*Circle one*) 1. Yes 2. No.

Q105. If no, what is your relationship to the household head? (*Circle one*)

- (1) Spouse (2) Son/daughter (3) Parent
(4) In-law (5) Sibling (6) Other relation (specify)

Q106. If you are not the household head, what is his or her name?

Q107. What is the sex of the household head? (*Circle one*) 1. Male 2. Female

Q108. What is the age of the household head?

Q109. What is the religion of the household head? (*Circle one*)

1. Roman Catholic 2. Protestant 3. Pentecostal/Born again
4. Islam 5. Seventh day Adventist 6. Others (Specify)

Q110. What is your tribe?

Q111. Which of the following best describes the present marital status of the household head?

1. Never Married/Single 2. Married Monogamous 3. Married Polygamous
4. Divorced/Separated 5. Widow/Widower

Q112. If polygamous, how many wives are in the household?

Q113. How many members are currently living in this household in the following age categories?

1. Female children under five years -----
2. Male children under five years -----
3. Female children between 5 and 17 years -----
2. Male children between 5 and 17 years -----

- 3. Adult females aged between 18 – 59 years-----
- 4. Adult male aged between 18 – 59 years -----
- 5. Elders aged above 59 years -----

Q114. What is the main occupation of the household head? (*Circle one*)

- (1) Farming
- (2) Salaried employment
- (3) Self-employed off-farm
- (4) Farm worker
- (5) Off-farm worker
- (6) Casual labour
- (7) Housekeeping
- (8) Other (Specify)

Section B: Selected Household Assets

Human

Q201. How many years did the household head and the spouse spent schooling?

- (a) Household head: ----- years.
- (b) Spouse: ----- years.

Q202. (a) How many members in this household are school going?

- (b) How many:
 - (i) Males are in primary school? -----
 - (ii) Females are in primary school? -----
 - (iii) Males are in secondary school? -----
 - (iv) Females are in secondary school? -----
 - (v) Males in vocational schools after S4 -----
 - (vi) Females in vocational school after S4 -----
 - (vii) Males are in Tertiary/University? -----
 - (viii) Females are in Tertiary/university -----

Q203. If primary school going, do they go to a school offering Universal Primary Education (UPE) or not? (*Circle one*)

- 1. Go to UPE School.
- 2. Do not go to UPE School.
- 3. Both

Q204. If secondary school going, do they go to a school offering Universal Secondary Education (USE) or not? (*Circle one*)

- 1. Go to USE school.
- 2. Do not go to USE school.
- 3. Both

Q205. (a) Do they pay for school fees, books and uniforms? (*Circle one*) 1. Yes. 2. No

(b) If yes, about how much do pay for school in a year? ----- shillings

(c) How do you raise the money to pay for school?

Q206. (a) Are there children below 18 years in the household who are not going to school?

(*Circle one*) 1. Yes 2. No.

(b) If yes, how many of them are:

- (a) Males between 5 and 12 years?
- (b) Females between 5 and 12 years?
- (c) Males between 13 and 17 years?
- (d) Females between 13 and 17 years?

Q207. Why are they not going to school?

Housing

Q208. What kind of main housing does the household have? (*Observe but ask if not possible*)

(a) Type of walls:

- 1. Brick walls plastered
- 2. Brick walls un plastered
- 3. Mud poles plastered
- 4. Mud poles un plastered.

(b) Type of roof:

- 1. Iron sheet roof
- 2. Grass thatched roof

(c) Type of floor:

- 1. Cement floor
- 2. Rammed earth floor

(d) How many rooms?

(e) Is the kitchen inside the house or outside? (*Circle one*) 1. Inside 2. Outside.

(f) Are animals being kept inside the house? (*Circle one*) 1. Inside 2. Outside

(g) Is there a latrine? (*Circle one*) 1. Yes 2. No

Q209. What kind of housing would you like to have?

- (a) Type of roof:
- (b) Type of wall:
- (c) Type of floor:
- (d) Number of rooms:

Water Supply and Sanitation

Q210. Where does your household mainly collect water for drinking?

- 1. Protected well
- 2. Unprotected well
- 3. Borehole
- 4. River
- 5. Lake
- 6. Dam
- 7. Tap water
- 8. Rain water
- 9. Other (Specify)

Q211. Where does your household mainly collect water for other domestic uses?

- 1. Protected well
- 2. Unprotected well

3. Borehole
4. River
5. Lake
6. Dam
7. Tap water
8. Rain water
9. Other (Specify)

Q212. How long does it take (minutes) to get to your main water source? -----minutes.

Q213. Who collects the water?

Q214. How often does this person have to go get water per day?

Q215. Does lack of water keep you from doing what you need or want to do? (**Circle one**)
 1. Yes 2. No

Q216. What would you be able to do if you had enough water?

Tools and Equipment

Q217. How many of the following Agricultural Implements does your household possess?

Item	Hoe	Panga	Rake	Spade	Axe	Slasher	Sickle	Wheelbarrow	Ox-Plough
Number									

Q218. How many of the following Home Items does your household possess?

Item	Radio	Watch	Clock	Bicycle	Mobile Phone	TV	Motorcycle	Motor Vehicle	Sofa sets	Lanterns
Number										

Social

Participation in Co-ops

Q219. Do you and/or any other adult in this household belong to a rural producer group (RPO)?
 1. Yes 2. No. (**Go to Q225**)

Q220. If yes, which household member and which RPO?

Who? _____ Name of Co-op _____ Since when? _____

Who? _____ Name of Co-op _____ Since when? _____

Q221. (a) Have you made any changes in farming or running your household as a result of being a member of a co-op? (**Circle one**) 1. Yes 2. No.

(b) If yes, what are these changes?

Q222. As a result of any change(s) that you have made in farming or in your household as a member a co-op, do you have *more* people you consider as '*close friends*' now? (**Circle one**)

1. Yes 2. No.

Q223. (a) If so, have you ever asked any new close friend for help in solving a problem? (**Circle one**)

1. Yes 2. No.

(b) If yes, what type of problem?

Q224. (a) If so, have you ever been asked by any new close friend for help in solving a problem? (**Circle one**)

1. Yes 2. No.

(b) If yes, what type of problem?

Q225. If you experienced a major problem (for example, failure or loss of your most important crop), to whom would you first turn for help?

Access to Land

Q226. In total, how much land (in acres) does this household (*all members*) own? ----- acres.

Q. In total, how much land does this household (all members) have access to use? ----- acres.

Q227. Of the above land, how much is currently under use? -----acres.

Q228. (a) If you needed more land to farm, could you get access to more? (**Circle one**)

1. Yes 2. No

(b) If yes, how?

Q229. (a) Is your household farming more land than it did 5 years ago? (**Circle one**)

1. Yes 2. No

(b) If yes, how much more? -----acres

(c) Who is the owner of the land?

(d) How did you get this land?

Q230. (a) Did belonging to a co-op group help you in any way in acquiring more land?

1. Yes 2. No

(b) If yes, how?

Q231. (a) Is your household farming less land than it did 5 years ago? (**Circle one**)

1. Yes 2. No

(b) If yes, how much less? -----acres.

(c) Who was the owner of the land?

(d) What happened to this land?

Q232. (a) Is belonging to a co-op group in any way responsible for having less land than you had before?

1. Yes 2. No

(b) If yes, how?

Q233. (a) Is belonging to a SACCO in any way responsible for having less land than you had before?

1. Yes 2. No

(b) If yes, how?

Access to Labour

Q234. (a) Do you use hired labour? (*Circle one*) 1. Yes 2. No

(b) For what tasks?

(c) On average, how much do you pay them per day? ----- shillings.

Q235. (a) Do you participate in a labour exchange group? 1. Yes 2. No.

(b) What is it for

(c) What do you do/ What do you have to do to participate?

(d) How many days a month/year?

Q236. (a) Do men in this household work on someone else's land? 1. Yes 2. No.

(b) How many days?

(c) For what tasks?

(d) What are they paid?

Q237. (a) Do women in this household work on someone else's land? (*Circle one*)

1. Yes 2. No.

(b) How many days?

(c) For what tasks?

(d) What are they paid?

Section C: Crop Production

Q301. Name, in order of importance, *four* major crops grown in your household last year (2013)

Crop	(a) Season one			(b) Season two		
	Acreage	Average output (kg)	Main purpose	Acreage	Average output (kg)	Main purpose
1.						
2.						
3.						
4.						

Main purpose- *Codes*: (1) Food, (2) Cash, (3) Both food and cash, (4) Others

Q302. (a) Of the major crops mentioned above, are there any crops that you grow because of the influence or support of the RPO/ACE where you or member(s) of your household belongs?

1. Yes 2. No.

(b) If yes, what type of influence or support?

Q303. (a) Of the major crops mentioned above, are there any crops that you grow because of the influence or support of the SACCO where you or member of your household belongs?

1. Yes 2. No.

(b) If yes, what type of influence or support?

Q304. Did you experience any severe constraints in producing crops in the last year?

(1) Yes (2) No. (*If no, go to Q306*)

Q305. If yes, what were the main production constraints your household faced?

Constraint	Did you experience this constraint?	Did the group where you or member of hhold belongs assist in coping with the constraint?		Did the SACCO where you or member of hhold belongs assist in coping with the constraint	
	1. Yes 2. No	1. Yes 2. No	If yes, how?	1. Yes 2. No	If yes, how?
1. Low soil fertility					
2. Pests					
3. Diseases					
4. Weeds					
5. Vermin/rodents					
6. Lack of improved varieties					
7. Lack of access to inputs					
8. Extreme weather changes					
9. Small land holding					
10. Lack of labour					
11. Other					

Q306. What are the major types of livestock kept in this household?

Livestock	Type	Number
Chickens	Local	
	Crossbreed/Exotic	
Pigs	Local	
	Crossbreed/Exotic	
Goats	Local	
	Crossbreed/Exotic	
Cows	Local	
	Crossbreed/Exotic	
Fish	Local	
	Crossbreed/Exotic	
Sheep	Local	
	Crossbreed/Exotic	
Bees		

Q307. Are some of the animals housed in your house? (*Circle one*) 1. Yes 2. No

Q308. Where do you graze your animals? (*Circle all that apply*)

- (a) Own land
- (b) Land belonging to fellow farmers
- (c) Communal land
- (d) Land belonging to my co-op/famer group
- (e) Other (Specify)

Section D: Crop Marketing

Q401. Did you sell any crops in the last 12 months? (*Circle one*) (1) Yes (2) No.

Q402. Who mostly sells the crops? (*Circle one*) 1. Man 2. Woman. 3. Both

Q403. (a) Do you sell all your produce through the co-operative where you are a member?
(1) Yes (2) No.

(b) If No, what proportion of the produce do you sell through the co-operative? -----%

Q404. What benefits do you enjoy by selling the produce through the co-operative?

- (a) Quantity/volume-related benefits
- (b) Quality-related benefits
- (c) Marketing cost-related benefits
- (d) Storage-related benefits
- (e) Market search-related benefits
- (f) Price-related benefits
- (e) Payment terms-related benefits
- (f) Others

Q405. What challenges do you face by selling the produce through the co-operative?

- (a) Quantity/volume-related challenges
- (b) Quality-related challenges
- (c) Marketing cost-related challenges
- (d) Storage-related challenges
- (e) Market search-related challenges
- (f) Price-related challenges
- (e) Payment terms-related challenges
- (f) Others

Q406. Where did you mostly sell your crops not sold through the co-ops? (*Circle one*)

- (1) Farm gate/home (2) Rural market (3) Urban market (4) Other (Specify) ---

Q407. Who usually buys your produce? (*Circle all that apply*)

- (1) Others in the village for local consumption,
- (2) Retailers,
- (3) Agents of wholesalers or retailers,
- (4) Wholesalers,
- (5) Processers,
- (6) Others (Specify)

Q408. (a) How far (Km) is the nearest rural and urban market? (b) How do you commonly transport your produce to the market? (c) How much time in hours do you take to reach the nearest rural and urban market?

	(a) Distance (Km)	(b) Means of transport	(c) Time taken to travel (hrs.)
Rural market			
Urban market			

Q409. Does your producer group belong to an Area Co-op Enterprise (ACE)? (**Circle one**)

1. Yes
2. No

Q410. If yes, what services do members receive from the ACE?

- (a) In procuring farm inputs
- (b) In accessing extension services
- (c) In accessing loans
- (d) In accessing storage facilities
- (e) In accessing transport services
- (f) In accessing markets for farm produce
- (g) In collective marketing
- (h) Others

Q411. When was the last time you participated in collective marketing?

1. Less than 5 months ago
2. 6 months to 1 year
3. 1 year to 2 years
4. Over 2 years

Q412. Do you access market information from ACE? (**Circle one**)

1. Yes
2. No

Q413. If yes, how often do you access this information?

1. Weekly
2. Twice a month
3. Monthly
4. In more than one month
5. When ACE staff visits
6. Others Specify

Q414 Apart from Market Information from ACE, from what other sources do you access market information? (**Circle all that apply**)

1. Radios
2. Mobile phone messages
3. Newspapers
4. Neighbours
5. Markets
6. Others (specify)

Q415. Did you experience any serious problems in marketing your crops?

- (1) Yes
- (2) No. (*If no, go to Q501*)

Q416. If yes, what were the main marketing constraints your household faced in marketing?

Constraint	Did you experience this constraint?	Did the group where you or member of your hhold belongs assist in coping with the constraint?		Did the SACCO where you or member of your hhold belongs assist in coping with the constraint	
	1. Yes 2. No	1. Yes 2. No	If yes, how?	1. Yes 2. No	If yes, how?
1. Poor roads					
2. High transport costs					
3. Low prices					
4. Low demand					
5. Poor storage facilities					
6. Lack of markets					
7. Lack of market information					
8. High post-harvest losses					
9. High local taxes(market dues, loading fees)					
10. Unorganized farmers					
11. Others (specify)					

Section E: Access to Financial Services

Q501. (a) Do you or anybody in your in your household save with a VSLA? (*Circle one*)

1. Yes 2. No.

(b) If yes, how much do you save in a week in your VSLA? -----shillings

(c) How much do you hope to get from the VSLA at the end of the current cycle? -----shillings

Q502. Does the VSLA you belong to have an account with a SACCO? (*Circle one*)

1. Yes 2. No

Q503. Does the RPO you belong have an account with a SACCO? (*Circle one*)

1. Yes 2. No

Q504. Do you or anybody in the household have an account with a SACCO? (*Circle one*)

1. Yes 2. No

Q505 If some other person, is the person male or female? (*Circle one*)

1. Male 2. Female

Q506. Did you or any member in your household borrow MONEY last year (2013)? (*Circle one*)

1. Yes 2. No (*If no, go to Q507*).

Q507. If yes, please provide the following details:

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Source (<i>Circle all that apply</i>)	(a) Have you ever borrowed? (1)=Yes (2)=No	(b) Amount borrowed)	(c) Purpose for borrowing (codes below the table)	(d) Interest rate (in percentage)	(e) Period of repayment
1. VSLA					
2. SACCOs					
3. Relatives and friends					
4. Microfinance					
5. Commercial bank					
6. Money lender					
7. Other.....					

Codes for (c): Purpose for borrowing:

- (1) Purchase food,
- (2) Purchase household assets,
- (3) School fees,
- (4) Buy crop inputs,
- (5) Buy livestock inputs,
- (6) Invest in business
- (7) Others

Codes for (e): Repayment period

- (1) After one month
- (2) After three months
- (3) After one year

Q508. If you or any member in your household ever borrowed MONEY from more than one source, which source was the easiest and hardest to borrow from? (**Rank: 1= Easiest**)

Source (<i>Circle all that apply</i>)	Rank	Reason for the rank
VSLA		
SACCOs		
Relatives and friends		
Microfinance		
Commercial bank		
Money lender		
Other.....		

Q509. (a) If you or any member in your household borrowed money from a SACCO, would it have been equally easy if you never belonged to the group? 1. Yes 2. No
 (b) If No, why would it have been difficult?

Section F: Household Income, Nutrition and Food Security

Q601. Now I would like to ask you about the income you and other members of the household earned any time of the year, big or small amounts of income. (*Ask one at a time and if the household does not get income from that source, move to the next*)

Income source	(a) Did you get income from this source? (1) Yes, (2) No.	(b) What did the household head do with the money from this source? <i>See codes</i>	(c) Who was this for?	(d) Estimate amount from this source in the past 12 months	(e) What is the contribution of this source to total household income (1) Very low, (2) Low, (3) High, (4) Very high
1. Crop sales					
2. Livestock and poultry sales					
3. Sale of other products (firewood/charcoal/crafts)					
4. Casual employment (agricultural related)					
5. Casual employment (non-agricultural related)					
6. Running own business					
7. Remittances					
8. Rentals					
9. Other					

Codes for (c): What was done with the money:

- (1) Purchase food,
- (2) Purchase household assets,
- (3) School fees,
- (4) Buy crop inputs,
- (5) Buy livestock inputs,
- (6) Invest in business
- (7) Drinking alcohol
- (8) Others

Codes for (e): Who was this for?

- (1) Men
- (2) Women
- (3) Children
- (4) All household members
- (5) Relatives and friends

Q602. What proportion of income is generated from crop sales?

Q603. In the past 12 months, were there months in which you **did not have enough** food to meet your household’s needs? (*Circle one*) (1) Yes (2) No.

Q604. If yes, in which month(s) did the household **not have enough** food to eat? (*Circle all that apply*)

1	2	3	4	5	6	7	8	9	10	11	12
Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

Q605. On average, how many meals does your household consume in a day during the season of plenty? (*Circle one*) (1) One (2) Two (3) At least three meals

Q606. On average, how many meals does your household consume in a day during the season of scarcity? (**Circle one**) (1) One (2) Two (3) At least three meals

Q607. Which type of food reserves does your household have? (**Circle all that apply**)

- (1) None,
- (2) Food in store,
- (3) Granary,
- (4) House,
- (5) Food in the garden,
- (6) Others (specify)

Q608. What proportion of the foods consumed in your household comes from the following sources?

- 1. The market -----
- 2. Own garden-----
- 3. Relatives, neighbors-----
- 4. Others (specify) -----

Coping Strategies

I am going to ask you several statements about food eaten in your household in the past 2 weeks, and whether you were able to have or afford the food the household needed. (*Response categories for the first questions: 1. Yes 2. No*). (*Response categories for subsequent questions: 1. Rarely 2. Sometimes 3. Often*).

Q609a.	In the past 2 weeks, did you worry that your household would not have enough food?	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	
Q 610a.	In the past 2 weeks, were you or any household member not able to eat the kinds of foods you preferred because of a lack of resources? Who? -----	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	
Q 611a.	In the past 2 weeks, did you or any household member have to eat a limited variety of foods due to a lack of resources? Who? -----	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	
Q612 a.	In the past 2 weeks, did you or any household member have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food? Who? -----	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	
Q 613a	In the past 2 weeks, did you or any household member have to eat a smaller meal than you felt you needed because there was not enough food? Who? -----	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	
Q614a	In the past 2 weeks, did you or any household member have to eat fewer meals in a day because there was not enough food? Who? -----	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	
Q 615a	In the past 2 weeks, was there ever no food to eat of any kind in your household because of lack of resources to get food? Who? -----	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	
Q616 a.	In the past 2 weeks, did you or any household member go to sleep at night hungry because there was not enough food? Who? -----	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	

Q6187a	In the past 2 weeks, did you or any household member go a whole day and night without eating anything because there was not enough food? Who? -----	
b	How often did this occur? 0. Never 1. Rarely 2. Sometimes 3. Often 4. Always	

Q618. Compared to the rest of the people in this village, do you consider yourself: (*Circle one*)
 1. Poorer than others? 2. The same level with others? 3. Richer than most others?

Q619. Do you consider your household to be? (*Circle one*)
 1. Always food insecure (Not having enough to eat for more than **six** months)?
 2. Sometimes food insecure (Not having enough to eat for at least one month but less than **six** months)?
 3. Food secure (Having enough to eat throughout the year)

Section G: Community Aspirations

Q701. Do you think your children will be farming your land or live in this region when they grow up? (*Circle one*) 1. Yes, 2. No.

Q702. How do you see yourself in 5 years?

Q703. How do you see your community in 10 years?

Q704. (a) Have you seen any good changes in farming in general in the last five years? (*Circle one*) 1. Yes, 2. No.

(b) What is the change?

(c) How did it help you or your community?

Q705. (a) Have you seen any bad changes in farming in the last five years ago? (*Circle one*)
 1. Yes, 2. No.

(b) What is the change?

(c) How has it hurt you or your community?

Q706. Does your household eat foods this year that you did not eat five years ago? (*Circle one*)
 1. Yes, 2. No.

Q707. Did your household eat foods five years ago that you do not eat any more? (*Circle one*)
 1. Yes, 2. No.

Q708. (a) Have you seen other big changes in your community compared to five years ago? (*Circle one*) 1. Yes, 2. No.

(b) What is the main change?

(c) Who is the change good for?

(d) Why is it good for those people?

(e) Who is the change bad for?

(f) Why is it bad for those people?

Q709. (a) What changes would you like to see to make life easier in your community
 (b) Which of those is the main change you would like to see?

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(c) Who would benefit from it?

(d) Who would not benefit from it?

THANK YOU FOR YOUR PARTICIPATION

Appendix 4: Checklist for Community Profiles

To consider as content for Case Study / Community Profile

1. Community Name
2. Location in the country (describe + map)
3. Size
4. Residents
 - a. age breakdown
 - b. family size
 - c. educational attainment of adults
 - d. school attendance of children
 - e. Wealth/poverty (not sure if data will be available on this or if need to just draw from HH survey) / income levels
5. Characteristics
 - a. Languages or cultures (if relevant)
 - b. Relevant geographic features
 - c. Any industries or business
 - d. Employment (draw on HH survey data)
 - i. % of farmers in community (% of people who say farming is their main business)
 - ii. average land size for farmers
 - e. Proximity to rural and urban markets
 - f. Availability of infrastructures (roads, rail, water processing, etc., whatever is relevant)
6. Historical/political context
7. Any other relevant information
8. Description of the co-op or co-ops in the community

Uganda	Tanzania	Rwanda
RPO	AMCOS	Rice co-op
SACCO (if present)	SACCOS (if present)	SACCO
ACE (if present)	Co-op Bank (if involved)	Union/Federation
	Dynamic or other union (if involved)	

Information to provide in describing each co-op

Name

Year Founded

of women members

of men members

of youth members (also counted above)

Mission

Lines of business

Other activities (training, education, links to government extension, involvement in development projects, links with apex organizations, etc.)

Volume of business (whatever measures are relevant)

Other business statistics (whatever is relevant)

Links between the co-ops – describe. Are they formalized with MOUs, etc.?

Any information on any overlap of members

Nonmembers: why do they not join? (too expensive? not relevant?)

Appendix 5: Checklists for Focus Group Discussions

Checklist for Rural Producer Organization (RPO) Leadership and Members

[A] Formation and Membership

1. How is a Rural Producer organization (RPO) formed?
2. Who manages and controls an RPO?
3. Which principles and laws govern the management?
4. What does it take (*requirements*) to become a member of an RPO?
5. When does one cease to become a member?
6. What is the minimum and maximum number of people in the RPO?
7. Why is the number of members limited to that minimum and maximum?

[B] Gender Considerations

1. Are there roles/responsibilities/activities of the RPO specifically done by men and others by women? *Mention them.*
2. When choosing the leaders of an RPO, do you consider gender? (*If Yes, how; No, why not*)
3. What is the composition of the executive in terms of men, women, and youths?
4. Of the men, women and youths in the RPO, who are the most active?

[C] Services Offered

1. What services does an RPO offer to members?
2. Do both men and women enjoy the same services offered by RPOs?
3. What services do RPOs offer to nonmembers?
4. What services do RPOs offer to the community?
5. What are the main differences among members of RPO and nonmembers in the same community?

[D] Training

1. What type of training has been done for members of RPO?
2. Who does the training?
3. Who has been receiving training?

[E] Linkages with ACE and SACCOs

1. What relationship does the RPO have with ACEs and SACCO?
2. Is there any form of contract/agreement for the implementation of this relationship?
3. If the contract/agreement exists, are members of the three entities well informed about it?
4. What advantages/benefits/services does the RPO enjoy because of the relationship with an ACE? What services does the ACE offer the RPO?
5. What limits the RPO from enjoying all those advantages/benefits offered by the ACE?
6. What advantages/benefits/services does the RPO enjoy because of the relationship with a SACCO? What services does the SACCO offer the RPO?
7. What limits the RPO from enjoying all those advantages/benefits offered by the SACCO?

[F] Strengths, Weakness, Opportunities and Limitations

1. What are the strengths of RPOs in promoting/improving the livelihoods of members and the community?
2. What weaknesses do RPOs have in promoting/improving the livelihoods of members and the community?
3. What opportunities do exist that favor RPOs in promoting/improving the livelihoods of members and the community?
4. What challenges and limitations are hindering RPOs from performing to their best?

[G] Aspirations

1. How do you see your RPO in some years to come (say in 10 years)?
2. How has the RPOs changed in the recent past (say in the last 5years)? *Give the key changes*
3. What has caused these changes?
4. Do you think most children in this community will join or form RPOs when they grow up?
5. How do you see your community in some years to come (say in 10 years)?
6. Do you think most children in this community will live in this region when they grow up?
7. How has the community changed in the recent past (say in the last 5years)? *Give the key changes- both good and bad*
8. What is the role of the co-op in the community as far as these changes are concerned?

Checklist for ACE Leadership and Members

[A] Formation, Membership and Services

1. How is an ACE formed?
2. Who are the members of an ACE?
3. What does it take (*requirements*) to become a member of an ACE?
4. When does one cease to become a member?
5. Is there a minimum and maximum number of membership of an ACE?
6. Why is the number of membership limited to that minimum and maximum?
7. Who manages and controls an ACE?
8. Which principles and laws govern the management of ACE?
9. What is the process of getting ACE leaders?
10. What services does an ACE offer to members?
11. What services does an ACE offer to nonmembers?

[B] Training

1. What are the main differences between members of ACE and nonmembers in the same community?
2. What type of training has been organized by the ACE for its members?
3. Who does the training?
4. Who has been receiving training?

[C] Linkages with RPOs and SACCOs

1. What relationship does the ACE have with RPOs and SACCO?
2. Is there any form of contract/agreement for the implementation of this relationship?
3. If the contract/agreement exists, are members of the three entities well informed about it?

4. What advantages/benefits does the ACE enjoy because of the relationship with RPOs? What services do the RPOs offer the RPO?
5. What limits the ACE from enjoying all those advantages/benefits offered by the RPOs?
6. What advantages/benefits does the ACE enjoy because of the relationship with a SACCO?
7. What services does the SACCO offer the ACE?
8. What limits the ACE from enjoying all those advantages/benefits offered by the SACCO?

[D] Strengths, Weakness, Opportunities and Limitations

1. What are the strengths of ACEs in promoting/improving the livelihoods of members and the community?
2. What weaknesses do ACEs have in promoting/improving the livelihoods of members and the community?
3. What opportunities do exist that favor ACEs in promoting/improving the livelihoods of members and the community?
4. What challenges and limitations are hindering ACEs from performing to their best?

[E] Aspirations

1. How do you see the ACEs in some years to come (say in 10 years)?
2. How has the ACE changed in the recent past (say in the last 5years)? *Give the key changes (both good and bad)*
3. What has caused these changes?

Checklist for Sacco Leadership and Members

[A] Membership

1. How is a SACCO formed?
2. Who are the members of a SACCO?
3. How many of the members are RPOs?
4. How many of the members are ACEs?
5. When does one cease to become a member of a SACCO?
6. What is the composition of leaders in terms of men, women and youths?

[B] Services Offered

1. What services do SACCOs offer to the members?
2. Are there special benefits for the RPO-members which other members do not get?
3. Are there special benefits for the ACE-members which other members do not get?
4. When offering services to members, do SACCOs have any gender preference? *Explain the preference and why*
5. What services do SACCOs offer to nonmembers?
6. When offering services to nonmembers, do SACCOs have any gender preference? *Explain the preference and why*
7. Are there any benefits the community has gained because of the existence of a SACCO?
8. Are there any problems the community has suffered because of the existence of a SACCO?

[C] Training

1. Does the SACCO organize training for members? If yes, what type of training?
2. Who does the training?
3. Who has been receiving training?

[D] Linkages with RPOs and ACEs

1. What relationship does the SACCO have with RPOs and ACEs?
2. Is there any form of contract/agreement for the implementation of this relationship?
3. If the contract/agreement exists, are members of the three entities well informed about it?
4. What advantages/benefits does the SACCO enjoy because of the relationship with RPOs?
5. What limits the SACCO from enjoying all those advantages/benefits offered by the RPOs?
6. What advantages/benefits does the SACCO enjoy because of the relationship with ACEs?
7. What services do ACEs offer the SACCO?
8. What limits the SACCO from enjoying all those advantages/benefits offered by ACEs?

[E] Strengths, Weakness, Opportunities and Limitations

1. What are the strengths of a SACCO in promoting/improving the livelihoods of members and the community?
2. What weaknesses does a SACCO have in promoting/improving the livelihoods of members and the community?
3. What opportunities do exist that favor a SACCO in promoting/improving the livelihoods of members and the community?

Checklist for Policy Makers, Department of Co-ops, Community Leaders, ACE, and SACCO Leaders

1. How is the integration structure organized? Is it organized in a horizontal network or hierarchical? If hierarchical, how is it structured?
2. What links exist among the three entities; RPOs, ACEs and SACCOs?
3. Is there any form of contract/agreement for the implementation of the integration?
4. If the contract/agreement exists, are members of the three entities well informed about it?
5. Do you think the integrated co-operative model leads to the achievement of particular (specified) rural development goals more efficiently/effectively than the single co-operative model?
6. What are the added advantages of the integrated model compared to the single co-operative model?
7. If there are visible advantages of the integrated co-operative model, why do we still have atomized/single co-operatives in the area?
8. What are the perceptions by the RPOs in the integrated model on achieving their goals as participants in the integrated model as compared to the single co-operative model?
(Compare/discuss levels of member satisfaction)
9. What are the perceptions by the ACEs in the integrated model on achieving their goals as participants in the integrated model as compared to the single co-operative model?
(Compare/discuss levels of member satisfaction)

10. What are the perceptions by the SACCOs in the integrated model on achieving their goals as participants in the integrated model as compared to the single co-operative model?
(*Compare/discuss levels of member satisfaction*)
11. What are the perceptions by the individual producers who are not members of RPO, ACE and SACCO? (*Compare/discuss levels of member satisfaction*)
12. What are the perceptions by the RPOs who are not members of ACE and SACCO?
(*Compare/discuss levels of member satisfaction*)
13. What are the perceptions by the SACCOs who are not part of the integrated co-operative model? (*Compare/discuss levels of member satisfaction*)
14. What are the perceptions by the community on integrated model as compared to the single co-operative model in improving the welfare (*financial, social*) of the community?
(*Compare/discuss levels of satisfaction*)
15. What are the perceptions by the Local government on integrated model as compared to the single co-operative model in improving the welfare (*financial, social*) of the members and the community? (*Compare/discuss levels of satisfaction*)
16. What specific roles does the government play in promoting co-operatives in general and integrated co-operative model specifically?
17. What are the policies in place in support of co-operatives?
18. What major role does Uganda Co-operative Alliance play in this integration?
19. Are there other organizations that have been supporting co-operatives in general and integrated co-operative model specifically?
20. What specific features of this region/part of the country that allowed the integrated model to evolve? (*cultural, social, economic, political, etc.*)
21. What specific features of the country's history that allowed the integrated model to evolve?
(*cultural, social, economic, political, etc.*)
22. What are the current factors (*cultural, social, economic, political, etc.*) that favor/promote the functioning of the integrated model as compared to the single co-operative model?
23. What are the current factors (*cultural, social, economic, political, etc.*) that hinder/limit the functioning of the integrated model as compared to the single co-operative model?
24. What are the weaknesses of the integrated co-operative model?
25. What are the challenges and limitations of an integrated co-operative model?

Appendix 6: Agendas of Validation Workshops

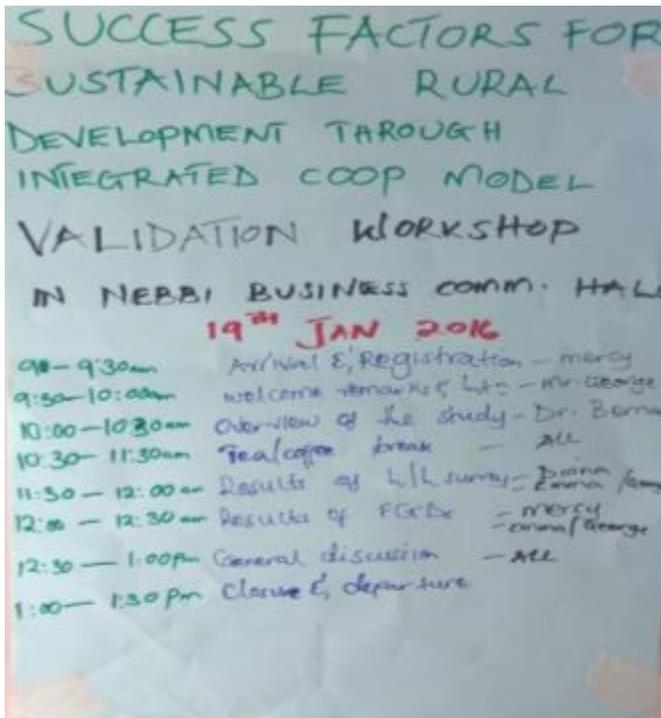


Figure 15: Agenda of the validation workshop in Nebbi district

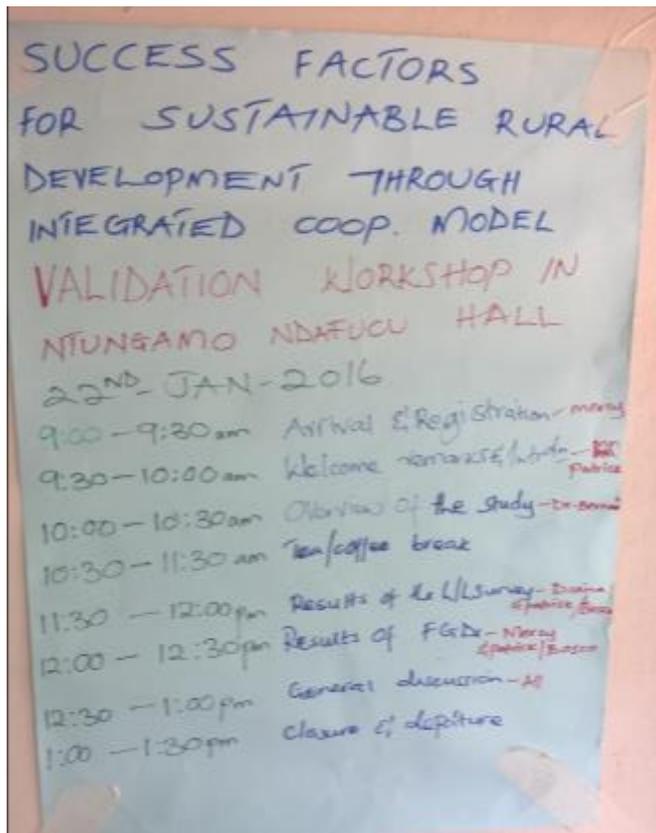


Figure 16: Agenda for the validation workshop in Ntungamo district

Appendix 7: Attendance Lists for Validation Workshops

Attendance list for the validation workshop in Nebbi district

MAKERERE UNIVERSITY				
DEPARTMENT OF AGRIBUSINESS AND NATURAL RESOURCE ECONOMICS				
INTEGRATED COOPERATIVE MODEL; IDRC PROJECT				
VALIDATION WORKSHOP; NEBBI DISTRICT				
REGISTRATION FORM				
DATE: 19/JAN/2016				
S/N	NAME	DESIGNATION/COOP	PHONE NO.	SIGNATURE
1	TORONA UGOKO	VICE CHAIRMAN NEBBI ACE PANYIMUR	075654460 0173071535	[Signature]
2	DYERWIN J.B.	SECRETARY MGR NEBBI ACE	0782372627 0994220261	[Signature]
3	UMELU PATRICK	MEMBER OF THE BOARD ACE	0784652667	[Signature]
4	JUMANWA JUDIS	VICE CHAIRPERSON MUSALAI ACE	0775616493	[Signature]
5	MONO JOREEN	MEMBER WABELAI ACE	0786579533	[Signature]
6	OKETHWENGU KIZITO	General Secretary WABELAI ACE	0779255781	[Signature]
7	MARY ASIMANGO	NEBBI ACE MEM	0783699226	[Signature]
8	ONENCHAN GABRIEL	UCA NEBBI (policy)	0752285789 0772464460	[Signature]
9	COOPER ANGA	PANYIMUR policy maker	0779577554	[Signature]
10	OLOBU KRICHAN	ADCO/NDLS	0755178489	[Signature]
11	LOKOJO FLO	PANYIMUR DEI ACE	0774442162	[Signature]
12	NSUBUBA GERALD	PANYIMUR DEI	0780508492	[Signature]
13	ALIEHI KAKAWAMBA	DEI ACE		[Signature]
14	OKETHA MATHIAS	MEMBER (NYARA) NEBBI ACE VUR	0758541793	[Signature]
15	ODONGO SAMSON	DEI ACE	0789874956	[Signature]

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16	MIGES HOSEA OLEKO	PANIMUR DEI ACE	0779823529	
17	A-ICERANGO BENISIO	CIPERSON WADDEAI PAWUNTO ACE	0773781645	
18	ACANDA DORISH	WADDEAI PAKUNTO ACE	0783189440	
19	EUMICA AMISI	WADDEAI PAWUNTO ACE	0781443927	
20	AYELLA FRANCIS	FOR MANAGER WADDEAI PAWUNTO ACE	0772350249	
21	ONORGIU O VINCENT	WADDEAI PAKUNTO ACE	0782192464	
22	PARAPE TEDDY	PANIMUR DEI ACE	0798522965	
23	FIBI CYELA	PANIMUR DEI ACE	-	
24	BITHUM NEZIA	NYARAVUR RPO	0773387587	
25	PINDUK PETER	NYARAVUR RPO	0782850096 0751476535	
26	OLUKUWA Emma	NEBBY ACE	0794618639	
27	MURIEL O KARENGA	PANIMUR SAECO	0773075563 0756243774	
28	ONGIORA JUSTINE	NYARAVUR	0776363090	
29	KUMAKESH BINA	FUNSI SAECO	0782758236	
30	MARACHO LILITH	ERUSI RPO	0773581931	
31	OPID ISRAEL	ERUSI RPO	0786697614	
32	OKANE OSCAR	PANIMUR-DEI ACE	0773246794	
33	OCARACON JOSEPH	PANIMUR RPO	0771863532 0758410933	
34	BIWINSIEC-LINA	ZEU RPO		
35	OWABACI ZAMBER	WADDEAI ACE		
36	KUMAKESH COLLIN	PANIMUR-DEI ACE	0777457902	
37	LUCY GORDON	UCH N'KARA	0772587276	
38	KEROMSA CHRISTOPHER	WAD PAWUNTO ACE	0783223532	
39				
40	AKWEN E SUMDIA	RPO KANBO	0777213995	
41	MARY JANE	RPO ZEUN	0773217575	
42	HON OPAK JACKLINE	SEC PRODUCT	0774136391	
43	PUPINY BONNIE ROBOT	NEBBY	0782782233	
44	KONIKANE HOSEA	ZEUN	0701671604	
45	OCAN DAVID	WADDEAI	0772717056	
46	AKWA APIC	WADDEAI		
47	RUTH TRACY	ZEUN	0778312448	
48	MILBU EXANS	RPO ZEUN	07797711819	
49	LUCY OVELLO	ZEUN	0785161701	
50	ALIPD MOREEN	WADDEAI	0701070816	

Attendance list of participants for the validation workshop in Ntungamo district

MAKERERE UNIVERSITY
DEPARTMENT OF AGRIBUSINESS AND NATURAL RESOURCE ECONOMICS
INTEGRATED COOPERATIVE MODEL; IDRC PROJECT
VALIDATION WORKSHOP; NTUNGAMO DISTRICT
REGISTRATION FORM
DATE: 22nd 19/JAN/2016

N	NAME	DESIGNATION/COOP	PHONE NO.	SIGNATURE
1	BUKENYA ALEX	FARMERS COOP RUHAAMA ACE	0774510050	<i>[Signature]</i>
2	ABAHISE POLITE	ICATASHAMPANA RUHAAMA ACE	0783759295	<i>[Signature]</i>
3	MAUDA ICABABABO	RUHAAMA ACE	0771860670	MIC.
4	TUMWAJUKYE PASCAL	SHUNGA ACE	0782766165	<i>[Signature]</i>
5	ASINGWIRE SARAH	NYAKYERA ACE	0779860395	<i>[Signature]</i>
6	TUMWAJUKYE JAMES	RUHAAMA ACE	0762677369	<i>[Signature]</i>
7	Kabakena	Ruhaama ACE	0774955790	Kabakena
8	Banyu Abel	NYAKYERA ACE	0754429769	Banyu
9	TUMWAJUKYE MARY	Ruhaama ACE	0774312124	TUMWAJUKYE
10	MUSOSI WILLY	NYAKYERA ACE	0775237669	<i>[Signature]</i>
11	IWESIIME TOBIAS	Nyakyera ACE	0787409255 0787409255	<i>[Signature]</i>
12	BICOMBE KATIITA	NYAKYERA ACE	0774358524	<i>[Signature]</i>
13	TWONGWEIRWE JESCAH	SIMUKA ACE	0701248000	Jescah
14	Busingye Kakisya	Abatoganda	0789710095	Busingye
15	SUNDAY JOSEPH	KIRATI SACCO	0775189133	<i>[Signature]</i>
5	S. MUYIRABI	Nyakyera ACE	0777116143	S. MUYIRABI

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6	Revekigaba Norah	Abateganda	0777426566	Revekigaba
7	Kiconco Mercy	Nyakyeru Rukoni ACE	0719413789	Kiconco
8	Ahimbisibwe Polly	Nyakyeru Rukoni ACE	0714444082	Ahimbisibwe
9	RUGUMAYO FRED	BUTANON/SIMUYA SACCO	078462036	Rugumayo
0	Ahwiine Darlies	Abateganda	0751514527	Ahwiine
1	Kabagambe Benon	Nyakyeru Bahiti banyisa	0774307268	Kabagambe
2	Iwikingizo Jeth	Nyakyeru Rukoni ACE	0777405015	Iwikingizo
3	KIZA PATRICK	UCA	078280980	Kiza
4	Ngaiga Daffoo	Nyakyeru	0784521055	Ngaiga
5	Grant Francis	Nyakyeru ACE	0782511031	Grant
6	PRAYEMBA R	ABATEGANDA ACE	070288071	Prayemba
7	BANJARIZA D.	ABATEGANDA	0757248524	Banjariza
8	TUMWECIYE BEN	Nyakyeru ACE	0772685439	Tumweciye
9	TUBANYAMA BENON	ACOMUKIGANO	0700996111	Tubanyama
0	Mutakanya Ama	DC	07828776	Mutakanya
1	Mugizi Laban	NDAFCU	078357817	Mugizi
2	Muhimbura myres	Nyakyeru (SEC. PBN)	0702752365	Muhimbura
3	CANDY MUGABI Sam	ABATEGANDA	0702566493	Candy
4	Kyempire Jennifer	NDAFCU	0775941389	Kyempire
5	Mukwase Lovence	NDAFCU	0701549013	Mukwase
6	Ukufuteekakalariano	Abateganda	0701492487	Ukufuteekakalariano
7	Twongemwa Jovanice	Ihunga ACE	0782845460	Twongemwa
8	Kabagambe Sam	Nyakyeru	070144640	Kabagambe
9	BWIKOBOZI IBERA	RUHAMBA	0781775041	Bwikobozzi
0	Mwukombezi Isaac	Kajara	0701426180	Mwukombezi
1	Ainembabazi Ketty	Simka	0782718990	Ainembabazi
2	MUJUME CHRIS	RUHAMBA	0771496161	Mujume
3	TWILUKYE JAMES	KAJARA	0772763007	Twilukye
4	Nelson MUJUNI MURUNGU	Ihunga	0701767801	Nelson
5				
6				

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