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Institutional Loaning Operational Procedures' and Sustainability of Government Revolving Funds in Murang'a County, Kenya

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Abstract

Loaning operation procedures is a basic requirement of institutions dealing with borrowing and lending money, in order to improve efficiency and bring down the level of default that is common phenomena in this field. In most cases by default or design the procedures are kept aside to benefit a few individuals and at times to deflect the institution its resources without minding the recourse. The government of Kenya like any other institution dealing with money has set out revolving funds institutions where borrowing and lending is done to the youths and women from year 2006 to date. The government role has been to provide revolving start-up funds to identified groupings; the youth enterprise development fund, the women enterprise fund and the Uwezo fund which was geared to reduce poverty to the youths and women respectively. The study was guided by the following specific objective, to determine the effects of institutional operational loaning procedures to government revolving funds sustainability in Murang'a County. The study adopted a positivism philosophy of research, where the researcher was independent on what was being observed and studied. Descriptive survey design was used to determine the level of government revolving fund repayment and its effect on sustainability for other borrowers. The target population was 1520 social and economic groups in Murang'a County. Clustering and Simple Random Sampling techniques were applied to select a sample size of 307 groups, in addition a census of 16 constituency credit officers, who were also interviewed. This, in total accounted to 19.5% of the total population. A questionnaire and an interview schedule were used to collect data. Descriptive data were analysed using tables and charts. Quantitative data were analysed using Chi-square, Analysis of Variance and Logit Regression Model. The results indicated that government revolving funds operation procedure was statistically significance to loan repayment and sustainability. The study underpins the importance of demanding business plans to WEF and YEDF which in the past has been a formality. The credit reference bureau which has been a preserve of the commercial banks should be made compulsory to all micro- credit institutions including the government initiated ones and that government revolving funds organization management systems should be strengthened to facilitate up-to-date loan repayment statements to lonees follow-up, in order to take action early in case of defaults.

Keywords: Credit assessment; Credit policy; Revolving fund; Collateral; Sustainability

Introduction

Background to the study

Documenting institutional lending and borrowing procedures is very crucial. This activity helps in streamlining the institution operations, geared to reduce wastage and enhance customer satisfaction throughout the entire process. The step by step guidance is made to ensure abidance processing, good supervision, effective screening mechanism, ensure satisfactory financial literacy exposure and proper verification of the entire money system. The process ensure credible credit investigation in

order to review the loan applications, approval of the loan applicants to make sure the money ends up with the right people as per policy. The documentation procedure ensures risk control operations are in place while ascertaining that the borrowers do not exceed the limit as per policy. In some cases collaterals are required from the borrowers which need a review guideline before lending is done. The loaning procedure also helps lender to evaluate the status of the loanee before lending, to ascertain his/her character, it should be the role of every government to come up with lending and borrowing policies that will help to dismantle the poverty trap prevailing in any economy, by ensuring that money lent out is recouped to be lent further to other needy members of the society without wastage. Policies and strategies that would increase consumption of the poor in general are principal components of a pro-poor development program, improving access to financial services being one of the policies [1,2]. A report to the legislature of the state asserts that; coming up with a revolving fund could be instituted with an appropriation of start-up money from the general fund, and should be tried by any existing government to investigate its impact to the society's wellbeing [3]. A revolving fund which may be in small amounts but very crucial, according to the report must demonstrate the capacity to be self-sustaining, through regular repayments of loans plus interest given out to different parties and individuals.

Statement of the problem

A lot of revolving funds have been initiated by the Government of Kenya towards reducing youth and women unemployment since independence in 1963. However, there has been reports' of high default that has affected sustainability of almost every fund initiated. Studies done on the women funds in Kenya shows a lot has been give out, but very little recovered. In Murang'a County, according to Public Accountability Statement out. 4.35 million disbursed to the women groups about Kshs. 2.68 million have been recovered. The recovery rate was slightly above 50% since its inception in 2007. There is a general fear that, if the issues affecting the repayment of the revolving funds including the institution loaning procedures are not tackled substantially, the sustainability of the revolving funds will be elusive [4].

Specific objectives

Determine the effects of revolving fund institutional operational loaning procedures to sustainability of government revolving funds in Murang'a County, Kenya.

Research hypothesis of the study

H_{01}: There is no relationship between institutional operation procedures to sustainability of Government revolving funds in Murang'a County, Kenya

Theoretical Literature

The study was guided by the following theories

Group lending theory

Group lending in theory, also referred to as solidarity group theory was the main theory applied in this study which is the first and most often-discussed "solution" to information asymmetries in developing countries. In this theory, as postulated by adverse selection and moral hazards are dealt with by effectively changing the responsibility of screening, monitoring, and enforcement from the lender to clients. The peer group, who normally consist of five or more individual group members, borrow a loan together in solidarity. Members are self-selected based on their reputation and relationship with each other. Group liability requires that in case one group member defaults, the fellow group members will be responsible for his/her payment. Under group liability funds then, clients have an inducement to screen other clients so that only the trustworthy individuals are allowed into the programme [5]. The study describes group lending as a means of addressing moral hazard by providing incentives for clients to employ peer pressure to ensure that funds are invested properly and effort exerted until the loans are repaid in full. By lowering default, the expected total cost of borrowing for borrowers can be condensed, improving welfare especially for households without collateral.

Principal-agent theory

The principal-agent theory postulated was developed on relationships between economic agents with different objective functions in which one party is the principal, delegates to another, the agent, some actions (control over resources) was observed [6]. The theory studied different ways in which the principal could induce the agent to take actions that are beneficial to the principal but may not be optimal for an unconstrained agent. The agent's actions are induced by the principal by varying the incentives provided in the contract in order to make these actions attractive to the agent. In this research, some revolving fund institutions use agents to disband funds to the loanees.

Empirical Literature

A successful revolving fund scheme requires a long-term commitment from government authorities, donors and other stakeholders, because time and effort are needed to establish the infrastructure and to build the necessary capacities [7]. It takes even longer to develop the trust, group confidence and financial discipline on the part of borrowers to make such funds sustainable. Systems for monitoring and evaluating the funds' performance are important, and borrowers must be helped to graduate gradually to other systems of credit. Cameroon were slow to enlarge, but with the right combination of leadership, technical know-how and innovative capital injections and

partnerships, this approach fostered both growth and sustainability to them. A magic solution of creating broad sustainable mechanisms for providing revolving fund services needs to be invented. The above study suggests investigation of borrowers' aims, needs and strategies and to establish possible approaches of enhancing contribution to empowerment that does not unnecessarily increase borrowers' vulnerability.

Revolving fund operation procedures and loan sustainability

Sustainability relates to the ability of a programme to continuously maintain its activities and services to meet its objectives. For revolving fund operation to be effective and successful there should be sustainability. The issue of revolving fund sustainability has been receiving high attention recently as revolving fund lenders try to reduce poverty in developing economies. The challenge noted by the Desta was lack of evaluation and mapping out the progress made by beneficiaries of revolving fund towards sustainability, so that, decision-makers could be able to monitor and evaluate effectiveness of the program, and adjust accordingly [8]. A successful revolving fund scheme requires a long-term commitment from government authorities, donors and other stakeholders, because time and effort are needed to establish the infrastructure and to build the necessary infrastructures.

Loan supervision for repayment

Supervision includes visiting the spot of loan money investment; verify the goods in the spot along with the loan in a scheduled meeting. The supervision is to be carried out through the group leader regarding the proper utilization of the loan money in presence of other members. This is a participation and responsibility of all members of the groups concerned. After taking the loan money, the investment of the same within specified time is to be ensured. Afterwards, all members are to be in touch with each other to ensure the intended investment is done. The group leader will take special initiative for the supervision and the revolving fund institution staff and other responsible persons concerned with loan will visit the spot of investment periodically. The utilization of the loan in question will be discussed regularly and necessary step taken in the meeting order to discover misuse in advance. Supervision is also intended to know the total status of the group and every member to ensure the loan purpose and capacity for investment of each other. In scheduled meetings, the members are supposed to express independent opinion regarding utilization of others loans for early detection of defaults. The general problem for lack of supervision of a member, affects the loan consumption and makes the members to out themselves from group meetings [9]. Again, if the loan is not supervised frequently, it encourages abuse of loan and members are not able to pay up their instalments, self-confidence on one another and the control of the group is hampered. Additionally, a lot of work will be created for the staff as they try to follow-up the loan defaulters, the members also lose faith with the revolving fund institutions and conceive of wrong ideas of the borrowed fund and eventually, the individual group member loses his/her social status. Assert that, non-supervision of borrowers influences the loan repayment. The study noted various supervisory methods that can be used by any management which include; off the-site surveillance, on-site examination, follow-ups and special assignment. Off-site examination entails analysis of prescribed reports submitted periodically by the revolving fund institutions. The prescribed reports are meant to provide information on performance of institutions. On-site examination entails supervisory of the physical books, records and data to assess the accuracy of reports submitted and to review details of compliance. The follow-up site visits should be undertaken to discuss supervisory concerns raised during examination and to ensure conformity with recommendations. Special responsibilities involve on-site activities such as investigation with respect to concerns and needs to be enforced. Strengthened skills of supervisory staff in knowledge of methodologies and ways of tightening enforcement of reporting including application of sanctions for non-compliance with directives are lacking in most revolving fund institutions.

Business plan requirement and loan repayment

Access to sustainable financial services by small-holders is normally seen as one of the constraints limiting their benefits from credit facilities. However in most cases, the access problem, especially among formal financial institutions, is one created by the institutions mainly through their lending policies [10]. The study notes that, this is displayed in the form of prescribed minimum loan amounts, complicated application procedures and restrictions on credit for specific purposes. For small-scale enterprises, reliable access to short-term and small amounts of credit are more valuable, and emphasizing it could be more appropriate in credit programmes aimed at such enterprises. Notes that a business plan as a written document that describes in detail how a new business will achieve its goals. It lays out a written plan for marketing, financial sourcing and operation of the business [11]. It's sometimes prepared for an established business that is moving into a new direction. It is tailored to a particular industry and may target changes in perception and branding by the customer, client, taxpayer, or larger community. Business plans may be internally or externally focused to cover 3 to 5 years. Externally, focused plans target goals that are important to external stakeholders, particularly financial stakeholders. Internally, focused business plans target intermediate goals required to reach the external goals. They may cover the

development of a new product or a new service. The financier requires the borrowers' credit history, the collateral securities in place, ability to meet the lenders' demands, whether demand for the product or service is adequate, whether the borrower has established a proprietary position and whether the business has a position in the market which is realistically projected and some of these information can be extracted from a business plan. The strength of the business plan must be substantial and the annual revenue estimates convincing for an existing business in order to get funding.

Financial literacy exposure and loan repayment

Notes that both the youth and women groups in Kisumu, have started defaulting on loans given to start businesses [12]. The default is attributed to widespread financial illiteracy in the area. The default rate according to the study was at about 40% and the fund managers fear that the revolving funds could dry out very soon and deny opportunities to new borrowers. Funds managers according to the study on both the YEDF and the WEF in Kenya are concerned as most borrowers have stopped servicing their loans completely. Stipulate the need to move closer financial systems to the users. For this to happen, the authority needs to formulate market enabling policies, formulate financial literacy programmes and ensure financial products are tailored to specific groups that are in place. The government role according to the study is the participation in the financial market and ensures enabling environment, deficiencies in financial literacy exposure requires more profound structural reforms, mostly outside the reach of even financial sector policy-makers and once effectively implemented, will increase access to sustainable credits and use of financial services [13].

Screening mechanism for loan repayment

Unlike formal finance, informal lenders often attach more importance to loan screening than to monitoring the use of credit [14]. The screening process usually involves the lender's assessment of the prospective borrower through non-credit transactions over a number of seasons, asking for references or personal sureties, asking questions from other people from the lender's village, and visiting the applicant's farm or business. In group lending, screening practices include group observation of individual character, personal knowledge by individual money-lenders and recommendations by members of the group. In this lending programme, members are made jointly liable for the loans given and the joint liability plus the threat of losing access to future loans motivates members to perform the function of screening of loan applicants, monitoring borrowers and enforcing repayment. In most cases, the borrowers are very cunning and most of them create lies to the lenders. In order to convince the lenders for higher amount of loans, and their ability to repay, some borrowers obtain some items from neighbours and friends and assume their ownership for a while. Cheating takes place because these borrowers are able to access the loan officers' assessment schedule before-hand, which make them able to set the borrowed items in a manner they will not display suspicion postulate that information asymmetries in Malawi coupled with costly enforcement of repayment influence and reduce the profitability of money lenders. The study notes that, when identification of clients is not possible, borrowers can obtain a fresh loan even if they have defaulted in the past by simply using a different identity. As a result, lenders are forced to offer the same contract every period or borrowers forced to surrender their personal identity cards, as they cannot tailor the terms of the contract to individual credit histories. Lenders sometimes are forced to respond by limiting the supply of credit, due to the inability to sanction unreliable borrowers [15].

Micro-insurance and loan repayment

Notes that saving is hard work in Kenya, and the Kenyan institutions are largely designed to make it easy to spend, and not to save. To address the issue of how saving might be increased among lower-income families, as per the study, a typology of saving policies needs to be introduced. The study discussed policies ranging from: - coerced (mandated) savings such as Social Security; programmes that make it hard not to save such as automatic enrolment in employer-sponsored savings plans; policies that bribe (or provide incentives for) people to save through, for example, savings matches; programmes like lottery-linked savings plans that actually get people excited to save [16]. Most communities have experimented the use of one or more savings plans outlined above including insurance, but the study notes lack of an acceptable national saving plan in Kenya and recommends for its invention soonest possible. Asserts that micro-insurance is the protection of low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved. It is the insurance services to low-income people, traditionally underserved and underinsured [17]. The insurance product is deemed to be targeted or sold the product to low-income people. World Bank notes that, loans for agricultural production or livestock breeding in South Africa usually have longer terms than those for trade or small industry [18]. In addition, rural households need financial services that are adapted to the agricultural cycle, such as savings funds to provide cash for the season in between harvests, or transfer funds for remittances for migrants who leave the rural areas for seasonal work. The study notes the need for agricultural insurance funds among small farmers who have to protect themselves against weather-related risks. Providing affordable insurance to small farmers remains a challenge due to the pooled risks involved (natural disasters

causing damage to many clients at once). Institutions providing such insurance funds need to be reinsured by big international insurance companies to spread the risk beyond their geographic region. Even though profitability in agriculture is generally low and interest rates are high, it is possible for rural financial institutions to operate on a cost-covering basis and offer financial services to farmers.

Summary of Literature Review and Gaps (Table 1)

Conceptual framework

Based on the preceding literature review and discussion, the systematic Diagram was developed to show the relationship between the independent, moderating and dependent variables. A discussion on how each of the variables was operationalized is given below (Figure 1).

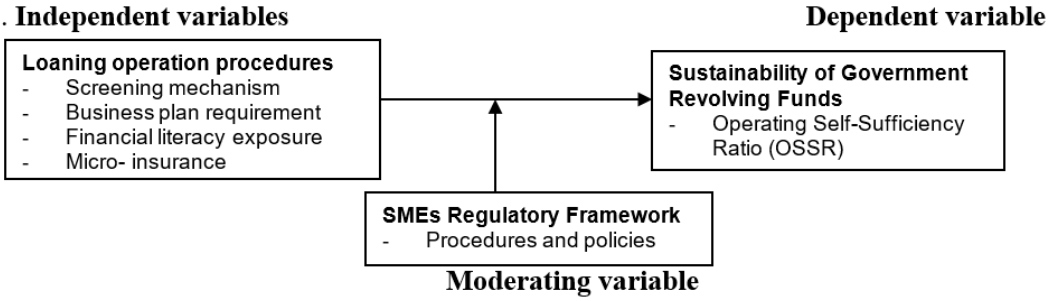

Figure 1: *Schematic diagram.*

Table 1: *Summary of Literature Review and Gaps.*

Study by	Title	Findings	Knowledge gap	Focus on proposed study
[5]	Development of finance in USA	Customers have become much more sophisticated regarding financial matters	Technological change needs to be phenomenal	Use of innovations in revolving fund institutions
[7]	Women and credit in Cameroon	Borrowers must be helped to graduate to other systems of credit.	Investigation of borrowers aims, needs and strategies to establish possible strategies enhancing contribution to empowerment	Solutions of creating large scale sustainable mechanisms
[14]	Cost structure and sustainability in micro-finance institutions in Bangladesh	Borrowers are very canning and a lot of lying taking place	How to deal with borrowers that are liars	Finding ways to reduce cheating by group members
Mahajan & Ramola	Empowerment of women through micro-finance in India	-Women-headed households are significantly disadvantaged in income compared to households headed by men. -Older household heads have lower income from off- farm sources	Agricultural extension had no measurable impact on either net crop income or livestock sales	Analysis of farm and of the farm income in determining loan repayment and sustainability
[13]	Causes of default in government micro credit programmes. A case study of Uasin- Gishu sub-county trade development joint loan board.	-Lack of appropriate Management Information Systems (MIS) to be able to detect slow borrowers and potential defaulters. -Non-prosecution of defaulters is contributing to the rising trends in default	Determine how much debt the borrower can comfortably handle, income streams and any other obligations that could interfere with repayment.	How to intensify borrower follow-up to, improve recovery of outstanding loan balances accruing to slow borrowers and prosecute defaulters

Giné	Use of biometric in the micro- credit institution in Malawi	Increased loan repayment was far much higher than the cost of outsourcing the biometric instruments.	Improve loan recovery methods	Ensure innovations are applied to increase loan recovery
Jamal	Microfinance and loan repayment performance: a case study of the Oromia credit and savings share company(Ocssco) in Kuyu	- Need for a continuous supervision on loan utilization and training -Screening system efficiency	Need to test if there is some sort of association between loan repayment and purpose of borrowing.	Relationship between revolving fund loan repayment and the amount borrowed
Kibaara	Rural finance services in Kenya	-Poor road network increases transaction costs -Lack of proper policy framework to spur the growth of rural financial services	Lack of proper policy framework to spur the growth of rural financial services	Need to ensure necessary management skills in community associations

Research philosophy

The study adopted a positivism research philosophy which is an epistemological position that advocates an observable social reality that allows replication and end product that can be generalised elsewhere [15].

Research design

The study adopted a cross-sectional descriptive survey research design. The design was chosen because it ensured complete description of the situation, making sure that there is minimum bias in the collection of data and allowed data collection from sizeable population in an economical way [16].

The empirical model

Discrete regression models like the probit, discriminant and logit models are ideal to use when the dependent variable is of a binary choice. Generally, any of the three models can be used as they tend to generate more or less similar results. The choice of any of the model is a matter of convenience. This study employed the logit model to examine the sustainability or (non-sustainability) of government revolving funds as a matter of personal preference. The following logit model was adopted as suggested [20].

$$\Pr(Yi = 1|Xi) = f(\beta 0 + \beta i\, Xi + \varepsilon i) \qquad (1)$$

This outcome has more than one independent variable. The outcome of the logistic regression will be 0 or 1, where 1 indicates that the outcome of interest is present, and 0 indicates the outcome is absent. Logistic regression generates the coefficients and standard errors and significant levels of a formula to predict a logit transformation of the probability of presence of the characteristic of interest. The logit model estimates the probability of dependent variable to be 1(Y=1). This is the probability that some events have happened. Both logit and probit models are preferred because they help in overcoming weaknesses inherent in linear probability models such as heteroscedasticity and linearity problems [21].

To measure the study's main objective; to determine the effects of revolving fund institutional operational loaning procedures to government revolving funds sustainability in Murang'a County, Kenya (X1); the multiple logistic regression model was applied as modelled.

$$\Pr(Y) = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon i \qquad (2)$$

Where Pr is the probability of presence of the characteristics of interest,

Y is the level sustainability of government revolving fund, is a multiple (partial) regression coefficient i.e. the expected change in Xi assuming other X's are entirely held constant,

- X1 = Loaning operation procedures,
- X2 = Socio-economic functions,
- X3 = Borrower' characteristics,
- X4 = Use of Technology,
- εi = Error term.

Target population

The target population was 1,520 respondents which include 1504 groups and 16 constituency credit officers or fund managers from the socio-economic women and youth groups, dealing with government funded revolving fund found in the county as per the youth enterprise board (2013) and the Women Enterprise Board (2013) (Table 2).

Table 2: *Distribution of the Population.*

STRATA Sub-counties in Murang'a County	WEF groups Year 2013	YEDF groups Year 2013	Total (N)	Percentage of the total
Gatanga	253	100	353	23%
Kandara	151	100	251	16.5%
Murang'a South	62	77	139	9.14%
Kigumo	42	67	109	7.17%
Mathioya	137	91	228	15%
Kiharu	79	40	119	7.8%
Kahuro	78	40	118	7.76%
Kangema	116	71	187	12.3%
Constituency credit officers	8	8	16	1.05
Total	**926**	**594**	**1520**	**100**

Table 2 shows the WEF and YEDF groups that are registered with the ministry of culture and youth services in Murang'a County. The county has been sub-divided into 8 sub-counties out of which 7 constituencies have been curved. Kiharu Constituency serves both Kiharu and Kahuro sub-counties. Results from the table 2 indicate that most groups for both WEF and YEDF were found in Gatanga Sub-county with 23% of the groups respectively. Kigumo and Kahuro Sub-counties had the lowest number of groups with 7.17% and 7.76% respectively.

Table 3: *Sample Determination.*

STRATA Sub-counties in the County	Total WEF and YEDF groups in Murang'a County (N)	Weighting from the total number of groups	Sampling rate	Sampled WEF and YEDF per Sub-County
Gatanga	353	23%	**19.5%**	69
Kandara	251	16.5%	**19.5%**	50
Murang'a South	139	9.14%	**19.5%**	27
Kigumo	109	7.17%	**19.5%**	21
Mathioya	228	15%	**19.5%**	44
Kiharu	119	7.8%	**19.5%**	23
Kahuro	118	7.76%	**19.5%**	23
Kangema	187	12.3%	**19.5%**	36
Constituency loan officers	16	1.05	**100%**	16
Total	**1520**	**100**		**307**

Table 4: *Loaning Procedures and Revolving Fund Repayment.*

Variables	N	Mean	Std. Deviation
Personal account vital for loan repayment	261	3.45	1.383
Ability to repay loans depends on which institutions the borrowing was done	261	3.70	1.314
Administrative fee charged on borrowed amount effects repayment	261	3.86	1.234
Number of other loans an individual has effect on borrowing and repayment	261	3.88	1.198
Delay in loan processing influences borrowing and repayment	261	4.21	.933
Business plan essential to borrowing and payment should be mandatory	261	4.28	.856
Quality of services provided by revolving fund institutions effect repayment	261	4.29	.912
Flexibility of revolving fund institutions on lending determines loan repayment	261	4.30	.829
The borrowing terms put in place influence on loan borrowing repayment	261	4.30	.823
Valid N (list wise)	**261**		

Sampling design and procedure

Clustering of the entire county into eight sub-counties and then applying a Simple Random Sampling technique to select a sample size of 307 respondents, which included 291 groups and 16 constituency loan officers was done. From every group sampled, one executive official was sampled using simple random sampling. In addition, a census of 16 constituency loan officers which entitled 8 constituency loan officers or the YEDF and 8 constituency loan officers for WEF were interviewed. This, in total accounted for 19.5% of the total population. Formula to determine the sample size is given below [22]:

$$n = \frac{Z^2 * P(1-P)}{d^2} \qquad (3)$$

Where n was the desired sample size

Z = z values e.g. (1.96 for 95% confidence interval)

P = percentage picking a choice expressed as decimal (0.5 used for sample size needed)

d = level of statistical significance set (0.05)

n= sample size

$$(n) = \frac{(1.96)^2 * 0.5 * (1 - 0.5)}{(0.05)^2}$$

$$n_f = \frac{n}{1 + {(n)}/{N}} \qquad (4)$$

Where n_f= the desired sample size (when the population size is less than 10,000)

n= the desired sample size (n = 384) (when the population is more than 10,000)

N = the estimate of the population size (N = 1502)

$$(n_f) = \frac{384}{1 + {(384)}/{1520}} = 307$$

Saunders, Lewis & Thornhill (2009) note that, a sample size of 10% and above are counted to be ideal to represent the entire population. A sample size of 19.5% for this study would be even be better and help to check any type I or type II error that may arise. Table 3 below shows the sampling strategy that was undertaken to arrive at the required respondents (Table 3).

Table 3 shows the sampling procedure to arrive at the number of respondents. Probability sampling technique where the chance or probability is known and is usually equal to all cases was applied [23]. After adding the WEF and YEDF together, a common rate of 19.5% per constituency was applied. To arrive at 307 respondents, 100% of the constituency loan officers were also included in the sample.

Research Findings, Presentation and Discussion

Effect of Loaning Procedure on Repayment

The respondents were requested to indicate procedures that influence micro-credit loan repayment. The results are presented on (Table 4).

The results in Table 4 show that the larger part of respondents with (Mean score = 4.30) indicated that the borrowing terms put in place and flexibility of revolving fund institutions on loan lending influences the influence of repayment. Respondents with (M= 4.28) indicated that a business plan is essential to borrowing and payment should be mandatory. Both variables had the lowest standard deviation of 0.823 and 0.829 respectively. The results from the findings indicate a mean (above 3.00) thus clearly showing that the loaning procedures has influence on revolving fund loan borrowing and repayment which was in line on breaking the financial services barriers in USA which voiced the importance of a business plan before borrowing and lending. Study cost structure and sustainability in micro-finance institutions in Bangladesh also voiced the importance to loan screening than monitoring lending and borrowing as part of loaning procedure. Currently, according to report by constituency loan offers in Murang'a County, business plan requirement was a formality.

Group members' failure to save

The study intended to know the reasons why group members were failing to save resulting to poor repayment of revolving fund repayment (Table 5).

Results in Table 5 shows that most of the respondents (Mean = 4.37) with the lowest standard deviation (Stdv 0.788) indicated that strong preference to current consumption results to low savings. Lack of motivation for savings to build a reserve fund to fall back had a standard deviation (stdv 0.909) and lack of pre-commitment measures to ensure preference of savings dominates (stdv 0.886) and lack of knowledge of advantages of maintain a financial buffer in the group had a standard deviation (stdv 1.001). The mean as indicate by Table 5 were 4.25, 4.21 and 4.18 respectively. The findings were in line with the study done on bank regulation that are changing in Kenya which had noted that saving is hard work, and many Kenyan institutions are largely designed to make it easy to spend, and not to save. The study recommendations of the means to improve savings including coerced (mandated) or otherwise should enforced. Most respondents (38.4%) supported a monthly visitation by the constituency loan officers and others for dissemination of information [16].

Table 5: *Reasons for not Saving.*

Reasons	N	Mean	Std. Deviation
No Knowledge of advantages of maintaining a financial buffer	261	4.18	1.001
No Pre-commitment measures to ensure the preference of savings dominates	261	4.21	.886
No motivation for savings to build a reserve fund to fall back	261	4.25	.909
Strong preference for current consumption to future consumption	261	4.37	**.788**
Valid N (list wise)	261		
Source: Survey data (2014)			

Multiple lending

The respondents were requested to indicate whether institutions in the constituencies were failing to reduce multiple lending and borrowing. Figure 2 below provides the outcome (Figure 2).

Results from Figure 2 show that a good number of the respondents (41.%) indicated that all the variables (ranging from irresponsible officers, lack of elaborate plans, lack of standing requirement and not providing training to borrowers as the key reasons that encourage multiple borrowing. About (5.4 %) indicated that, irresponsible officers are the main cause of multiple borrowing. Among the respondents, (19.4%) indicated that lack of providing training to borrowers on financial matters as the main cause of multiple borrowing.

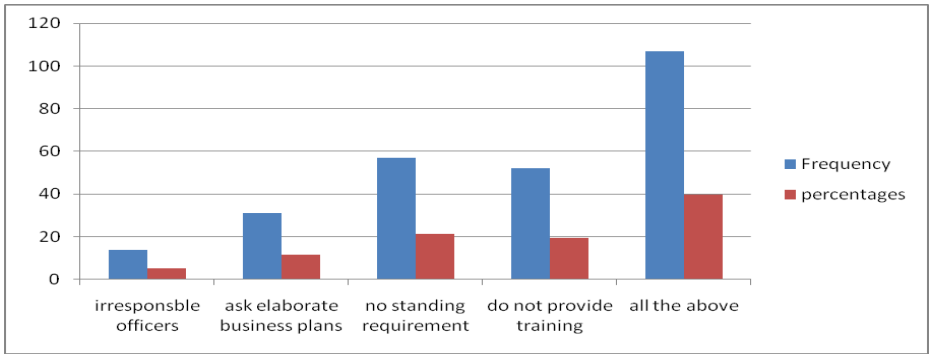

Figure 2: *Multiple Lending.*

Table 6: *Loaning Procedure extent to Borrowing and Repayment.*

Category	N	Mean	Std. Deviation	Variance	Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Importance of screening on micro - credit borrowers	261	4.68	.736	.542	10.314	.300
Micro-insurance introduction to YEDF and WEF	261	4.44	.770	.593	4.143	.300
Every micro-institutions should demand on business plans before issue of borrowed fund	261	4.33	.863	.745	2.343	.300
Use of technology should be applied by every revolving fund institutions for mining data	261	4.02	1.259	1.584	.374	.300
Multiply the amount lent out to the groups	261	4.53	.797	.635	5.027	.300
Review the administrative fee upwards	261	3.00	1.777	3.158	-1.547	.300
Valid N (listwise)	261					

Table 7: *Screening Process in Groups Including the Interview Report.*

Category	Frequency	Percentage
Loan application and integrity checks	225	86.5
Technical assessment	12	4.6
Approval by secretariat based on ability	9	3.5
Ability to insure the loan	5	1.9
Collateral security checks	4	1.5
Proposed development criteria checks	3	1.2
Site eligibility checks	3	.8
Total	**261**	**100.0**

The results supports on the study of causes of default in government revolving fund in Uasin-Gichu District who noted high existence of multiple borrowers and recommended the need for early detection of the multiple borrowers.

Extent of loaning procedure to influence borrowing and repayment

The respondents were requested to indicate the extent to which screening mechanism, micro-insurance, demand of business plan, use of smart-cards, amount lent out and administrative fees influence revolving fund borrowing and repayment. The results are as indicated on (Table 6).

Results from Table 6 show that a good number of respondents (M = 4.68) and a lower standard deviation of (Std dev = 0.736) indicated the importance of screening on revolving fund borrowers. Kortosis captures whether the actual distribution was more peaked or flatter than the normal distribution. From the findings, kortosis measure for impotent of screening was (K=10.34) showing how peaked the category was comparatively. The respondents with (M=4.44) indicated that introduction of micro-insurance to YEDF and WEF very much needed and should be hastened. The respondents indicated that loan screening mechanism was most vital aspect in revolving fund borrowing and repayment compared micro-insurance, demand for business plan, use of smart cards and administrative fees put in place to others.

Screening process taking place in most groups

The study intended to know the screening process that takes place in the groups the respondents belonged (Table 7).

Results from Table 7 show that most of the respondents (86.6%) indicated that main screening process they had come across was loan application and integrity checks, site eligibility checks had the least respondents (0.8%). The importance of screening but warn the credit officers on borrower's cunning and lying that takes place in many villages.

Rounds of borrowing and amounts

The respondents were asked to state the number of rounds they had borrowed since the inception of both the YEDF and the WEF (Table 8).

Results from Table 4.5 show that large part of respondents (41.4%) indicated they had borrowed in the second round, showing most of them were not new members to the groups. (38.7%) of the respondents only borrowed in the first round. The results were in line with the challenges that were stated in 2009 on both YEDF and WEF status reports. The reports had indicated a negative perception and attitude on the funds as they were established on the eve of a general election and hence perceived as a political organization to influence voting pattern particular among the youth and women. The individuals concerned have proved the assertion to be not true and are now joining in numbers. On the other hand, many did submit their borrowing documents in good time, resulting to delay in release of funds and this accounts as to why they were in round one. The fund was not sufficient as reported by the YEDF and WEF reports to cater for the high demand and the expectation of the youth and women. This was another reason for the high rate of respondents in round one in 2013 survey. On the amount borrowed as indicated by the results on Table 8, most of the respondents (52.5%) had borrowed (between Kshs. 10,000 - 100,000). Very few (2.7%) had borrwed above Kshs. 400,000.

Seminars attendance and workshops for financial literacy

The researcher needed to find out whether group members attend training/workshop/seminars for financial literacy (Table 9).

Results on Table 9 show that most of the respondents (82.5%) indicated they have attended workshops and seminars on financial literacy. Only (11.9%) of the respondents had not attended any seminar. The results reflect the positive initiative taken by the WEF and YEDF initiatives but still question on the (11.9%) who have already borrowed and have not being trained. The expectation should be (100%) training on all the groups. The results support on whether micro-crest programmes alleviate poverty in South Africa, who attributed the need to external reliance, provide financial literacy education and revolving fund institutions to work closely with village administration. The constituency loan officers confirmed the mild involvement of the village administration in identifying members in their villages for financial literacy training but rarely involved during the process of loan repayment. They are only involved when the deal does not materialize which needs to be checked [8].

Sustainability using the operating self-sufficient ratio (SSOR)

The study computed operating self-sufficient ratio (OSSR) of the amount borrowed and repaid by all the constituencies in Murang'a County. This was meant to determine whether the operating revenue as a percentage of operating and financial expenses including loan loss provision expense was greater than 100%. If the OSSR is greater than 100%, it means that the institution(s) in question is able to cover the costs through own operations and therefore do not rely on contributions from other donors to survive. The general formula as modelled for computing revolving fund sustainability was:

$$\text{OSSR} = \frac{\text{Operating income}}{\text{Total operating expenses}}$$

Table show the analysis of the loan borrowed, repaid, cost and amount recovered including the risk level for WEF in 2012 and 2013 (Table 10).

In the researcher's point of view in Table 10, the total amount recovered (2013)(b) Loan cost was (c) which was 5% of the amount borrowed and amount due to date was (a)

$$\text{OSSR} = \frac{b}{a+c} = 0.95:1$$

OSSR< 1(Not sustainable but near to 1)

The Operating Self- Sufficiency Ratio (OSSR) for WEF year 2012 was 0.91:1. Which was an indication of non-sustainability of the government revolving fund initiative. The findings indicated a satisfactory trend since the OSSR was positive from 0.91:1 to 0.95:1. The computed risk level in all the constituencies in 2013 as reported by the public account statement (2013) on WEF was found to be greater than 10% thus sending unsatisfactory results. Kandara constituency was outstanding with the lowest risk level of 11%. The risk level in Kangema constituency (62%) was rather worrying and measures should be put in place to arrest this scenario. The Average County risk level for WEF (2013) was computed as 33%. The OSSR for the YEDF for year (2012- 2013) was computed as 0.417:1 and 0.540:1 (APPENDEX 6) for years 2012 and 2013 respectively. This was also an indication of non-sustainability of the YEDF but the trend was positive. The study agrees with the results indicated in the Youth Fund Status Report (2009) that noted the loan repayment rate in two constituencies in Murang'a County, namely; Kandara and Maragua to be at 40%. This rate as noted from the computation has improved but still a lot needs to be done for YEDF to reach sustainability level.

Table 8: *Rounds of Issue and Amount Borrowed.*

Classification Factor		Frequency	Percent
Rounds of issue	Round 1	101	38.7
	Round 2	108	41.4
	Round 3	38	14.6
	Round 4	9	3.4
	Non-respondents	5	1.9
	Total	**261**	**100.0**
Amount borrowed	Between 10,000 and 100,000	137	52.5
	Between 101,000 and 200,000	89	34.1
	Between 200,001 and 300,000	20	7.7
	Above 400,000	7	2.7
	Non-respondents	8	3.1
	Total	**261**	**100.0**

Table 9: *Attendance to Seminars and Workshops for Information.*

Category	Frequency	Percent
Attended training	221	82.5
Did not attend training	32	11.9
Non-respondents	8	3.0
Total	**261**	**100.0**

Table 10: *Amount Lent out and Repaid (WEF- 2013 and 2012 Report).*

Constitu-ency	No. of Groups		Amount Distributed		Amount due to date		Paid to date		Loan balance		Loan cost/ expenses 5%		Risk level	
	(Millions)													
	Year 20 - -													
	12	13	12	13	12	13	12	13	12	13	12	13	12	13
													%	%
Gatanga	208	253	10.8	13.1	3.15	5.7	6.27	6.9	6.27	6.3	0.54	0.66	<1	25
Kandara	121	151	6.34	8.1	2.2	3.2	3.7	4.2	3.7	3.8	0.32	0.41	<1	11
Kangema	112	116	6.05	6.3	3.76	4.3	3.45	3.3	3.45	2.9	0.30	0.31	23	62
Kigumo	40	42	1.9	2.1	1.5	1.6	0.74	1.2	0.74	0.9	0.10	0.11	23	50
Kiharu	140	157	7.4	8.6	3.6	4.1	3.9	5.1	3.9	3.5	0.3	0.43	<1	24

											7			
Maragua	61	62	3.3	3.3	1.8	2.2	1.6	2.1	1.6	1.2	0.17	0.17	9	36
Mathioya	119	137	5,21	7.1	3.91	4.1	2.23	3.7	2.23	3.7	0.26	0.36	24	24
Total	**801**	**918**	**48.6**	**48.6**	**19.8**	**25.5 (a)**	**22.3**	**26.5 (b)**	**22.3**	**22.3**	**2.01**	**2.43 (c)**		

Table 11: *Correlation analysis.*

Correlations			
		Level of sustainability	Loaning operation procedure
Level of loan sustainability	Pearson Correlation	1	.622
	Sig. (2-tailed)		.024
	N	261	261
Loaning operation procedure	Pearson Correlation	.622	1
	Sig. (2-tailed)	.024	
	N	261	261

Table 12: *Parameter Estimate of Logit Model.*

Loan sustainability		**B**	**S.E.**	**Wald**	**df**	**Sig.**	**Exp(B)**	**95% C.I.for EXP(B)**	
								Lower	**Upper**
Step 1[a]	**Loan operation procedure**	**-.018**	**.292**	**.004**	**1**	**.048**	**.982**	**.554**	**1.741**
	Socio-economic functions	-.838	.264	10.064	1	**.002**	.432	.258	.726
	Borrower characteristic	-.965	.341	8.005	1	**.005**	.381	.195	.743
	Use of technology	-.519	.285	3.317	1	**.069**	.595	.340	1.040
	Constant	1.618	.230	49.475	1	**.000**	5.04		
	Chi-square	22.761				**0.000**			
	Predicted overall performance	73.4*							
	-2log likelihood	344.29							
	Negelkerke R^2	0.402							

Hypothesis testing

The previous results had presented descriptive statistics on government revolving fund repayment and sustainability however, to draw inferences about the population on the basis of the sample, there was need to empirically analyse data using the Pearson correlation coefficient (Table 11).

From the table 12, the loaning operation procedure was significantly correlated to the level of loan sustainability as the significance level was (<0.05). The Pearson correlation coefficient the two variables are (0.622) which was positive and large. This indicates a stronger relationship between loaning operation procedure and level of sustainability of government revolving funds.

Measuring of the multiple logit regression model

The result of regression analysis is as indicated below (Table 12). The regression results of the logit model in Table 13 are reflected by the regression coefficient standard errors t- values, Wald

statistics and p-value. The logit model generates a chi-square value of 22.761 and p-value of 0.000 which was statistically significant because the p= value was less than∞ = (0.05). The results indicated that loan operation procedure had a significant level of 0.045 < 0.05. This called for the rejection of the null hypothesis and adopting the alternative was; there is a relationship between revolving fund institutional operation procedures to loan sustainability in Murang'a County. Result on Table 4.8 above shows the logit model's accuracy of overall prediction was 73.4 %, showing that the overall fit of model was satisfactory. Additionally, the logit model yielded a Negelkerke R2 is 0.402, meaning that 40.2% of the dependent variables can be explained by the independent variable, namely the loaning operation procedures. Asserts that a Negelkerke R2of 0.2 and <1(excluding 1) is satisfactory. Logit model generated a -2loglikelihood value of 344.26 which means that the model was good (a perfect model has a -2loglikeli-hood value of zero and above). The easiest way of assessing Wald statistics is to consider the significance value, and if (< 0.05), it means that the null hypothesis should be rejected; that there is no statistical relationship between the independent variable to the dependent variable. For interpretation of Exp (B) shown on table 4.8 above, results of values from the regression analysis is taken to account, and if the value (>1), then the odd of an outcome occurring increases, and if the figure is (< 1), any increase in the predictor variable leads to a drop in the odd of the outcome occurring. From the table Loan operation procedure as a predictor has a value of Exp (B) at 95% Confidence interval(CI) of 1.741 that implies that, when the predictor is raised by one unit, will increase level of sustainability by 1.741 times. The summary of hypothesis testing is provided below [24-25] (Table 13).

Summary of hypothesis testing

The summary of the hypothesis in Table 4.9 indicates the significance of the coefficients tested. The results showed that the first three variables were significant and hence the null hypotheses were rejected and the alternative hypotheses taking effect. The regression model appears as shown in equation 14 below;

$$\Pr(Y_i) = \beta_0 + \beta_1 X_1 + \varepsilon_i \ldots\ldots (5)$$

The modal summary and ANOVA tests

The ANOVA test which partitions the observed variance based on explanatory variables and the general equation after substituting the coefficients was done. It compares partitions of test significance of explanatory variables (Ayers, 2008). The ANOVA tests results are as indicated in Table 15 below (Table 14):
Source: survey data (2014)

Table 13: *Summary of Hypothesis Testing.*

Hypothesis	Construct	Result	Explanation
H1	There is no statistical significant relationship between micro credit institutions' operation procedures to loan sustainability	Reject null hypothesis	Significant level of 0.045 < 0.05

Table 14*: ANOVA Test.*

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	1.329	4	.332	2.508	.043[b]
Residual	33.912	256	.132		
Total	35.241	260			
a. Dependent Variable: level of sustainability					
b. Predictors: (Constant), borrower characteristic , loaning procedure , socio-economic factors					

The results in table 15 on ANOVA test showed an F- statistics of 2.508, (significance level = 0.043) which were statistically significant at 0.05(P < 0.05). This shows that the model adopted in the study was significant and that, the variables tested fitted well in the model. A multiple logit regression analysis was performed to determine how the independent variables influenced the independent variables. The logit regression model for the study was as shown in equation 4.1 above. Results on Table 4.10 above show that, the first three independent variables were found to be significant. The values of betas were referred to as (β0=1.618, β1= -0.018,. The model is represented below:

$$\Pr(Y) = 1.618 - 0.018X_i$$

From the model above, the coefficient of revolving fund loaning procedures is negative but significant as p-value was less than ∞ = 0.05 on the three variables (Table 14 above) and the predicted probability resulted to high and positive results (Table 15 below). Logit coefficients are log-odds units and cannot be read as Ordinary least squares (OLS) coefficient. To interpret, one needs to estimate the predicted probabilities of Y= 1, using a formula provided below as modelled.

$$Pr\ (Y) = \frac{1}{1 + \left[\frac{1}{e^{(\beta_0 + \beta_1 x_1)}}\right]}$$

The logit regression shows that loaning operation has positive and statistical influence on the level of sustainability. The β-value of (X1) was provided as negative 0.018 as indicated in the above general equation which means in theory that, an increase in loaning operation procedures (X1) by one unit is associated with an increased chance ratio of micro-credit sustainability by 0.83 computed as follows

$$Pr\ (Y) = \frac{1}{1 + \left[\frac{1}{e^{\frac{1}{(1.618 - 0.018)}}}\right]} = 0.83$$

Recommendations

The study made some policy recommendations to loan repayment and sustainability of government revolving funds. To start with, the study underpins the importance of demanding business plans to WEF and YEDF which in the past has been a formality. Business plans help one to organize his/her thoughts, as well as the individual resources. It helps one to communicate the specifics of the business idea to others, including business advisors, potential suppliers and major customers, family and friends. The plan provides a "yardstick" against which one can measure progress during the initial years of the business. Studies have shown that businesses that started with a formal business plan are considerably more likely to succeed than those that go without a written plan. Developing a business plan is the first step to a successful business. This guide will provide an outline in organizing individual effort to gather and evaluate information about the business. Effectively completed business plan must identify the strengths, weaknesses, opportunities, and threats that may affect the business and the strategy one may use to succeed. In view of the above, business plans should be subjected to a thorough adjudication process by the qualified staffs that are able to review and make decisions on certain plans, to demonstrate viability for better loaning operation procedure. Use of business plan as one of the revolving fund loaning operation procedure was found to have a significant relationship to repayment and sustainability. Constituency loan officers, on top of dissemination of information on what makes a business plan, should be in a position to review the plans to measure their viability and advise accordingly before loans are issued. This would help reduce uncertainty in repayment. The credit reference bureau which has been a preserve of the commercial banks should be made compulsory to all revolving fund institutions and should be net-worked to share some important information on borrowers. It should assist in making credit accessible to more people, and enabling lenders and businesses to reduce risks and fraud. Revolving fund institutions play great role in extending financial services within an economy especially to the rural areas. In support of this role, credit bureaus will help lenders to make faster and more accurate credit decisions. The government revolving funds organization management systems should be strengthened to facilitate up-to-date loan repayment statements to lonees follow-up and take action early in case of defaults. Some groups identified prosecution/blacklisting of defaulters as a solution to some of the problems they are currently facing. Due to problems of high risk and high cost of borrowing, uncertainty of repayment capacity on the rural borrower has been reported high due to irregular income streams. Systems should be developed to ensure consistent incomes and expenditure to reduce/remove uncertainty. The study supported the importance of micro-insurance on loans borrowed by both the WEF and YEDF. Micro-insurance according to this study reflected that kind of insurance protection arrangement with low premiums and low coverage. In this context, "micro" refers to the small financial transaction that each insurance policy generates. Micro-insurance is a financial arrangement to protect low-income people against specific perils in exchange for regular premium payments proportionate to the likelihood and cost of the risk involved. The target population typically consists of persons ignored by mainstream commercial and social- insurance funds, as well as persons who have not previously had access to appropriate insurance products. The study emphasized the importance of agricultural insurance scheme among small farmers who have to protect themselves against weather-related risks. Institutions aimed at providing such insurance need to be reinsured by big international companies in order to spread risks beyond the agricultural regions.

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