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The Financial Performance dilemma in Agricultural Cooperatives of Kamwenge and Sheema districts in Uganda. The Credit Facilitation Decisions perspective

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Abstract

This paper argues that forming agricultural cooperatives was to mitigate agricultural financing deficiencies experienced by small holder farmers. These cooperatives however, are experiencing financial performance challenges; decline in accessible credit compared to farmer' credit demand and increased loan non-repayments. The paper examined this dilemma from a credit facilitation decision perspective. A cross-sectional research design along a mixed methods approach for data collection was utilized. The sample size was 113 credit facilitation decision makers from six agricultural cooperatives in Kamwenge and Sheema districts in Uganda, with an 88.5% response rate. The bivariate findings reflected a positive significant relationship between credit facilitation decisions and financial performance. A breakdown of which reflected: A positive significant relationship between credit capital sourcing decisions and financial performance with r of 0.300** Sig (=0.002). A positive significant relationship between credit terms and screening decisions and financial performance with r of 0.504** Sig (=0.000). A positive significant relationship between credit terms and screening decisions and financial performance with r of 0.309** Sig (=0. 0.002). The multi-variate findings reflected r2 of 21.8%. To mitigate the financial performance dilemma, agricultural cooperatives need to adopt optimal techniques of making credit facilitation decisions with emphasis on setting credit terms and screening decisions

Key words: *Agricultural Cooperatives, Credit facilitation decisions, Financial Performance.*

Introduction

Uganda is an East-Africa country with a population of 41 million, and majorly depends on agriculture (Manzano, 2015). This is because agriculture is the largest employer at 75% of the Ugandan labor force, (FAO, 2013; World Bank, 2011). The farming practices in the country are driven majorly by smallholder farmers who are roughly three million, FAO, 2013). It is therefore critical that a supportive economic environment is in place for these farmers to thrive. This is however not the case as most of these farmers can't attract financing to ably support their farm activities that is farm inputs like seedlings, fertilizers, machinery and land. This was and is still the major motivation for smallholder farmers to form and join these agricultural cooperatives. In Uganda, these institutions were introduced in 1913 by colonial masters (Wanyama, 2009), they facilitated crop financing, crop value addition and agricultural produce marketing (Msemakweli, 2012). The implication of which was that all decisions related to these services were dependent on colonial masters. This situation though unfair to the Ugandans who were involved in the daily farm practices, it was effective and efficient as it ensured compulsory membership of farmers in agricultural cooperatives. This membership ensured timely receipt of farm inputs as per the seasons, which led to high yielding farms and ensured timely repayments of extended farm inputs to the colonial masters.

This period with colonial masters in charge of decisions at the agricultural cooperatives lasted until 1962 when the colonial era ended in Uganda and the government took over control of the institutions. The government control time was mauled with inefficiency as a result of insufficient capacity to oversee cooperative activities. This led to collapse of most state-owned cooperatives in the early 1990s (Okello, 2013). However, given the terrain of smallholder farmers in Uganda that couldn't stands on their own financially to support their farm activities (Msemakweli, 2012). The only realistic solution to keep afloat with their agricultural activities, was to reunite and form privately owned cooperatives. This type of agricultural cooperatives continues to be popular, ICA in 2018 reveals that 16, 408 were registered by 2016 down from 554 cooperatives registered in 1995 in Uganda. These institutions' agenda is ensuring financial soundness in order to support the activities of their members (MTIC, 2012). This is however hasn't been the case as most cooperatives have been experiencing increased none loan repayment by their members (Kavun & Vorotintces, 2016). This in last 10 years has led to most cooperatives not able to meet the financial expectations of their members, both in times of quantity of loan supply and timeliness. This explains the outcome of none loan repayment amongst other factors, which represent poor financial performance in these institutions.

Danso (2015);Essendi (2013) previously examined the challenges of financial performance in cooperatives from the credit management and credit risk management perspective respectively and suggested the need to explore the contribution the entire credit facilitation process decisions make to this dilemma. However, very limited studies have attempted to explore this perspective. This formed the motivation for this paper that is to answer the question. How do credit facilitation decisions affect financial performance in agricultural cooperatives in Uganda?

Ogbonna, Okaro, & Igwe, (2019) explain that credit facilitation in agricultural cooperatives has its foundation in the microfinance implying that its more inclined to supporting the marginalized (smallholder farmers). However, credit facilitation diverts from micro finance because the owners and beneficiaries in the cooperatives are the same different from the microfinances. That is the farmers capitalize and are beneficiaries of the institutions' services. Danso, (2015) too supplements that credit facilitation decisions originate from its three sub-processes, these are credit sourcing (Ortmann & King 2006; Ombado, 2010); Credit preparation, application, analysis and evaluation Kavun & Vorotintces, (2016); credit reporting Kinyariro, et al (2016). Each of these sub-processes has major decisions that agricultural cooperatives must ensure are made optimally, if financial performance measured loan repayments and liquidity level is to be realized (Ondieki, et al., 2012).

The credit facilitation decisions as per each sub-process include: Under credit sourcing, decisions on sources of capital which can be internal or external. In the case of internal sourcing, the cooperative concerns itself with; determination of the different rates of membership fees. This is because membership fees inform the shareholding that an individual member has in the cooperative (USDA, 2005) as well as the credit capital available. In case of external sourcing the cooperative concerns itself with decisions about the source of external funding, cost of this funding, and the management of this funding unanswered (Fiorillo, 2006). In Credit terms and screening; the cooperatives concern themselves with setting optimal credit terms of interest rate, credit duration and credit limits (Maina, et al, 2016). These are so vital in order to mitigate risk within the agriculture cooperatives. In credit reporting, cooperatives have to make key decisions on setting monitoring guidelines, tracking of credit repayments, tracking of collateral and preparing of credit status report for the final users of agricultural cooperative information (Danso, 2015). Even though these are known according to literature, in the Ugandan terrain empirically, limited information remain available furthermore, less is known about the effect these credit facilitation decisions have on financial performance. Therefore, continuous operation of these institutions is very harmful not only to the cooperatives, but farmers and the general agricultural productivity in Uganda that majorly depends on the sector for its big portion on GDP.

Theoretical Review

Agricultural cooperatives are a type of farmer organizations with distinct characteristics differentiating it from other farmer organizations. As the unit of analysis for this paper, there is need to clearly understand how cooperatives are defined. ICA, (2016) "a co-operative is an autonomous association of persons united voluntarily to meet their common economic, social, and cultural needs and aspirations through a jointly-owned and democratically controlled enterprise." Despite this definition, the academic theoretical debate in the current century about the cooperative theory is pointed towards emphasizing cooperatives as decision making firms (Ortmann & King 2006). Considering, (Helm Berger & Hoos, 1962) organizational theory, focus on treating cooperatives as decision-making entities that are non-hierarchical. This theoretical overview provides an entry to the current debate about cooperatives in an effort to provide credit facilitation which this paper is concerned about. In the paragraphs that follow there is tabling of the underpinning theories for the

variables. The paper was guided by the Credit Risk theory and the theory of financial intermediation and Mintzberg theoretical perspectives.

Melton 1974 introduced the credit risk theory also called the structural theory which explains default as an event. It is derived from a firm's asset evolution modeled by a diffusion process with constant parameters. An evolution of this category is represented by asset of models where the loss conditional on default is exogenously specific. In these models, the default can happen throughout all the life of a corporate bond and not only in maturity (Long staff & Schwartz.1995). This model was critiqued by MacDonald et al, 2006 for not being able to specifically spell out the areas that lead to potential default. And thus MacDonald et al, in 2006" advanced the 5C"s of credit, that lending institutions must ensure to build a credit policy around; Character (of the applicant), Capacity to borrow, Capital (as back up), Collateral (as security), economic Condition. Even though these are ideal and realistic, in credit facilitation in agricultural cooperatives, the emphasis and the determination of the 5Cs has not been pronounced. This can explain the current terrain in Ugandan agricultural cooperatives that start and collapse shortly due to unstructured credit facilitation challenges.

Schumpeter, (1934) and Goldsmith, (1969), theory established the relationship that exists between credit and financial intermediation. McKinnon, (1973) and Shaw, (1973), later on emphasized this role of financial intermediation in financial performance. In the same vein, Greenwood & Jovanovich, (1990) noted that proper financial development influenced by optimal financial decisions made in the coffers of financial intermediation lead to financial performance of an institution. In a related study, Bencivenga & Smith, (1991) explained that development of financing arms in financial institutions like cooperatives in the context of this study can contribute to financial performance. This is done by channeling savings to high productive activities and reducing liquidity risks due to the nature of the cooperators. Co-operators are fully known by the cooperatives and committed through their equity contribution. Therefore, it is prudent to conclude that financial intermediation leads to financial performance. Credit provided is an influencer of financial performance of these institutions to foster economic growth. The institutional environment is complex with many stakeholders which presents decision challenges for credit facilitation.

From the discussion so far, of the theories; the cooperative theory, organizational theory, credit risk theory and the theory of financial intermediation. It's evident that credit facilitation processes cannot be divorced from decision making. And that it is easy to trample and fall into the decision weakness zone if a cooperative is insufficiently informed. It is important to explain various theories around decision making. Mintzberg et al. (1976), and Simon, (1960) explain that decision making facilitates information search on the problem to be solved. Providing possible solutions alternatives, evaluating these different alternatives and choosing the most viable alternative as well as controlling the alternative decided upon. March, (2010) suggests that decision making is characterized by rationalistic and bounded rationality models. Rational decision making implies that the decision maker operates under certainty. He is conversant with the decision criteria and has the ability to make an optimum choice to implement (Towler, 2010), which is an ideal situation for a decision maker but not the reality of a cooperative manager with decision challenges in credit facilitation.

Methodology

To explain the relationship credit facilitation decisions and financial performance in agricultural cooperatives in Uganda. An exploratory study was conducted in six agricultural cooperatives spread out in two districts of Kamwenge and Sheema in south western Uganda. These included: Kamwenge Tukolereehamwe, Nkooma, Nyabbani, Bwizi, Mikyerere and Ankole Coffee Producers. These district were chosen because they were referred to by Uganda Cooperatives Alliance as the districts being hard hit in terms of poor financial performance. The selection of the different cooperatives case study was done purposively with the intention of representing every county of the district to have an exhaustive coverage. This was under rooted in literature by Zainal in 2007 that case study method is best suited for exploration studies in-depth investigations.

A mixed methods approach was employed with both quantitative and qualitative methods of data collection adopted. Respectively, survey and focused group discussion methods were used, with a questionnaire and focused group discussion guide as the instruments. A total of 113 respondents were involved in the study comprised of cooperative decision makers clustered into cooperative managers and cooperative members evenly distributed across the cooperatives given the cooperatives population. To ensure that high quality data was collected from the study, there was checking for validity and reliability of the instruments. For reliability the split-half technique was employed using Cronbach' alpha and the pre-test was (a) 0.969. Utilising Pallant, (2001) recommendation, this alpha value was good given that it is above 0.7. In terms of validity, that emphasises reduced subjectivity, there was ensuring that data collection questions are linked to the research question and prepositions which was adhered to in drafting the instrument questions. In order to strengthen validity in the focus-group discussion guide, the researcher ensured that the finding was able to be triangulatable, which increased chances of considering all participant feedback (Yardley, ,2008).

The questionnaires were administered to all respondents. To explore deeper, the cooperative members and managers' thoughts and feelings, and obtain more information as per Onwuegbuzie, et al (2009) six focused group discussions were held. To constitute focused groups, 8 people who included cooperative managers and other purposively selected senior members were brought together to form the groups, members had equal chances of participation.

Data was analyzed through first ensuring data recording into an excel template. The excel sheet was then cleaned for any inconsistencies and thereafter data was exported into Statistical Package for Social Science (SPSS) version 21 for analysis data editor. Preliminary analysis was done using frequency tables for the demographic and individual variable parameters as recommended by Sekaran, (2013). This quantitative data presented was supported by triangulation for qualitative data. Further analysis was done to confirm the effect of credit facilitation decisions on financial performance using inferential statistics of correlation and multi-regression analysis (Kothari, 2004).

Results and Discussions

Response Rate

Cole, (2015) asserts that the response rate refers to the number of people who answered the survey divided by the number of people in the sample expressed in form of a percentage. The findings are presented in Table 4.1

Table 4- 1 **Response Rate**

Category of Respondents	Expected Number from Questionnaires	Actual Number Questionnaire	Percent	Expected Number for FGDs	Actual Number For FGDs	Percent
Cooperative Managers	38	31	82%	18	16	88.8%
Cooperative Members	75	71	95%	30	30	100%
Sample Total	113	102		48	46	

Source: Primary Data 2018

Table 4.1 above presents that, the expected sample size of the study was 113 but the actual turned size considered was 102. This represents 90% of the expected participants that participated in the study. The variance of 10% didn't take part in the study though had been expected because of the planting season even though the research made an effort of getting to them. Nulty 2008 they all opines that 70% is adequate response rate. AAPOR (2011) recommends that a response rate of pre-determined survey questionnaires should be above 80%. The pre-determined survey questionnaires in the present research were administered to both managers and members. The response rate in the present research was at 90%, with the managers at 82% and the members at 95%, with the number of expected respondents who did not participate at 10% which is insignificant. This percentage is within the scholarly acceptable percentages taken as complete response rate (; AAPOR, 2011).

Demographic characteristics of respondents

Farmer, (2007) explains that personal characteristics of respondents have a significant role they play in expressing and giving the responses about the problem. The findings are presented as follows:

Gender of Respondents

Gender refers to the statistical distribution of male and female respondents Ali, et al, (2006). The gender of the respondents was ascertained and results are indicated in Table 4.2.

Table 4- 2 Gender of Respondents (Managers)

	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	26	83.9	83.9	83.9
	Female	5	16.1	16.1	100
	Total	31	100	100	

Source: Primary data 2018

The findings revealed that the majority of the manager respondents were male (83.9%). The female respondents stood at 16.1%, implying that both genders were represented. This revelation confirms that leadership role bestowed on the males in rural communities, however the 16.1% of the women managers shows improving status on women participation in cooperative leadership. This confirms to the findings of Woldu, et al., (2013) that due to lack of full ownership of resources women cannot be fully trusted as resource controllers in the agricultural cooperatives. These findings aren't different from the terrain in western parts of Uganda where the study was conducted.

Table 4- 2 Gender of the Respondents (Members)

	Gender	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	51	71.8	71.8	71.8
	Female	20	28.2	28.2	100
	Total	71	100	100	

Source: Primary data 2018

The findings revealed that the majority of the member respondents were male (71.8%). The female respondents stood at 28.2.1%, implying that both genders were represented. But also these findings clearly contradict with the expectation of studies by (FAO, 2013) that reveals that women in East Africa are the majority farmers. The findings reflect that even though women make up the majority of the farmers, they are eliminated when it comes to financial decisions that are sale of the produce from the farms. The study concludes that the structural setup of the respondents' domain explains the findings on the limited participation of females in agricultural cooperatives.

Respondents by Age

French, (2014) explains that age of a set of respondents is vital when the study is supposed to design an intervention as different age brackets work with different designs and presentations. Findings of age are presented below:

Table 4- 3 Age of Managers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	40-49 years	11	35.5	35.5	35.5
	50 years and above	20	64.5	64.5	100.0
	Total	31	100.0	100.0	

Source: Primary data 2018

The findings revealed that for the manager respondents, 35.5% were above the age of 40 but below the age of 50. And 64.5% were above the age of 50. These findings relate to the findings of Adekunle &Henson, 2008 who confirmed that the mean age of cooperative members was 43 because at that point, it is when there is increased financial responsibility in families and most family heads are striving to strengthen their financial power. In Uganda, this situation isn‟t any different and this explains these findings that farmers above 40

years of age will strive for managerial positions in order to secure their agricultural investment but are equally focused at this age to make realistic decisions that will grow their financial power.

Table 4- 5 Ages of the members

Table 4- 4 Ages of the members

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-29 years	4	5.6	5.6	5.6
	30-39 years	4	5.6	5.6	11.3
	40-49 years	26	36.6	36.6	47.9
	50 years and above	37	52.1	52.1	100.0
	Total	71	100.0	100.0	

Source: Primary data 2018

The findings presented in Table 4-5 about member respondents show that 52.2% are aged 50 years and above, 36.6% are aged between 40-49 years, 5.6% are aged 30-39 and 5.6% are aged between 18-29 years. These statistics still confirm with the findings of Adekunle &Henson, 2008 who confirmed that the mean age of cooperative members was 43. In Uganda too, most youth are increasing resorting to townships and the middle aged are concentrating on agriculture. These findings therefore imply that the information can reliable upon as it was provided by mature, responsible decision makers.

Respondents by Education

The education level of the respondents is presented with managers" first and thereafter the member education level. Education level is a term commonly used by statisticians to refer to the highest degree of education an individual has completed. The presentation of the findings is done below:

Table 4- 5 Education status of managers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary level	10	32.3	32.3	32.3
	Diploma	19	61.3	61.3	93.5
	Undergraduate	2	6.5	6.5	100.0
	Total	31	100.0	100.0	

Source: Primary data 2018

From research findings as in table 4-6, up to 32.3% of the manager respondents completed secondary level; up to 61.3% managers completed a diploma level; up to 6.5% have been educated up to University level.

Table 4- 7 Education status of the members

Table 4- 6 Education status of the members

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1.4	1.4	1.4

	Secondary level	70	98.6	98.6	100.0
	Total	71	100.0	100.0	

Source: Primary data 2018

From research findings as in table 4-7, up to 98.6 % of the member respondents had completed secondary level and there was 1.4% invalid status which was insignificant. This can be explained by the increased rural education through Uganda „free tuition education system of UPE and USE. These results imply that there is improved rural education and therefore these literate cooperative members and managers have the awareness about the importance of decision making

Type of Cooperative for the Respondents

Respondents were also surveyed on the type of agricultural cooperative, they are involved in and the findings for both managers and members are presented below in table 4 -8 and table 4-9.

Table 4- 8 Type of Agricultural Cooperative for Managers

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Crop	23	74.2	74.2	74.2
	Producer	7	22.6	22.6	96.8
	Multipurpose cooperative	1	3.2	3.2	100
	Total	31	100	100	

Source: Primary data 2018

The findings from the manager respondents revealed that 74.2% were from crop cooperatives, 22.6% of the respondents were from producers‟ cooperatives and 3.2% of the cooperatives were from multipurpose.

Table 4- 9 Type of Agricultural Cooperative for Members

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Livestock	2	2.8	2.8	2.8
	Crop	42	59.2	59.2	62
	Producer	27	38	38	100
	Total	71	100	100	

Source: Primary data 2018

The findings from the member respondents revealed that 59.2% were from crop cooperatives, and 38% of the

respondents were from producers‟ cooperatives.

Descriptive statistics of the Independent variable.

Descriptive statistics in the form of means and standard deviation and triangulation of these statistics are presented to illustrate the feedback from respondents. These statistics are in regard to the credit facilitation processes, which are credit capital sourcing; credit preparation application, evaluation and approval; credit reporting. The feedback from the respondents was measured on five-point Likert scale. The measurement of values for the Likert scale is summarized in the figure below using Uebersax, in 2006 recommendation.

Values	Level of agreement	Interpretation
4.21 - 5.00	Strongly Agree	Very satisfactory
3.41 - 4.20	Agree	Satisfactory
2.61-3.40	Not Sure	Below Average
1.81 – 2.61	Disagree	Fairly satisfactory
1.00 – 1.8	Strongly Disagree	Not satisfactory

To analyze the standard deviations; The standard deviation cutoff point was 1; if below, it implies no much variation in the responses, and if above 1 it means much variation. In order to provide an overview of the different credit facilitation processes‟ decision, descriptive statistics were run for all the processes and the findings are presented in below.

Descriptive statistics on credit capital sourcing

It is universally believed that credit capital sourcing is the first most important credit facilitation decision that any credit supplier must carefully think through before the process of credit supply starts (Danso, 2015). This mechanism is highly required because of the cost Withstanding to all these factors there are different sources of credit capital available to agricultural cooperatives due to their unique mandate described above (ATTF, 2012). In order to understand the various decisions made about sourcing for capital; the survey raised questions on the different sources of credit capital for the agricultural cooperatives and the findings are presented descriptively below in Table 4-10.

Table 4- 7 Descriptive statistics of credit capital sourcing decisions

Credit capital sources in Agricultural Cooperatives	N	Mean	Std. Deviation
Through membership subscriptions and equity sales	102	4.10	1.221
Through retained earnings(profit from previous sales)	102	3.94	1.153
Through external borrowing(commercial banks, other cooperatives and individuals)	102	3.68	1.077
Through donations(politicians)	102	2.58	1.361

Source: Primary data 2018

The findings from Table 4-10 are as follows: For the sub-construct of membership subscriptions and equity sales, the survey shows a mean of 4.10 and a standard deviation of 1.221.For the sub-construct of retained

earnings (profit from previous sales) the findings shows a mean of 3.94 and a standard deviation of 1.153.For the sub-construct of external borrowing the findings show a mean of 3.68 and a standard deviation of 1.077.For the sub-construct of donations the findings show a mean of 2.58 and a standard deviation of 1.361.The findings of subscriptions and equity sales, retained earnings and external borrowings are above the mean of 3.41 which sets the boundary for agree. This implies that these constructs were highly relevant means through which agricultural cooperatives decide to source for credit capital in agricultural cooperatives because members agreed and strongly agreed to them. To triangulate the quantitative data, focused group discussions comprising of eight people were done and the findings are as follows. When asked about how their cooperative sources for credit capital, seven of the respondents in Bwizi agricultural cooperative agreed that: Credit capita sourcing is through: *i) Through our monthly and annual subscriptions ii) Through our unspent profits from the previous year iii) Through borrowing especially at peak times* (Bwizi, 2017).This input was not different from the feedback from the other five cooperatives were similar focused groups were conducted.

From these findings, it evident to note that the decisions around raising credit capital are important to cooperatives. But what is not clear is the blend on what is the best suitable source of credit capital that can be utilized by agricultural cooperatives to achieve the highest financial performance. This is a great challenge and if not cleared cooperatives‟ performance will remain comprised.

Descriptive statistics on decisions on determining the cost of membership subscriptions

Sourcing credit capital from members has been justified as the best source of capital because of its enormous benefits (Ombado, 2010). The survey sought to understand how decisions in regard to membership subscription.

Table 4- 11Descriptive statistics on determining the cost of membership decisions

Bases for decisions on the cost of equity	N	Mean	Std. Deviation
The annual general meeting agreements	102	4.06	1.237
Pre-set guidelines(annual increase percentages)	102	3.94	.727
The cooperative manager‟ discretion	102	2.03	1.224
Government regulation on the cost equity setting	102	2.45	.888
Cooperative board‟ decision	102	4.26	.575
Borrowing history	102	4.16	1.003
Benchmarking from other cooperatives	102	3.32	1.166

Source: Primary data 2018

The findings of the sub-constructs on how the decisions on the cost of membership subscriptions and equity sale are made as in Table 4-1 revealed that: Based on the annual general meeting agreements, had a mean of 4.06 and a standard deviation of 1.237. Based on pre-set guidelines had a mean of 3.94 and a standard deviation of 0.727. Based on cooperative manager‟ discretion had a mean of 2.03 and a standard deviation of 1.224. Based on government regulation, had a mean of 2.45 and a standard deviation of 0.888. Based on cooperative board decision, had a mean of 4.26 and a standard deviation of 0.575. Based on borrowing

history had a mean of 4.16 and a standard deviation of 1.003 and Based on benchmarking from other cooperatives had a mean of 3.32 and a standard deviation of 1.666.

> In order to triangulate this quantitative data, focused group discussions were done. The findings reveal what the respondents inputted about decisions on cost of membership subscriptions and equity sale. When asked about how the cost of membership subscriptions was agreed upon; the majority of the respondents expressed that: i) *There are always annual general meetings that seat to discuss what the cost of the subscription should be for the following year* (Nkooma, 2018). *ii) That the cooperatives also reviews outstanding debts for the cooperative and what the members have borrowed from the cooperatives and this helps them to decide how much should be charged in order to raise the new credit capital required* (Bwizi, 2018). *iii) That cooperatives review what their neighboring cooperatives are doing* (Mikyerere, 2018).

Both quantitative and qualitative findings reveal that in order to decide on the cost of membership subscriptions and equity sales. The following key decisions must be made; decisions to review of preset cooperative guidelines, decisions to review borrowing history, decisions to seek consent from the cooperative‟ board and finally decisions to seek approval from the annual general meetings. These decisions are vital decisions and thus ought to be enhanced. Even though these findings confirm the different decisions for setting the cost of subscriptions in cooperatives, it was also noted that the considerations are non-structured which is explained by the mixed reactions from the respondents other emphasizing cooperative meeting decisions, other emphasizing stock of debt due while other emphasizing benchmarking from neighboring cooperatives (Mikyerere, 2018; Bwizi, 2018).

As per Ombado‟ in 2010 recommendation these are vital decisions but suffer ill-structured processes in determining the cost of subscription needs to be improved in order to achieve efficiency in the cooperative services.

Descriptive statistics on decisions about selecting a loan provider (external borrowing)

Fiorillo, (2006), noted that external financing if applied effectively can help a strong cooperative become stronger but would not help a weak one become strong.

Table 4- 12 Descriptive Statistics on external borrowing decisions

Considerations for loan provider	N	Mean	Std. Deviation
Type of bank	102	4.03	1.08
Banker for cooperative	102	3.1	1.326
Banker for most farmers	102	4.42	0.886
Interest rate	102	4.61	0.715
Repayment structure	102	4.45	0.768
Bureaucratic requirements of the loan provider	102	4.39	0.844
Based on the cooperative board‟ discretion	102	4.03	0.706
Based on the cooperative manager‟ discretion	102	4.00	0.683

Source: Primary data 2018

The findings in Table 4-12 reveal that the type of bank had a mean value of 4.03 with a standard deviation of 1.08; the banker to the cooperative had a mean value of 3.1 and a stand deviation of 1.326. The banker to most of the farmers had a mean value of 4.42 and a standard deviation of 0.886. Interest Rate for the loan had mean value of 4.61 and a standard deviation of 0.715. The repayment structure had a mean value of 4.45 and a standard deviation of 0.768. The Bureaucratic requirements of the loan provider had a mean value of 4.39 and a standard deviation of 0.844. The cooperative board‟s discretion had a mean value of 4.03 and a standard deviation of 0.706. The cooperative manager‟s discretion had a mean value of 4.00 and standard deviation of 0.683.

Some variables reflected a standard deviation above 1 which preempted quantitative data to be triangulated with a focused group discussion. The responses from the focused groups‟ discussion revealed the following when members were asked whether they borrow external loans to raise capital for offering credit to members: Bangirana, (2018) said

> *"We cannot raise all the funds needed to offer credit to the members through our contributions as members, we have no option other than getting funding externally through borrowing."*

6/8 members agreed to Bangirana' submission. Nkooma, (2018) expressed a number of considerations, they review before deciding to take a loan; *the cooperative leadership decision on whether a loan is needed. Then there are decisions on bank selection, decisions on review of bank requirements, there are bargaining decisions on repayment structures and interest rate to be payment.* These findings confirm that in order for a cooperative to decide on acquiring an external loan, the key decisions are: the cooperative managers need confirmation, the cooperative board approval; decision on the selection of the type of bank, i.e. the one with strongest relationship with the members; decision on bank requirement eligibility and their terms and conditions. There is however lack of a chronological order to be followed while making external borrowing decisions. This partly explains the irrational mode of decision making and the consequences of this have lasting effects on the financial performance of the cooperatives.

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Descriptive statistics on Credit terms and screening

In order to appreciate each of the above activities, respective decisions were drawn and the findings to each are discussed below:

Descriptive statistics for credit duration decisions made by Cooperative Managers.

Tan, (1987) opines that agricultural cooperatives highly depend on the type of farmers to determine the credit duration. Information support is necessary and thus a number of parameters were reviewed and the findings are presented in Table 4-13.

Table 4- 13 Credit duration decisions

	N	Mean	Std. Deviation
Review the expected payback	102	4.19	1.014
Review the interest rate	102	4.42	0.923
Review repayment structure	102	4.65	0.877
Review the expected cash inflows	102	4.29	0.938
Review borrower' credit history	102	4.48	1.288
Review the manager' discretion	102	2.68	1.661
Review the AGM recommendations	102	3.84	1.344
Review the cooperative financial year	102	4.19	1.167

Source: Primary data 2018

Table 4-13 reveal that the cooperative managers mainly consider the repayment structure while deciding on the credit duration. This is because it had the highest mean score of 4.65 and the least standard deviation of 0.877.

Borrower' history ranked second with a mean value of 4.48 and a standard deviation of 1.288; interest rate had a mean value of 4.42 and a standard deviation of 0.923. The mean scores for the sub-constructs of repayment structure, borrower‟ history and interest rate signify that most of the cooperative managers strongly agreed to this sub-constructs. This is because the mean values are above 4.2 which is the boundary for strongly agree. The expected pay back had mean score of 4.19 and standard deviation of 1.014. The cooperative financial year has mean score of 4.19 and a standard deviation of 1.167. The Annual general meeting was next with a mean value of 3.84 and a standard deviation of 1.344. These sub-construct belong to the boundary of Agree as per Andy field 2009.The Manager‟ discretion had a mean value of 2.68 and standard deviation 1. 661.These results signify that the cooperative managers expressed uncertainty to this sub-construct as the mean values belong to the not sure boundary. The above quantitative data was triangulated with focused group discussions which findings revealed the following: When the group members were asked about the different bases used for deciding on the credit duration. Respondents expressed that: *They must observe the rule of depositing a part of the loan back to the cooperative by the next meeting in order to avail some funds to be lent out to some other members* (Nyabbani, 2018).

These findings indicate that in order to make decisions on the credit duration, the agricultural cooperative have to review the cooperative financial year; then review the borrower‟ history; then review the interest rate; decide on the repayment structure; decide on the expected pay back and finally get approval from the annual general meeting. They too must ensure that there is some kind of repayment at the next meeting. It was

further confirmed that even though these decisions are vital, there was not specific order observed while these decisions taken. This was observed in Nyabbani, 2018 input on their depositing part payment at the next meeting which lacked scientific logic.

Descriptive statistics for credit limit decisions made by Cooperative Managers

Kissinger (2002) notes that credit limits are key in the determination of credit requirements of farmers as set by the cooperative. Table 4-14 presents key items managers consider while deciding the credit limit:

Table 4- 14 Credit Limit Decisions

	N	Mean	Std. Deviation
Equity capital of the borrower(membership value)	102	4.61	.803
Share capital of the Agricultural Cooperative	102	4.45	.995
Value of collateral security	102	4.55	.810
Expected returns from the harvest	102	4.68	.653
Borrower' history	102	4.35	.755
Referee' for credit	102	4.26	.999
Cooperative manager' discretion	102	3.90	1.491
Board' discretion	102	4.26	.999
Valid N (list wise)	102		

Source: Primary data 2018

Table 4-14 reveals that Expected returns from the farmers had a mean score of 4.68 and a standard deviation of 0.653. The equity capital of the borrower had a mean score of 4.61 and a standard deviation of 0.803. Value of collateral security had a mean value of 4.55 and a standard deviation of 0.810. Share capital of the agricultural cooperative had a mean score of 4.45 and a standard deviation of 0.995. Borrower‟ history had a mean value of 4.35 and a standard deviation of 0.755. Referee‟ for credit had a mean score of 4.26 and a standard deviation of 0.999. Board discretion had a mean score of 4.26 and a standard deviation of 0.999. Cooperative manager discretion had a mean value of 3.90 and a standard deviation of 1. 491.This quantitative data was triangulated with focused group discussions which were done. The findings from the focused groups revealed the following about decisions on setting credit limits. When the group members were asked about the different bases used for determining the credit limits. *Respondents expressed that cooperative annual general meeting always meets and agrees on common terms; how much each member can borrow; but also the common scenario was that, limits are set on a periodic basis depending on the money that the cooperative has* (Nkooma, 2018).

These findings indicate that in order to determine credit limits, the decisions below are key: Review of equity and share capital of the cooperative; review the expected returns from the credit to be advanced; review of the value of collateral security; review borrower‟ history, references for the credit and seeking board and annual approval. These decisions confirm the decisions that matter but don't confirm the structure and sequence to be followed setting the credit limit which is an urgent challenge that needs a solution.

Descriptive statistics on lending rate decisions made by Cooperative Managers

Haberl in 1937 claims that "The theory of interest has for a long time been a weak spot in the science of economics, to explain interest rate determination. Several considerations were raised using literature and the findings are shown in Table 4-15

Table 4- 15 Lending Rate decisions

	N	Mean	Std. Deviation
Ministry of Trade guidelines	102	3.35	1.582
Prevailing inflation rate in the country	102	4.1	1.044
Cooperative reserve requirement	102	3.52	0.926
Volume of borrowing applications	102	4.39	0.667
Cooperative finances available for lending	102	4.48	0.508
Benchmarked lending rates from other cooperatives	102	4.29	0.824
Cost of external debt for the cooperative	102	4.13	0.619
Cost of loan administration	102	4.39	0.667
Negotiation ability by the borrower	102	4.19	0.98
Cooperative manager discretion	102	3.19	1.302
Board discretion	102	4.19	0.703

Source: Primary data 2018

Table 4-15 reveals that the different sub-constructs had different scores and these are as follows: Cooperative finances available for lending had a mean score of 4.48 and a standard deviation of 0.508. Volume of borrowing applications had a mean score of 4.39 and a standard deviation of 0.667. Cost of loan administration had a mean score of 4.39 and a standard deviation of 0.667. Benchmarking from other agricultural cooperatives had a mean score 4.29 and a standard deviation of 0.824. Negotiation ability by the borrower had a mean score of 4.19 and a standard deviation of 0.983. Board discretion had a mean score of 4.19 and a standard deviation of 0.703. Cost of external debt for the cooperative had a mean score of 4.13 and a standard deviation of .619. Prevailing inflation rate in the country had a mean score of 4.10 and a standard deviation of 1.044. Cooperative reserve requirement had a mean score of 3.52 and a standard deviation of 0.926. Ministry of Trade guidelines had a mean score of 3.35 and a standard deviation of 1.582. Cooperative manager discretion had a mean score of 3.19 and a standard deviation of 1.302. For the findings meant that the constructs of; cooperative finances available for lending, volume of borrowing, cost of loan administration and benchmarking from other agricultural cooperatives had a mean score above 4.20 which implied that the respondents strongly agreed to them. The constructs of negotiation ability by the borrower, board discretion, cost of external debt for the cooperative, prevailing inflation rate and cooperative reserve requirement had a mean score above

3.41 which implied agree. The constructs of Ministry of Trade guidelines and cooperative manager discretion were in the category of not sure.

With this quantitative data, triangulation was done with focused group discussions. When the group members were asked about the different bases relied upon while making lending rate decisions: The majority of the respondents confirmed that there are so many consideration factors amongst which are: i*) The cooperative meetings ii) The cooperatives funds available for credit iii) The members' financial status iv) The charges by other similar cooperatives v) The cost of external borrowing* (Nyabbani, 2017). *A* cooperative manager to decide about the lending rate the decisions to be considered are: reviewing the cooperative finances; reviewing the cost of external debt; reviewing of other cooperatives lending rates and inflation rate; reviewing of members' financial status and seeking approval from the board.

Descriptive statistics on acceptance and rejection decisions for credit applications

Acceptance and rejection decisions are equally important. Findings from the study respondents about adherence decisions on accepting or rejecting credit applications submitted are presented in Table 4-16.

Table 4- 16 Acceptance/ Rejection of credit application decisions

Sub-constructs for accepting and rejecting credit applications	N	Mean	Std. Deviation
The credit purpose	102	4.29	0.824
The type of credit	102	4.29	0.824
The credit duration	102	4.45	0.85
The credit limit	102	3.97	1.016
The credit history	102	4.45	0.768
Collateral security	102	4.52	0.677
Authenticity of the information provided	102	4.52	0.811
The guidelines of the referees	102	3.77	0.845
Membership requirements	102	3.81	0.543
Acceptance to the set terms and conditions	102	4.23	0.669

Source: Primary data 2018

Table 4-16 reveal that the different sub-constructs had different scores and these are as follows: Adherence to collateral security had a mean score of 4.52 and a standard deviation of 0.677. Authenticity of the information had a mean score of 4.52 and a standard deviation of 0.811. Credit history had a mean score of 4.45 and a standard deviation of 0.768. Adherence to the credit duration had a mean score of 4.45 and a standard deviation of 0.850 Adherence to the credit purpose had a mean score of 4.29 and a standard deviation of 0.824. Adherence to the type of credit had a mean score of 4.29 and a standard deviation of 0.824. Acceptance to the set terms and condition had a mean of 4.23 and a standard deviation of 0.669. Adherence to the credit limit had a mean of 3.97and a standard deviation of 1.016. Adherence to membership requirements had a mean of 3.81 and a standard deviation of 0.543. Adherence to the guidance of the referees had a mean of 3.77 and a standard deviation of 0.845. These results imply that the sub-constructs of collateral security, Authenticity of the information, Credit history, credit duration, credit purpose, type of credit, set terms and condition, were strongly agreed to because all their mean values were above

4.21. The results for credit limit, membership requirements, and guidance of the referees had a mean value between 3.41 and 4.20 which mean reflects agreed.

To triangulate the above data, focused group discussions were done. The findings from the focused groups revealed the following about decisions on the application acceptance and rejection decisions. When the group members were. Nyabbani, (2017) opines that seven of the eight respondents in the focused group discussion when asked about the different bases used for accepting or rejecting a received application, expressed that: *i) Ensuring that the membership requirements were fully met. ii) Members had to provide genuine information which was a cause of rejection if it was verified differently. iii) Members at one of the cooperative expressed that; if you apply for credit above the set maximum then your application is automatically rejected.* Both qualitative and quantitative findings therefore imply that, the sub-constructs collateral security, authenticity of the information, credit history, credit duration, and credit purpose, type of credit, set terms and condition are very vital in deciding whether to accept or reject an application received. Furthermore, the sub-constructs of credit limit, membership requirements, and guidance of the referees are equally important even though they were ranked agree.

These decisions confirm the decisions that matter but don't confirm the structure and sequence to be followed setting the credit limit which is an urgent challenge that needs a solution.

Descriptive statistics on applicant' financial position assessments

Byaruhanga, (2013) suggests that evaluation of agricultural loans "five C"s" is inefficient. A set of considerations

were raised for assessing applicant" financial position and the findings are presented in Table 4-17.

Table 4- 17 Applicant' Financial Position Assessment

Applicant" financial position assessment sub-constructs	N	Mean	Std. Deviation
Type of agricultural project	102	4.00	.683
Expected income from the agricultural project	102	4.19	.703
Periods of expected income	102	4.29	.643
Review of the recent three bank statement	102	4.35	.755
Credit repayment history	102	4.39	.558
Collateral security valuation	102	4.32	.541
Reference checks	102	4.32	.541
Valid N (list wise)	102		

Source: Primary data 2018

Table 4-17 reveals that the different sub-constructs had different scores and these are as follows: Credit repayment history had a mean value of 4.39 and a standard deviation of 0.558. Review of the recent bank statement had a mean value of 4.35 and a standard deviation of 0.755. Collateral security valuation had a

mean value of 4.32 and a standard deviation 0.541. Reference checks had a mean value of 4.32 and a standard deviation 0.541. Periods of expected income had a mean value of 4.29 and a standard deviation 0.643. Expected income from the agricultural project had a mean value of 4.19 and a standard deviation 0. 703. Type of agricultural project had a mean value of 4.00 and a standard deviation 0. 683. These results imply that the sub-constructs of credit repayment history, review of the recent bank statement, collateral security valuation, reference checks, periods of expected income were strongly agreed to because all their mean values were above 4.21. The results for Expected income from the agricultural project and Type of agricultural project had a mean value between 3.41 and 4.20 which mean implied that the applicants agreed to them.

The above quantitative data was triangulated with focused group discussions which were done. The findings from the focused groups revealed the following about decisions on the applicants‟ financial assessments. When the group members were asked about the different bases used for assessing financial positions. Bangirana, (2017) expressed that "*We cannot give out loans to persons who are not going to invest in the season bulk; All the loans provided are to be used in the season projects; Credit defaulters of previous credit issued can be considered at the next credit issues; Members who are non- committal to the every 10th day meeting cannot be advanced credit; Members who have not committed their annual membership holding of shs100, 000 even though they are shareholders can be advanced credit."* These findings imply that when cooperative managers are handling decisions that relate to applicant‟ financial position; the sub-constructs of credit repayment history, review of the recent bank statement, collateral security valuation, reference checks, periods of expected income must be given attention.

Descriptive statistics on Credit Reporting

The credit facilitation processes are incomplete without credit reporting. In order to appreciate credit reporting activities, respective decisions were drawn and the findings to each are discussed below:

Descriptive statistics for establishing monitoring guidelines

Experian, (2017) opines that once lenders say "yes," they need to review the borrowers‟ credit report regularly as they continue to manage their financial risk. The findings from the respondents are presented in Table 4-18.

Table 4- 18 Considerations for setting monitoring guidelines

Considerations for setting monitoring guidelines	N	Mean	Std. Deviation
Credit purpose	102	4.55	.850
Credit repayment Schedule(Periods for payment	102	4.10	.870
Borrower Credit	102	4.03	.948
Credit limit	102	4.29	.071
Borrower financial position	102	4.45	.850
Acceptance to the set terms and condition	102	4.42	.923
Valid N (list wise)	102		

Source: Primary data 2018

Table 4-18 reveals that the cooperative managers mainly consider the credit purpose while establishing the monitoring guidelines and this had a mean of 4.55 and a standard deviation of 0.85. Borrower‟ financial position was next with a mean of 4.45 and a standard deviation of 0.850. Acceptance to the set terms and condition had a mean value of 4.42 and a standard deviation of 0.923. Credit limit had a mean value of 4.29 and a standard deviation of 1.071. Credit repayment had a mean value of 4.10 and a standard deviation of 0.870. Credit due had a mean value of 4.03 and a standard deviation of 0.948. From these findings it is clear that credit purpose, borrower‟ financial position, acceptance to the set terms and condition and credit limits had been strongly agreed to as key elements in making credit limits decisions. This is because their mean value was above 4.20 which is the scale assigned for strongly agree. Credit repayment and Credit due were agreed too which also makes them strong contributor to setting of monitoring guidelines. All these considerations are vital in setting monitoring guidelines and so need to be enhanced.

Descriptive statistics for checking compliance with repayment **terms**

Checking compliance with repayment terms is a vital stage in credit reporting. The respondents were requested to rank these parameters and the findings are presented in Table 4-19.

Table 4- 19 Checking Compliance for repayment terms activities

Checking compliance for repayment terms activities	N	Mean	Std. Deviation
payment schedules	102	4.06	.814
overdue payments	102	4.39	.919
collateral security	102	4.39	.919
progress of agricultural venture to forecast cash flow	102	4.26	.962
full utilization of credit advanced	102	4.13	.846

Source: Primary data 2018

Table 4-19 reveals that the cooperative managers mainly monitor repayment terms through checking overdue payments and checking of status of collateral security as these had a similar mean value of 4.39 and a standard deviation of 0.919. These were followed by checking on progress of the agricultural venture to forecast cash flow and this had a mean of 4.26 and a standard deviation of 0.962. Utilization of credit advanced through provision of accountability had a mean value of 4.13 and a standard deviation of 0.846. Checking adherence to payment schedules had a mean value of 4.06 and a standard deviation of 0.814. These findings reveal that the parameters of checking overdue payments, checking of status of collateral security and checking on progress of the agricultural venture to forecast cash flow were strongly agreed to. This is because their mean was above 4.20 which is the scale assigned for strongly agree. The parameters of utilization of credit advanced through provision of accountability and checking adherence to payment schedules were agreed too. This is because their mean values were between 3.41 and 4.20. This equally makes them strong contributors to checking compliance with repayment terms.

Descriptive statistics for ascertaining status of the collateral security

Ascertaining status of the collateral security is another important activity in credit reporting. Cooperatives managers are concerned with ascertaining the value of the collateral security in order to simplify disposal decisions. The respondents were requested to rank these parameters and the findings are presented in Table 4-20

Table 4- 20 Consideration for ascertaining status of collateral security

	N	Mean	Std. Deviation
Value of collateral security	102	4.52	.626
Existence of collateral security	102	4.52	.626

Source: Primary data 2018

Table 4-20 reveals that the cooperative managers mainly depend on value of collateral security and existence of collateral security to make decisions in regard to ascertaining status of collateral security. This is because they had a similar mean value of 4.52 and similar standard deviation of 0.626. These findings reveal that respondents strongly agreed to them as their mean values were above 4.22. This implies that both parameters are vital for ascertaining the status of the collateral security. These are of a strong importance in credit reporting process and therefore ought to be enhanced.

Descriptive statistics for notification procedures for non- performing credit

In order to understand how agricultural cooperatives, share information, Key parameters from literature for notifying borrowers about non-performing credit were set, the findings are presented in Table 4-21

Table 4- 21 Notification procedures for non-performing credit

non-performing credit	N	Mean	Std. Deviation
Debtors	102	4.13	1.056
Referees	102	4.32	1.137
Warning debtors	102	4.32	1.107
Attaching collateral security in bid to recovery bad credit	102	4.35	1.050
Writing off Credit bad debtors	102	4.26	.999

Source: Primary data 2018

Table 4-21 reveals that the cooperative managers mainly notify debtors through attaching collateral security in bid to recovery bad credit. This had a mean value of 4.35 and a standard deviation of 1.050. Notification of referee about their reference‟ outstanding debt was next with a mean value of 4.32 and a standard deviation of 1.137. Warning of debtors had a mean value of 4.32 and a standard deviation of 1.107. Writing

off bad credit had a mean value of 4.26 and a standard deviation of 0.999. Notification of debtors had a mean value of 4.13 and a standard deviation of 1.056. These findings show that all the parameters used to measure notification procedure were very vital because they all had mean values above 3.41 which is he measure for agree. The above quantitative data was triangulated with focused group discussions because it was noted that standard deviations for some of the parameters was above 1. The group members were asked about the different notification procedures used by the cooperatives, to communicate to borrowers who had not honored their credit installments. The eight of them expressed that: *Engaging the creditor was the greatest starting point, but if non-successful, then there was informing the referee for the creditor in order to motivate the creditor to pay up. If this was still non successful, the collateral security would be attached* (Mikyerere, 2018). It was observed that these procedures for notifying the creditors were confirming the quantitative data collected and thus confirming the importance of notification procedures.

Decision challenges for credit facilitation in Agricultural Cooperatives of Uganda

From the descriptive statistics presented key decisions need to be formulated into proper structures that would guide decision making. Not just with credit reporting but throughout all the other processes in credit facilitation. These are the summary of the challenges observed as follows:

Ombado, (2010) recommends the importance of credit capital sources and further confirms how vital decisions around credit capital are so important. However, from the research findings, it was noted that cooperatives operate ill-structured processes in determining the cost of subscription, and yet this is the main source of credit capital. In selecting the provider for external credit, there is lack of a chronological order to be followed while making external borrowing decisions. This partly explains the irrational mode of decision making and the consequences of this have lasting effects on the financial performance of the cooperatives.

The factor analysis on credit capital sourcing further emphasizes the gap that users lack an appropriate solution to decide the most suitable source of credit capital due to insufficient information availed on the source. This was noted from the factor loading that showed credit capital sourcing more inclined to payments from subscriptions and retained earnings and less from external borrowing. This contradicts the recommendations of Onyango, 2016 who emphasizes the importance of external financing for an agricultural cooperative. The decision challenge on lack of a logical and systematic flow of activities as per the specified strong factors loaded in the anova for credit capital sourcing.

The study also confirmed that even though these duration decisions are vital, there was not specific order observed while these decisions taken. This was observed in Nyabbani, 2018 input on their depositing part payment at the next meeting which lacked scientific logic. This decision gap needs enhancement.

The findings on credit limits and lending rate decisions helped confirm the decisions that matter but don‟t confirm the structure and sequence to be followed setting the credit limit which is an urgent challenge that needs a solution. Even though the various factors that need to be considered while making credit preparation, application, evaluation and approval decisions are critical as confirmed by the factor analysis, there is need for a preset receipt to guide these processes. (Danso, 2015) notes a need for standard requirements to enable capturing of borrowers to enable agricultural cooperatives officers decide on the most suitable persons to qualify for credit. This is yet another gap that needs enhancement.

Credit reporting factor analysis and as supported by (Experian, 2017), it was noted that a notification guideline and a credit notification guide is very vital in making credit facilitation decisions. However, as it is, there is lack of the guideline which is a key challenge to credit facilitation in agricultural cooperatives.

Descriptive Statistics for Financial Performance of Agricultural Cooperatives (Dependent Variable)

The descriptive statistics for the dependent variable are shown in Table 4-25 indicating the measurement items as shown in the questionnaire. These are presented in inform of means, standard deviation and the scale as per the Likert scale measurement.

Table 4-22 The descriptive statistics of financial performance

	MEAN	STD.DEV	SD (%)	D (%)	NS (%)	A (%)	SA (%)
Return on Assets	3.22	1.119	11	10	37	32	11
Volume of Loan Portfolio	3.67	0.861	2	8	23	55	12
Cooperative liquidity ratio	4.1	0.686		2	13	58	27
Number of active loan repayments	3.88	1.085	6	6	12	48	29

From the Table 4-22, 43% (32% Agree, 11% Strongly Agree) of the respondents were in affirmative with return on Assets, with a mean of and standard deviation of 3.22 and 1.1119 respectively as a clear measure of financial performance. 67% (55% Agree, 12% Strongly Agree) of the respondents were in the affirmative with volume of loan portfolio with a mean of 3.67 and standard deviation of 0.861 as a measure of financial performance in their cooperatives. 85% (58% Agree, 27% Strongly Agree) of the respondents were in the affirmative with cooperative liquidity ratio with a mean of 4.1 and standard deviation of 0.686 as a measure of financial performance. While 76% (48% Agree, 29% Strongly Agree) of the respondents were in the affirmative with number of active loan repayments with a mean of 3.88 and standard deviation of 1.085.

These findings imply that financial performance in agricultural cooperatives is more concerned with measurements based on, volume of loan portfolio, cooperative liquidity ratio and number of active loan repayments made by the borrowers. These findings can be parameters can be best explained could be explainable by Ortman and king 2007 that agree that the cooperative principle of existence is about its ability to respond to the member needs.

Correlation statistics summary

Even with credit facilitation decisions confirmed, and decision challenges indicated as per the descriptive findings, Breheny, (2016) recommends a summary of statistics describing the strength of association between the conceptualized independent and dependent variables. Concerning the study, credit facilitation decisions were used to explain the variation in financial performance in agricultural cooperatives in Uganda. It was therefore vital to confirm the effect of credit facilitation challenges and financial performance in agricultural cooperatives. This was done through correlation analysis

Table 4-23 Summarized Correlation analysis showing only the variables

Variables	Mean	Std. Deviation		Independent variables			Dependent variable
				CCS	CTS	CR	FP
Credit capital Sourcing (CCS)	3.207	0.461	Pearson Correlation	1			
			Sig. (2-tailed)				
			N	101			
Credit Terms & Screening (CTS)	3.689	0.446	Pearson Correlation	.806**	1		
			Sig. (2-tailed)	0.000			
			N	101	101		
Credit Reporting (CR)	3.373	0.665	Pearson Correlation	.916**	8.22**	1	
			Sig. (2-tailed)	0.000	0.000		
			N	101	101	101	
Financial Performance (FP)	3.716	0.461	Pearson Correlation	.3.00**	.504**	.309**	1
			Sig. (2-tailed)	0.002	0.000	0.002	
			N	101	101	101	101

** Correlation is significant at the 0.01 level (2-tailed).

Table 4-23 above shows that the Pearson's correlation coefficient Between Financial Performance (FP) and CR (Independent variable) is r= 0.309**and its significant with Sig (=0. 0.002) which is less than 0.01; and the Pearson's correlation coefficient Between Financial Performance (FP) and CCS (Independent variable) is r=.300**and its significant with Sig (=0.002) which is less than 0.01. lastly, the Pearson's correlation coefficient Between Financial Performance (FP) and CTS (Independent variable) is r=.504**and significant with Sig (=0.000) which is less than 0.01. This point out that Credit capital sourcing, Credit Terms and Screening and Credit Reporting decisions had an effect on Financial Performance, which was weak but positive and significant relationship since the all the p-values were less than 0.01. Therefore, rejecting the null hypothesis and upholding the alternate hypothesis.

Regression Analysis

In order to establish how the independent variables (credit facilitation decisions) together explain the variation in a dependent variable (financial performance), the model summary of the multiple regression was run. This is presented by the R squared. This is presented in Table 4-24

Table 4-24 Multi- Regression Analysis

MODEL	VARIABLES	UN-	STANDARDIZED	T	SIG.

		STANDARDIZED COEFFICIENTS		COEFFICIENTS		
		Beta	Std. Error	Beta		
	CR	-.169	.189	-.203	-.896	.372
	CCS	-.187	.261	-.157	-.717	.475
	CTS	.987	.191	.798	5.168	.000
R	.541[a]					
R SQUARE	.292					
ADJUSTED R SQUARE	.270					
F CHANGE	13.359					
R SQUARE CHANGE	.292					
SIG.	.000					

Source: Primary Data, 2018

From the table 4-24 above, the multiple correlation coefficient r = 0.541[a] which is a positive and moderate relationship between the Dependent variable and the Predictors (Credit Capital Sourcing, Credit Terms & Screening and Credit Reporting).

The multi-regression model indicated a multiple r squared value of 0.292. When r squared is translated into percentage, we have 29.2%. This implies that overall Credit Capital Sourcing, Credit Terms & Screening and Credit Reporting contribute about 29.9% variance in Financial performance.

The study investigated whether the r squared is significantly greater than zero. Below is an analysis of the variance in the dependent and independent variables. From the figure above, the F-value for multiple r squared value of 0.292 is 13.359 with a p-value (Sig) of .000[b]. Therefore, the test is significant hence r squared is significantly greater than zero hence the predictors are able to account for a significant amount of variance in the Dependent Variable (Financial Performance). We therefore conclude that the overall regression model was significant F (3, 97) = 13.359, $p<0.01$, $r^2 = 0.292$.

From the table above, the predictor CR has its constant as (-0.169) with a Beta of (-0.203) and t-value of (-.896); CTS has its constant as (.987) with a Beta of (.798) and t-value of (5.168) and finally CCS has its constant as (-0.187) with a Beta of (-0.157) and t-value of (-0.717). CCS, CTS and CR have a Sig. of (p=0.475); (P=0.000) and (p=0.372) respectively. This implies that CCS and CR have their Sig. above 0.01; (p>0.01) and therefore they are not the unique predictors of Financial performance. On the other hand, CTS has a Sig of (p=0.000) which is below 0.01 and therefore it is the unique predictor for financial performance.

Conclusion and Recommendations

With the discussion so far it's evident that the credit facilitation in agricultural cooperatives is a decision journey. This journey in Ugandan agricultural cooperatives is full of so much uncertainty. From the uncertainty of knowing there is a crisis to the uncertainty of the ability to make decisions in a sub-optimal way. The process of addressing the suboptimal decision making starts with understanding decision challenges

in the credit facilitation. As described in the introduction agricultural cooperatives are a reality solution to agricultural financing to the poor and small holder farmers not only in Uganda but in the world (Essendi, 2013). From the credit facilitation decision challenges explained, an innovative decision support system to enhance the entire credit facilitation is long overdue as it would overturn the crisis in agricultural cooperatives. This paper hereby presents that entry point for an innovation decision enhancement studio that starts with problem confirmation and theoretical research problem grounding.

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