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INFLUENCE OF GROUP CHARACTERISTICS ON AGRICULTURAL CREDIT REPAYMENT PERFORMANCE AMONG MAIZE PRODUCER GROUPS IN RWAMAGANA DISTRICT, RWANDA

[1*] **Lambert Niyigaba**
niyilambert@gmail.com

[2**] **Patrick Mulyungi**
mwendandu2017@gmail.com

[3***] **David Mburu**
dmburu.mburu13@gmail.com

[1, 2 ,3] *Jomo Kenyatta University of Agriculture and Technology, Kenya*

Abstract*: The rate of loan repayment default in Rwanda financial market is still alarming more so in agriculture sector. The aim of this study was to investigate the influence of group characteristics on agricultural credit repayment performance in Rwamagana District, Rwanda. Descriptive and correlational research design was employed in this study. The target population was maize producers who have received loans from MFIs solely for maize production. The sample size was 283. Stratified, proportional and random sampling techniques were used in this study. Primary data was collected from maize producers using questionnaires and secondary data was collected from data records of group through group leaders and MFIs office and other published documents. The findings were presented in form of tables. The study employed binary logit model in analysis. The findings indicated that group age and adherence to rules and regulations are significant. The study further found that farm input subsidy has positive effect on credit repayment and lastly the farmers face delay in farm input subsidy disbursement in addition to insufficient farm input subsidy. The study recommends that MFIs should focus on strengthening the existing groups rather than the new ones. There is also need for awareness to farmers to follow the MFIs set simple and comprehensive rules and regulations, increasing discipline thereby improved loan repayment. Lastly there is need to enhance private public partnership to reduce delay in disbursement in addition to the government increasing the share of subsidy to farmers.*

Keywords*: reward Agriculture credit repayment, group characteristics, lending group based programme, Performance, maize producers*

INTRODUCTION

Three quarters of the world's poor and small holder farmers that live in rural areas, 80 percent directly or indirectly depend on agriculture as their main source of income and employment (IFC, 2011). Agricultural is a fundamental component of overall development in sub-Saharan Africa, serving as the basis for economic growth, poverty reduction, and food security. As the dominant economic sector, agriculture employ 55% of the African population, it accounts for 34 percent of sub-Saharan Africa's gross domestic product (GDP) and employs 64 percent of its labor force against 55% (USAID,2012).

Despite the importance of agriculture sector to economic growth and human welfare in Africa, only 1% of bank lending goes to the agricultural sector and therefore the sector remains significantly underdeveloped

relative to its potential (IFC 2014). Toby and Akani (2014) puts it right that access to agricultural credit enables families of developing countries to expand their agricultural production, realize considerable progress and escape from poverty translating to improved overall growth of the economy. Agricultural credit is the transfer of purchasing power from the lender to the borrower who mostly is a farmer allowing the farmer to use capital for agricultural purposes the lender having confidence and willingness on the farmers' ability to repay at a future predetermined date either with interest or not. (Kuwornu et al., (2013)

Agricultural credit plays a vital role in the development of agriculture sector globally. By having credit available to farmers, they are able to explore the idle resources at their disposal and also have enough working capital to carry out farming activities on time thereby improving agricultural production. (Siddiqi & Baluch, 2009). According to Saboor et al., (2009), timely provision of credit to farmers enables them to purchase the required necessary inputs in order to carry out farm activities smoothly.

The credit facilities are needed for smallholder farmers because of the limitations of self-financing, uncertainty pertaining to the levels of output, and the time lag between inputs and output, however, its accessibility is imperative for improvement in the quality and quantity of farm products, so as to increase farmer's income and improve food security. Consequently, the shortage of affordable credit for agricultural sector constrains growth in this sector and prevents the small farmer's integration into the market economy (Hazell & Rahman, 2014).

Despite the positive effect of agricultural credit on output and employment in many development countries where Rwanda is not exception, credit institutions find it difficult to lend to smallholder farmers. The main reason often cited is high default risk or poor loan repayment performance often caused by high degree of uncontrolled production and price risk that confronts the agricultural sector, uncertainty and risk inherent in agricultural production and marketing. Other reasons cited are the high processing and collection costs of loans made to smallholder farmers relative to amount lent, failure in meeting terms of agreement, lack of the means to use the legal system to enforce repayment on the side of many financial institutions, lack of collateral, the low rate of interest on agricultural loans, and the long-term nature of agricultural loans which is not compatible with bank lending, particularly in situations of high risk. (P. Satish, 2012).

In many developing countries like Rwanda, Commercial banks require that loans be secured by title to land or physical assets, deposit balances, while these options are clearly beyond the reach of poor households in the rural and urban areas. These trends justify why governments in developing countries which Rwanda is no exception and their developing partners in the recent decades have emphasized the need for Microfinance and group based lending program as the means of providing small loans and other facilities like savings, insurance, transfer services to poor low income household and microenterprises. (Hussain & Gopal, 2012).

In Rwanda, financial institutions such as Microfinance institutions and Saving and Credit Cooperative Societies (SACCOs) have been promoted in order to improve the situation of access to credit by smallholder farmers and low income people, and then the National Microfinace Policy focusing on legal and regulatory framework for the microfinance sector have been adopted and brought into force in 2008 (Malimba and Ganesan, 2008).

The government has also initiated and promoted some specific programs such as: Women Guarantee Fund Project, Agricultural Export and Agro-business Guarantee, Guarantee Fund and Credit Line for the retrenched civil servant project and the Rural Investment Facility project to encourage access to credit by the marginalized populations (NBR, 2008). Musahara (2006) indicates that Rwandan land policy reform was also based on the assumption that poor farmers will have access to credit when land tenure systems were formalized.

Despite these efforts, however, the financial institutions continue to decline credit to the agricultural sector mainly due to poor loan repayment performance from this sector. According to Rwanda National Bank, in terms of loan distribution granted by financial institutions by sectors of economic activities, the largest share of 35.8% of the total outstanding credit was granted to commerce, restaurants & hotels followed by public works and construction (31.1%). Surprisingly only a share of 14.4% was granted by MFIs to agriculture (BNR, 2015).

The loan distribution granted by MFI by sectors of economic activities is presented in Table1

Table 1.1: MFI's Outstanding (in billions Frw) Loans by Economic Sector

Economic Sector	UMURENGE SACCO		Other MFIs		Total	
	Jun-15	Share %	Jun-15	Share %	Jun-15	Share %
Agriculture, Livestock, Fishing	7.1	24.5%	6.9	10.2%	14.0	14.4%
Public Works (Construction), Buildings, Residences/Homes	3.5	12.1%	26.7	39.2%	30.2	31.1%
Commerce, Restaurants, Hotels	13.9	48.3%	20.8	30.5%	34.7	35.8%
Transport, Warehouses, Communications	1.6	5.7%	2.4	3.5%	4.0	4.2%
Others	2.7	9.5%	11.3	16.6%	14.1	14.5%
All Sectors	28.9		68.2		97.2	

Source: BNR, 2015

Most countries within EAC Rwanda included still exhibit high percentage of non-performing loans to total bank loans. Most values are still higher than the recommended World Bank standard of less than 5%. From the following table 1.2 only Uganda is posting impressive values as far as the proportion of non-performing loans in the total bank loans is concerned.

Table 1.2 : Non-performing loans as percentage of all bank loans in selected East African Countries, 2005–2017

year	Rwanda	Uganda	Kenya	Tanzania	Burundi
2005	Na	2.14	Na	Na	Na
2006	Na	2.75	19.35	Na	Na
2007		3.93	10.23	Na	Na
2008	10.27	2.09	9.01	Na	Na
2009	8.58	3.97	8.	Na	Na
2010	7.33	1.86	6.28	7.84	9.32
2011	5.59	2.03	4.42	5.4	7.39
2012	5.11	4.06	4.59	6.4	8.17
2013	5.93	5.76	5.04	5.12	9.89
2014	5.22	6.24	5.46	6.58	20.82
2015	5.91	5.13	5.99	8.58	17.92
2016	7.08	10.4	8.68	9.61	21.06
2017	7.73	5.51	10.08	12.44	13.61

Source: World Bank data report 2005-2017

Financial institutions in developing countries including Rwanda are adversely affected by the problem of poor loan repayment. Loan repayment is the percentage of loan drawn to the borrower who is able to pay back to

the lender within the stipulated time period as expressed in the condition for the loan release (Shariff et al., 2010).

In Rwanda, the NPL of bank stood at 6.3%, still above the BNR's target rate which is to be below 5%. (BNR, 2015). Recent data showed that the NPLs ratio of micro financial institutions slightly deteriorated from 8.5% end December 2016 to 11.5% as at end June2017, while the NPL ratio of UMURENGE-SACCOs has reached 8.2% end June 2015 compared to 7.1% registered in December 2014. This has created some resistance among banks to explore new niches in the agriculture and other related SME sectors, which are perceived as high risk. As an example, banks typically require 130%- 200% of high-quality collateral for SME loans, something the SME sector cannot provide (Robert, Andrew et al., 2011). This bottleneck chiefly affects agricultural finance, but also has an impact on other elements in the sector (MINECOFIN, 2013).

Statement of the problem

A critical problem which cuts across most financial institutions in developing countries including Rwanda is the issue of poor loan repayment. The available data indicates that many financial institutions still face a problem of loan recovery due to the fact that not all disbursed loan are repaid on the due date. According to (NBR, 2009), the banking sector in Rwanda continues to struggle with a high Non-performing loan ratio (NPL). For banks, the NPL stood at 6.3%, still above the BNR's target rate which is below 5% (BNR, 2015). Recent data showed that NPLs ratio of Microfinance institutions slightly deteriorated from 7% end December 2014 to 7.4% as at end June2015, while the NPL ratio of UMURENGE-SACCOs has reached 8.2% end June 2015 compared to 7.1% registered in December 2014 (MINECOFIN, 2013).

The process of issuing loan to smallholder farmers by financial institutions goes hand in hand with risks such as loan repayment risk, and liquidity risks (Robert F,.2014) therefore group lending based program among smallholder farmers have been promoted by many financial institutions, governments, donors and development partners as a feasible way of improving credit repayment performance in agricultural finance and extending credit to poor people who are usually kept out of traditional banking systems. Despite all these the apparent advantages, various studies on farming group lending have had mixed results as far as their performance is concerned.

According to (Tundui and Tundui, 2013), the factors that influence agricultural loan repayment performance vary from country to country ,region to region depending on the local conditions, and cultural peculiarities, consequently, certain factors especially those behind the success and failure of agricultural loan repayment are to be considered before credit is availed to the beneficiary and their analysis is very important for financial institutions to generate empirical information on which intervention might be based to strengthen lenders' abilities to recover loan and reduce risks associated with loan repayment.

Objective of the study

To investigate the influence of group characteristics on agricultural credit repayment performance in Rwamagana District, Rwanda.

Research Hypotheses

Null hypothesis: Group characteristics have significant influence on agricultural credit repayment performance.

REVIEW OF LITERATURE

Concept of Agricultural credit

Agricultural credit is an assistance offered to farmers either in cash, kind or both for the production purpose the repayment of which farmer is expected to make at future date with or without interest rate while loan is money borrowed at an agreed interest rate for an agreed time. Thus all loans are credit but not all credits are loans. In order words cash credit are loan (Salami et al, 2010).

Agricultural Credit is essential in rural economies as it is required to finance working capital and investments in fixed capital, particularly among farmers to accumulate much saving. It is an important instrument for smoothing consumption in a context where incomes typically experience large seasonal fluctuation. Availability of credit reduces reluctance to adopt technologies that raise both mean levels and riskiness of incomes. Thus credit market affects output, investment, technology choices and inequality (Parikshit G., 1999).

Concept of group lending

In contrast to individual lending, group lending (or joint liability) grants a loan to a group of borrowers, and the whole group is liable for the debt of any individual member in the group. Thus for financial institution this is the only instrument they have against loan defaulters, where if any member is unable to repay, other group members cannot borrow unless they assist in repaying defaulters' debt (Ghatak, 1999). Group lending improve the financial sustainability by inducing group members to use their mutual familiarity and close ties in assuming several roles normally played by external lender. This practice allows financial institutions to rely mainly on accountability and mutual trust among group members rather than financial collateral to insure against default (Ghatak, 1999).

Concept of Rural finance, agricultural finance and micro finance

Rural finance refers to the provision of a range of financial services to the inhabitants of all income levels in rural area, involved both in agricultural and non-agricultural activities (Meyer, R.,2007). In relevant to developing countries, Agricultural finance often constitutes the most noticeable part in rural finance due to the fact that the majority of people living in rural areas are involved in agricultural activities and consequently the sector generates most of rural income. Agricultural finance is thus a subset of rural finance aiming at increasing access to financial services for rural farmers such as in put supply, production, distribution and marketing.

Microfinance is characterized by small volume of credit and savings per client. The clients are generally not bankable with regards to the formal financial sector particularly the banking sector. The specificity of microfinance is that it focuses on the poor and aims at providing financial services such as saving, credit, payment transfers and insurance to the poor and low income households which are denied access to traditional source of finance (CGAP, 2003).

Since the poor often lack of readily available collateral, commercial banks perceive them as high risk clients inducing high transaction costs and this contribute to their exclusion from formal financial market (STGLITZ, 1990). This problem has addressed by Microfinance through providing tailor-fit financial services to the poor by using group liability based lending that reduce risk and costs.

Principal agency theory

The principal agent theory can best describe the interaction between the lender (the principal) and the borrower (the agent) where they operate under an incentive problem. The fundamental nature of the theory is that the agent who has no wealth on his own, borrow money from the principal to run a project. The outcome of the

project is freely observed only by the agent. The principal lacks information about the characteristics of the agent and faces a problem of enforcement. Thus as long as the principal has no mechanism available for rewarding or punishing the agent, the rational agent would always announce the project failed and therefore the agent would never repay back to principal. Rational principal would predict this outcome and he would never lend the money to the agent. Each of the actors would like to maximize their individual objective functions subject to the constraints imposed by each other (Maru & Roberto, 2010).

The problem of the principal is as to what kind of incentive structure to put in place so as to get the agent repays the loans taken. Therefore, if the agent accepts the credit contract offered by the principal and puts in a maximum effort the outcome would be high repayment performance unless the agent would like to adopt a course of strategic default. On the contrary if the agent puts in a low effort after accepting the credit contract of the principal, there will be a likely outcome of loan default but the agent would still claim that the outcome is due to factors beyond his/her control. In the literature this is what is called export moral hazard. In connection with this, the lender's risk hypothesis presents two broad categories of factors that determine loan repayment performance of borrowers. These are the willingness and ability of borrowers to pay back loans (Ray, 1998).

Information asymmetries about borrowers' characteristics, activities and inability to accept labor and outputs as collateral put formal financial institutions at a disadvantageous position relative to informal money lenders because the later usually cater to the financial needs of the poor for productive purposes and they give little focus to their consumption needs. On other hand, the absence of legal systems makes it difficult to enforce borrowers to repay loans leading to strategic default (Ray, 1998).

Production economic theory

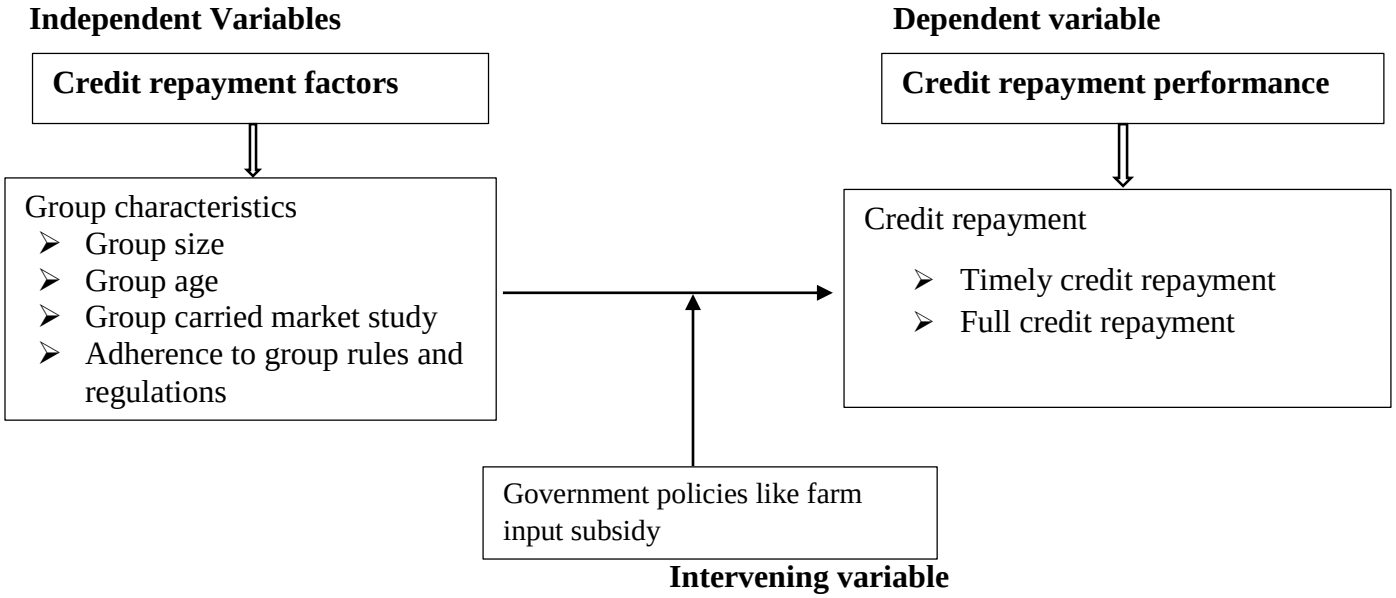
The theory of production is also relevant in this study. This is a part of microeconomic theory that deals with production of goods using a set of inputs. A production function is a model used to formalize this relationship. Production as dependent while inputs are independent variables. The production function indicates the maximum amount of the output attainable using different combinations of inputs.

The model can be specified as follows;

$Y=f(L, S, F...)$ ..... (1)

For example, the output produced by a farmer depends on labor (L), quantity or quality of seeds(S) and lastly fertilizer (F). Y in the equation above represents farm's output. According to Jhingan (2007), a production function is a functional relationship between quantities of inputs and outputs. It shows how and to what extent output changes with variation in inputs during a specified period. One of the aims or objectives of the farmer is to maximize output. This can be achieved better if the production function exhibits increasing returns to scale where by an increase in inputs by certain percentage leads to an increase in output by more than the percentage increase in inputs. This theory is relevant to this study since for better loan repayment the output of maize production is critical since it will signify the profitability and revenue of the farmer hence the ease of loan repayment. The output of the production depends on inputs which include fertilizers, seeds, labors and other factors which are necessary in production. (Onyeagocha et al., 2012).

Figure 1: Conceptual Framework



Source: Researcher, 2019

Group characteristics and agricultural credit repayment

Onyeagocha, Chidebelu, Okorji, Ada-Henri, Osuji and Korie (2012) on examination of determinants of loan repayment of microfinance institutions in southeast states of Nigeria found that group size significantly influences loan repayment performance of MFIs. However, methodology was found to have no significant effect on the loan repayment performance.

Gutu et al., (2017) analyzed the determinant factors affecting loan repayment performance of women borrowers from Micro finance institutions from Southwest Ethiopia with evidence from four Woredas around Gilgel Gibe Hydroelectric Power Dam using binary logit model. Among the factors considered was number of group members. The findings indicated that number of group members had positive significant effect on loan repayment among women borrowers.

RESEARCH METHODOLOGY

According to Kothari (2010), research design is the conceptual structure within which research is conducted, it constitutes the blueprint for the collection, measurement and analysis of data as such the design includes an outline of what the researcher did from writing the hypothesis and its operational implications to the final analysis of data. To investigate the influence of group characteristics on agricultural credit repayment performance, this study adopted quantitative and qualitative descriptive research design. During data analysis qualitative aspects were converted into quantitative. According to (Mugenda & Mugenda, 2013), descriptive research design is used to extract useful data for evaluation of current situation in order to ease in decision making. The study also adopted correlational research design to ascertain the strength of association between credit repayment factors and performance of cooperatives. The target population of this study comprised of 965 smallholder farmers residing in Rwamagana district who took agricultural credit through lending group model between 2016 and 2017 for Maize production purpose. The researcher purposively selected 30 groups in the entire district to form the population due to financial and time constraints. A sample of 283 respondents was calculated using Yamane's formula. The study adopted purposive, proportional and random sampling

techniques to select the respondents. Primary data was collected using questionnaires and secondary data collected from MFIs reports and groups records kept by group leaders. Data collected was coded and analyzed using STATA 16 software. Findings were presented in form of tables. The study adopted binary logit model in investigating the influence of group characteristics on agricultural credit repayment performance.

Model specification

Binary logistic model was selected in this study.

Therefore, the cumulative logistic probability is econometrically specified as follows (Mugenda & Mugenda).

$$\text{Pi} = F(zi) = (\alpha + \sum \beta i Xi) = \frac{1}{1 + e^{-zi}}$$

Where, Pi is the probability that borrower will be defaulter; e denotes the base of natural logarithms, which is approximately equal to 2.718; Xi represents the i^{th} explanatory variables; α and βi are parameters to be estimated. Z_i is the function of a vector of n explanatory variables.

$$(1 - \text{Pi}) = \frac{1}{1 + \text{e}^{\text{zi}}}$$

Therefore,

$$\left(\frac{\text{Pi}}{1 - \text{Pi}}\right) = \left(\frac{1 + \text{e}^{\text{zi}}}{1 + \text{e}^{-\text{zi}}}\right) = \text{e}^{\text{zi}}$$

Or taking natural logarithms

$$Zi = Ln\left(\frac{Pi}{1 - Pi}\right) = \alpha + \beta 1X1 + \beta 2X2 + \cdots + \beta mXm$$

If the error term (ui) is taken in to account, the logistic model becomes:

$$Zi = \alpha + \sum_{i=1}^{m} \beta i Xi + \mu i$$

The unknown parameter β's are estimated by likelihood function.

Mathematically, the model is specified as follows:

$\boldsymbol{Y_t = \beta_0 + \sum_{i=1}^{i=4} X_i \beta_i + \cdots \ldots \varepsilon_t}$ **..... (1)**

Where: $\boldsymbol{Y_t}$ = repayment performance of loan (t=1 if the loan was fully repaid within the specified period of the loan contract, otherwise 0)

$\boldsymbol{\beta_0}$ = Constant (intercept) ε_t= disturbance error (Which is assumed to have zero mean and constant variance)

$\boldsymbol{\beta_i}$ = = slope coefficients of independent variables (the unknown parameters that reflecting the impact of change in independent variables).

$\boldsymbol{X_i}$= independent variable which constitute group characteristics.

RESEARCH FINDINGS AND DISCUSSION

Data reliability test findings

The researcher used Cronbach's alpha to test for the reliability of the data. The findings indicate a Cronbach alpha value of 0.752 which is more than 0.70 a proof of reliability.

Table 4.1: data reliability test

Variable	Cronbach alpha	No. of items
Group characteristics	0.752	5

Source: researcher, 2019

Credit repayment status among respondents.

The findings indicated that out of the 247 respondents, 163 respondents representing 65.83% paid loan on time whereas 84 respondents representing 34.17% didn't pay loan on time. This is an implication that more than average numbers of maize producers are good loan re-payers.

Table 4.2: Credit repayment status

Credit repayment	Proportion	Standard error
Timely repayment	65.833%	0.5678
Late repayment	34.167%	0.2614

Source: Researcher, 2019

Proportional analysis of group characteristics

From the findings in the table 4.3, 0.83%,32.5%,45.83% and 20.83% of respondents had group members ranging from 10-19,20-29,30-39 and 40 and above respectively. Concerning group age, 60 % of the respondents indicated that their group is 1-3 years old, 21.67% were for 4-6 years old and lastly 18.33% were for more than 6years old. Most respondents were of the view that the member's level of adherence to group rules and regulations is low whereas the least respondents accounting for 1.67% felt that the level of adherence is fair. Moreover 18.33% of respondents opined that the group carried out a market study before its formation whereas 81.67% declined. Lastly concerning to what extent does group characteristics influence credit repayment performance, 6.67%, 53.33% and 40% indicated that the influence was to a no extent, small extent and moderate extent respectively.

Table 4.3: Proportional analysis of group characteristics

Item		frequency	percent
Number of group members			
	10-19	3	0.83
	20-29	80	32.5
	30-39	113	45.83
	40 and above	51	20.83
Age of your group			
	1-3 years	148	60
	4-6 years	54	21.67
	More than 6 years	45	18.33

Level of adherence to internal rules and regulations			
	Very low	21	8.33
	Low	132	53.33
	Fair	4	1.67
	High	76	30.83
	Very high	14	5.83
Group carried a market study before formation			
	Yes	45	18.33
	No	202	81.67
To what extent does group characteristics influenced your loan repayment behavior			
	No extent	16	6.67
	Small extent	132	53.33
	Moderate extent	99	40
	Large extent	-	-

Source: researcher, 2019

Correlation between group characteristics and credit repayment performance.

The researcher carried out correlation analysis to ascertain the degree of association between group characteristics and agricultural credit repayment performance among small holder farmers. The findings indicated that the correlation coefficient between the two is 0.460 at 0.001 level of significance.

Table 4.4: Correlation between group characteristics and credit repayment performance

Correlations

		Group characteristics	Credit repayment
Group characteristics	Pearson's Correlation	1	.460**
	Sig. (2-tailed)		.001
	N	247	247
Credit repayment	Pearson's Correlation	.460**	1
	Sig. (2-tailed)	.001	
	N	247	247

Source: researcher, 2019

Logistic model findings

Table 4.5: summary of logistic model for factors influencing credit repayment

Logistic regression

Number of obs = 247

LR chi2 (3) = 75.48

Prob > chi2 = 0.0000

Log likelihood = -40.447846 Pseudo R2 = 0.5898

Factor	Coefficient	Odds Ratio	P>|z|	Marginal effect(dy/dx)
Group size	-0.2549	0.7749	0.542	-0.0440
Group age	2.5242	12.4804	0.000*	0.4351
Adherence to group rules and regulations	0.5436	1.7222	0.034***	0.0937
Group market study	1.0707	2.9175	0.247	0.1845

***, **, *** is significant at 1%, 5% and 10% respectively**

Source: researcher, 2019

Government policies and agriculture credit repayment

Item		frequency	percent
Have you ever received government farm input subsidy			
	yes	162	65.59
	no	85	34.41
If yes, what kind of input subsidy?	Fertilizer	11	6.79
	Improved maize seeds	10	6.17
	Both	141	87.03
To what extent did the farm input subsidy affect your production			
	No extent	4	2.47
	low extent	19	11.73
	moderate	57	35.18
	High	82	50.61
In your opinion how did farm input subsidy affect your credit repayment status	Improved	128	79.09
	No effect	2	1.23
	Declined	32	19.75
What challenges did you face regarding farm input subsidy provision.	Delayed disbursement of subsidy	74	45.68
	Insufficient subsidy amount	80	49.38
	Stringent regulations on farm input subsidy	8	4.94

CONCLUSION AND RECOMMENDATIONS

Conclusion

The group characteristics that the study focused on included group size, group age, adherence to group rules and regulations and carrying out market study by group. From the correlation analysis there was a low positive association between group characteristics and credit repayment. Group size had negative influence while group age, adherence to rules and regulations and group carrying out market study had positive influence. Group age and adherence to rules and regulations had significant influence while group size and market study had insignificant influence on credit repayment. Keeping other factors constant, a unit increase in group age, adherence to group rules and regulations and group carrying out market study increases the log odds of credit repayment by 2.5242, 0.5436 and 1.0707 respectively and also increases the probability of timely credit repayment by 43.51%, 9.37% and 18.45% respectively. On the other hand, a unit increase in group size reduces the log odds of credit repayment by 0.2549 and also reduces the probability of timely credit repayment by 4.4% ceteris paribus. The findings are against the findings of Gutu (2009) who found a positive significant effect of group size on loan repayment. The findings were also against those of Mata (2004) who found a significant negative effect of group size on loan repayment. Concerning the government subsidy and loan repayment the study concluded that there is high positive impact of farm input subsidy on credit repayment as it increased production from the views of respondents. Majority of those who received farm input subsidy (79.09%) indeed agreed that it improved their credit repayment status. Lastly the study concludes that the farm input subsidy comes late and its insufficient. The conclusion in this study regarding farm inputs subsidy concurs with the conclusion of Mwesigye (2015) who also concluded that there is a challenge of delayed disbursement of form inputs.

Recommendation

There is need for farmers to follow the rules and regulations set out within their groups since this improves the level of discipline and makes the members to be focused in achieving a given objective one of which is repaying loan on time. Group leaders should be steadfast in ensuring that all group members are aware and follow the group rules and regulations. This will ultimately help the group in repaying the loan on time through enhanced discipline among the members.

MFIs should focus on strengthening the existing groups rather than the new ones since they have enough experience in terms of loan management and can easily repay their loan. Farmers should also focus on stabilizing themselves and carry out self-tests in savings activities before joining formal financial institutions.

The farmers should also be given support by the financial institutions in terms of looking for better prices for their produce and also assist in devising better farming methods and inputs to improve their output. This will enable them to repay the loan easily.

Lastly there is need for the government to come up with proper channels which enables the farmers to access the farm inputs subsidy on time to avoids delay. This can be done through private partnership to ensure that there is continuous subsidy disbursement even if the government is committed.

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