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LENDING MODEL AND LOAN REPAYMENT AMONG FINANCIAL INSTITUTIONS IN KAKAMEGA MUNICIPALITY, KENYA

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ABSTRACT

The study sough to investigate the effect of lending models on loan repayment in Kakamega Municipality-Kenya. This study was anchored on theory of financial intermediation and uniting theory of microfinance. Research design adopted was correlational research design. The study targeted all the commercial banks and microfinance institutions operating in Kakamega municipality. The study used both qualitative and quantitative data. Data was analyzed using descriptive and inferential statistics. This study found out that group lending has no statistically significant effect on loan repayment while individual lending has statistically significant effect on loan repayment. This study recommends the formulation of policies that will reduce delinquencies and defaults for group lending. Researchers may also use the results of this study to further literature on lending models and loan repayments.

KEYWORDS: *Lending Models, Loan Repayment, Commercial Banks, Financial Institutions*

INTRODUCTION

Background of the Study

Lending model and loan repayment induce interdependence amongst borrowers modelled to specify repayment game. This represents loan repayment returns, a simple instinctive depiction of tradeoff between it and individual lending in reference to repayment rates, which is the game theoretic analysis of repayment decision (Stiglitz, 1990). The mostly adopted lending model is individual and group lending models. Individual Lending is where loan is advanced to a borrower who is solely liable to make payments of principal amount and interest.

Financial institutions provide both technical and business management support including information on payment schedule (Hazeltine and Bull, 2003). Various lending models have been adopted by micro financial institutions in particular. Such models include, Group/Joint lending or simply ‘peer lending groups ‘or ‘Solidarity groups’ (Moshi, 2016). Joint liability and social sanctions can be adopted where group loans are concerned to improve borrower quality through assortative matching – Ghatak (1999; 2000), N'Guessan and Laont (2000), and Sadoulet (2000). Joint liability is an important feature of group lending where the entire group is treated to be in default whenever a member of the group fails to repay loan. Group lending and individual lending attracts a different level of credit risk. Credit risk is high where loans are given to individuals since where there is default; the FI has no one to fall back onto as in the case of group lending.

The risks associated with failure to repay have made lending institutions to gather key information to prove credit worthiness of the borrower (Kay, 2005). The financial institutions in Kenya prefer individual lending which reports a higher rate of default in comparison to group lending, Kodongo and Kendi (2013). Group or individual lending model

affects the level of credit risk resulting to loan delinquency and non-performing loans ((Amott and Stiglitz (1991), Ghatak and Gunnane (1999)). A failure by a group member to repay loan calls for other group members to bail the defaulting one or else the whole group fails to secure loans in the future .The adverse selection risks are reduced by voluntary group formation while moral hazard risks decreases by joint liability through peer monitoring where group members ensure others repay on time. (Armendariz and Moduch, 2010).

The Lemons Model of Akerlof (1970) supports theory of financial intermediation. Financial intermediaries exist because they can reduce information and transaction costs that arise from an information asymmetry between borrowers and lenders. The presence of risky borrowers in a group lending can push the original equilibrium interest rate high probably to put off the safe borrowers from the market. The models group lending delves on are moral hazard and adverse selection. Adverse selection model is when information asymmetry occur, it is believed that one member of the group has more information than counterparts. The advantaged member benefits over the other because of the information. In the case of Moral Hazard, the situation arises when one party benefits over the other by not providing full information. Ghatak and Guinane (1999). The Uniting Theory of Microfinance relates to free riding problem lowers the incentive of members for effort. The members of the group pool their possessions and share the repayment risks hence lowering the chances of default in comparison to individual lending therefore help lessen the challenges facing lenders (Gin´e et al., 2010). Group members are ineligible to access credit should a member default even if the contract does not state the same. Joint liability creates possibility of peer sanction through members' effort decisions where a member of the group shirks the entire group punished hence raising their payment burden. Ghatak and Guinnane, (1999).

Lending Models

Lending models adopted in the study includes;e Group and Individual lending models. Group lending model involves working with clients in small groups of between three and seven where loans are advanced to individuals but the members of the group are jointly held liable should a member face repayment difficulties. (Stiglitz 1990; Varian 1990; Besley and Coate 1995; Morduch 1999b, Armendáriz de Aghion 1999; Armendáriz and Gollier 2000 and Ghatak and Guinnane 1999). "Group loan" means a loan given to an individual within a group where all the members of that particular group (DTMI, Regulations 2008) jointly guarantee. The model provide groups with incentives to monitor, screen and impose each other's loans. The main feature of group lending model can either be with joint liability where members of group are treated as being in default should a group member fail to pay their loan. Joint lending model in the situation of default by a member infers that the group members have to make up the deficit. Joint liability is an example of group model whereby the group is jointly liable in case of any default whenever the group takes out a loan. The weaknesses encountered at the individual level are countered by the collective responsibility and collateral derived from group formation. The purpose of group formation is for collective bargaining power, educating and awareness building peer pressure and social ties (Huppi and Feder, 1990 and Srinivas (2015).

Joint liability refers to members making up the deficit should a member of the group default. The goal is to examine the effectiveness of joint liability to trigger peer monitoring and formation of homogenous group, (Ghatak and Guinane, 1999). A study by Aghion and Morduch (2005, p. 119) indicates that joint liability is the main difference between traditional banking and micro-finance.

Joint liability of group members is a characteristic of Microfinance; nevertheless, most FIs relatively offer

individual loans in preference to group loans. Group lending without joint liability is a model where clients work with groups of about seven members and individual members are personally held liable on loans borrowed. De Quidt, Fetzer and Ghatak (2012), illustrates from 2009 database of MIX Market (Microfinance Information Exchange) with a sample of 715 FIs estimated that solidarity group lending covered 54% against individual lending.

A measurement with the value of loan results to 18% only a reflection that group loans are small since they are advanced to borrowers. Social capital creation because of group lending may induce individual lending. Cull et al. (2009) discloses that lending without joint liability in a low social capital environment performs better than that with joint liability.

The individual lending model where loans are advanced directly to the borrower, the contract is between borrower and lender by signing relevant documents where the borrower is individually liable. Payment decisions of other borrowers are distinct (Bharat and Ogden, (2010)).There is maximum utilization of time by individual borrower compared to group lending in terms of time factor, the group meetings common with group lending schemes in order to gather information weeds off risky members (Gines and Karley (2010)). Individual lending attracts higher interest rates and collateral availability is key. The loan size to individual borrowers is low due to risk of default rate that is high. High-risk borrowers opt for individual loans which attracts high interest rates. Kodongo and Kendi (2013).

Loan Repayment

Financial Institutions have introduced inducements that motivate the borrowers during their engagement with them (Morduch ,1999 and Godquin ,2002). To reduce late or defaults in loan repayment among borrowers, there are various forms of loan repayments adopted including cash back, future Interest Rate reduction, and SMSs reminders sent to borrowers monthly in few days before repayment dates. FIs promise of new loans to borrowers and increased amount of credit acts as a motivation, hence borrowers are always determined to repay the current loan balance within shortest possible time. Large amount of credit offered to the borrower with revised terms is a form of incentive.

The significant mechanism to realize repayment rates which are high in group lending plans is by using “dynamic incentives” alike “progressive lending” (Hulme & Mosley, 1996), the loan size is increased over time and conditional repayment histories considered (Besley & Coate, 1995). The initial amounts of loan are small and gradually increasing the loan size upon repayment. Dynamic incentives mechanism ensures increase of the loan size over time as the borrower satisfactorily make repayments. In order to qualify for future access of loans, the members of the group are indebted to monitor one another.

The social collateral (systems) or bonds constitute a commanding scheme that reinforces repayment among the social sanctions. If embraced, it become an important mechanism that helps members to repay their instalments and sustain the groups and improves the capability of the groups to harness social sanctions and make use of the same to improve the repayment performance of the microfinance lending (Egli, 2004). Among the incentives to ensure higher repayment rates are mandatory savings, regular repayment schedules and joint liability.

Financial Institutions in Kakamega

Financial Institutions in Kenya are licensed and regulated by the CBK in accordance to the provisions of the Banking Act Cap 488. This study focuses on lending models and loan repayment among Financial Institutions operating in Kakamega Municipality. The research involved all the twelve banks which are; National Bank, Kenya Commercial Bank (KCB), Family

Bank, Corporative Bank of Kenya, Barclays Bank, Equity Bank, Standard Chartered, Diamond Trust Bank, Bank of Baroda, Post Bank , Commercial Bank of Africa and Spire Bank. The five microfinance institutions are namely Faulu Kenya, Small and Micro enterprise Program (SMEP), Kenya Women Finance Trust (KWFT), Letshego and Starbuck Limited.

Financial institutions have availed various Lending model concepts in their operations across the world and specifically in Kenya to individuals who seek loans. The available financial services have improved the economic activities of the population thereby resulting to poverty alleviation (Kingston, 2006). Scholars have indicated that there is a relationship between lending model and loan repayment, which is determined by the internal policies adopted by the FIs. However, this relationship is not clearly defined as different scholars report conflicting results from their studies. Moreover, financial institutions in Kakamega are faced with non-performing loans regardless of the lending model adopted. Coupled with the fact that no inferential study has been done on the same issue, it against this backdrop that this study sough to investigate the effect of lending models on loan repayment in Kakamega Municipality-Kenya.

RESEARCH PROBLEM

Financial Institutions have availed various Lending model concepts in their operations across the world to individuals who seek loans. The available financial services have improved the economic activities of the population thereby resulting to poverty alleviation (Kingston, 2006). Scholars have indicated that there is a relationship between lending models and loan repayment, which is determined by the internal policies adopted by the FIs .The mechanisms of group lending, such as peer pressure and group solidarity are touted as instruments to attain favourable repayment rates. However, repayment rates vary dramatically from one program to another, suggesting that various models need to be adopted by various lenders unique to each borrower's characteristics.

The lending model incorporates stabilizing and destabilizing determinants of Loan repayment (Paxton 1996). However, Milgo (2014) asserts that joint liability lending model is only effective in ensuring timely repayments of funds, instilling supervision and administration traits among the group members. Recent theoretical work, however, has cast a sceptical eye on some lending models, suggesting that a range of simpler borrowing schemes offer more effective repayment techniques than the known lending models (Milgo 2014).

The Kenyan banking sector has faced challenges to the point of placing certain banks into receivership. The CBK appointed Kenya Deposit Insurance Corporation (KDIC) as receiver manager pursuant to the provision of section 43(1), 43(2) and 53(1) of the Kenya Deposit Insurance Act 2007. (CBK, Bank Supervision Annual Report, 2017). Non-Performing Loans (NPLs) is the main crisis faced by financial institutions. The Financial Institutions operating in Kakamega County play a major role by offering affordable and available products to their clients. Clients may consider group or individual lending models. Just as other FIs, the banks and MFIs in Kakamega county faces the same factors, Non-Performing Loans is the main challenge regardless of the lending models adopted, which is an indication that there could be some challenges not addressed by either group or individual lending models.

Ochung (2013) identified Firm, Individual/Borrowers and Loan as factors affecting loan repayments with a conclusion that the relationship between firm/group, individuals and the loan repayment is significant among the customers of commercial banks in Kenya. The challenge on loan payment performance persists among the members of the group. Scholars have indicated that joint liability is not the only operational feature of group lending, relatively there might be

additional mechanisms that are risk pooling, spill over effects, and reduced transaction costs by moneylenders where most of the clients prefer borrowing as individuals rather than as a group. However, group methods are cheaper and enables poorer and more remote clients easily access microfinance institutions. ((Ghatak and Guinane, 1999) and (de Quidt, Fetzer and Ghatak, 2012)). Kihimbo (2012) indicates that 6.7% of businesses owners acquire trade credit under group and individual lending model arrangement from their initial capital of about 10% of their new business. Kiragu & Sakwa (2013) delves on how group-lending mechanisms affect the growth of women based establishments in the rural regions, a conclusion that such mechanisms are effective to ensure timely access of funds and proper supervision. However, Milgo (2013) established that groups can enforce repayment by selecting trustworthy peers, monitor use of loan proceeds and assess whether default are due to strategic reasons or out of borrower's control.

RESEARCH OBJECTIVE

To establish the effect of lending model on loan repayment among financial institutions in Kakamega Municipality.

Value of the Study

The findings were of importance to various stakeholders. First, financial institution to better their understanding on lending model and loan repayments among borrowers and to analyze effective lending models based on client preference and loan repayment performance. The information obtained on default rate among borrowers to help Financial Institutions formulate policies to minimize the level of defaults.

The government and Central Bank of Kenya (CBK) benefits from the study by developing specific management policies to enhance effectiveness and sustainability of financial institution in Kenya. This to improve level of performance of non -performing loans thereby reducing default rates to help the relevant parties come up with better and alternative measures to address possible hitches faced by the various consumers of financial services.

Scholars' understanding improved on the development of Financial Institution in Kenya in relation to various type of lending model which play a significant role in future expansion of the sector. The study will further unearth information to understand the relationship between lending models and loan repayment in reference to loan default.

Theoretical and Empirical Review

In this section, the study delves on the main theories that explain group lending model and loan repayments by borrowers. This includes the Theory of Financial Intermediation, Game Theory of Microfinance, Uniting Theory of Finance and Credit risk. Referring to theory of intermediation, recent theories of the economic role of financial intermediaries build on the economics of imperfect information that dates back to the 1970s with the formative contributions of Akerlof (1970), Spence (1973) and Rothschild and Stiglitz (1976). Financial intermediaries exist because they can reduce information and transaction costs that arise from an information asymmetry between borrowers and lenders. Financial intermediaries consequently support the effective functioning of markets, and any factors that affect the amount of credit routed through financial intermediaries that can have significant macroeconomic effects (Spence (1973). Based on asymmetric information and transaction cost, when the parties of the contract do not have equal information, the adverse selection and moral hazard problems arise. The adverse selection arises at the point of distinguishing between high and low risk loan applicants before striking a deal. Moral hazard arises on loans because the borrower is able to keep excess income above a fix payment as indicated on the loan agreement. The information available to customers in terms of income and credit

history makes them have a formed opinion. This theory determines the nature of loan contract either individual or group.

Game theory is a study of decision-making whereby several players' makes choices that possibly affect the interests of other players. The various players select a strategy and a set of payoffs /rewards for every grouping of strategies (Holt and Roth, 2004). John von Neumann and Oskar Morgenstern (1944) invented this theory.

The theory borrows from Grameen lending model of microfinance, the loans are advanced to individual groups of between four and seven members. The members of the group mutually guarantee the repayments of loan and future access of loans depends on successful repayment by the members of group. This model has enhanced social benefits resulting from mutual trust plan of group guarantee arrangement where the group becomes the benchmark to a broader social network. Ledgewood (1999). The free riding and collusion dominates the group mechanism thereby supporting the idea of group lending among Financial Institutions and microfinance institutions. The theory is relevant in this study since the members of the group are jointly liable and action of one affect the whole group. New mechanisms depend on groups of borrowers in order to jointly monitor and enforce contracts themselves. The members of the group collectively guarantee loan repayments and successful repayment by all members of the group is a guarantee to subsequent loans (Wanja, 2015).

Ghatak and Guinnane (1999) illustrate vital mechanisms suggested by a number of theories where joint liability is to improve repayment rate and the well-being of the borrowers who are constrained. In the study, it is evident that joint liability helps lessen the challenges facing lenders.

Empirical Review of Loan Repayment

The FI characteristics relates to the loan facility offered to the borrower, size of the loan repayment period, value of the collateral and number of instalment. (Maigua, 2017). Interest rate, Legal procedures to defaulters, credit rationing, Loan supervision/monitoring are also FI characteristics. The monthly interest charged on the loan matters, where interest rate is lower, the loan uptake rises and vise vasa. A longer loan repayment period is manageable and attractive since the borrower can plan amicably to repay. High interest rates can result to loan disbursement lag and increases transaction costs in borrowing, this may affect repayments (Olomola, 1999). High interest rates charged by financial institutions are the reason for alarming defaults. (Okpugie, 2009) a fact confirmed by Vandael (1993). The information about future credit prospects by the FIs acts as a motivation to the borrowers. These may be lower interest rate, longer repayment period, or large size of loan having met certain criteria. The new arrangements /terms that are better in relation to credit may encourage the borrower to improve on the repayment amounts to shorten current credit duration.

The size of loan is the common measure used by FI to reach out and fulfil their social mission (Bhatt &Tang, 2001; Cull, Demiguc-Kunt & Morduch, 2007). The study indicates that size of loan is a control variable as its thought to affect the costs of operation as well as risk to the FI. The financial institutions incur a fixed cost in loan provision thus making smaller loans more costly in comparison to larger loans (Mersland & Strom, 2012a). Risk is diversified when loans are in small portions since credit is spread out on a number of borrowers. There is negative effect on operating costs when the average size of loan increases. The warnings to members in case of default to cut off future access to funds and incentive to get a larger loan size can improve repayment. Both group and individual lending programs can adopt dynamic incentives. Currently most microfinance institutions require some percentage of the loan saved by clients to withdraw at a future date. The savings may serve as partial collateral should there be any default. The rate of interest charged by the lender, Size of the loan, maturity and disbursement time of the loan impacts on the rate of repayment (Oke et al., 2007).

This influences loan repayment. They include Age, Gender, Level of Income, Level of Education, Credit use (Nawai and Sharrif, 2010) and marital status. The income level of the borrower determines repayment. Income source can be from employment or business. Consistency of income level influences an individual's eligibility of loan liability and performance (Kumar, 2010). FI advances loan based on the ability of the borrower to demonstrate capability of repayment. Level of security may include personal guarantee (Ledgerwood, 1990).

The business characteristics relates to the investment plan financed by the loan facility that influences loan repayment. The nature of business, Business experience, usage of loan Profitability and business location are key. Business located in close proximity to town records high repayment as opposed to those interior (Angaine & Waari, 2014). Business experience and existence is vital. The business in operation for less than one year records low repayment rate as compared to those in existence for above one year.

Individual loans are less costly in comparison to group lending. Individual lending enables FI to reduce loan risk through portfolio diversification. There is potential to attract a range of borrowers thereby leading to growth and strengthening of financial stand in the market. The FI are in a position to meet its Mission, Vision and overall strategic objective (Dellian and Leland, 2006). Cull et al, (2006) in a study compares institutions profitability in 49 countries focusing on 124 institutions, a positive correlation between sustainability and interest yield realized. At high rates individual lending program registered default problems but not for group lending program. In conclusion, typical models of information asymmetry are salient for individual lending but key factors causing information asymmetry have been mitigated by group lending through relationship and social networks. Individual lending is preferred to group lending by FIs in Kenya despite of higher rates of default. Armendariz and Moduch, (2000) illustrates that the guarantor is in a position to pressurize the client to repay the loan. In Individual lending, the borrower saves on time and enjoys privacy on projects they undertake (Maria, 2009). The loan officer according to Dellian et al, (2005) is entrusted with decisions on loan advancement. They screen monitor the individual applying for the loan and settle on mechanism to enforce repayment. The mechanisms to secure high settlement in individual lending programs are mandatory savings, dynamic incentive and regular repayment schedules (Ghatak and Guinnane, 1999).

Laure and Baptiste (2007) delves on the challenges encountered by individual borrowers, the self-guarantee is only possible if the borrower have assets to pledge as surety. To promote loan repayment the various incentive adopted by individual loan program are collateral requirement, guarantors and co-signers with strict enforcement contracts. Regular repayment schedule adopted to address moral hazard behavior whereby undisciplined borrowers screened out. The loan officers are able to identify ways to address emerging challenges, (Armendariz and Morduch, 1999). Borrowers are likely to divert part of loan to urgent personal needs (Gine et al, 2006). There is need by the FI to make frequent visits to the clients in order to ensure borrowers do not divert the funds (Champagne et al ,2007).

The difference between group lending and individual lending program revolves on social network built after a period. This result to right membership in terms of credit worthiness hence eases the loan officer's roles by providing administrative guidance and trainings on loan process, Dellian et al, (2005). Group lending is presumed to improve the rate of repayment through monitoring, peer selection and enforcement. According to Armendariz and Moduch (2000), education and training during group meetings are useful to members with little experience thereby improving the overall financial performance in their businesses. Godquin 2004, Madajewicz (2011) illustrates that risks resulting from

information asymmetry are mitigated because joint liability is linked to group lending. Therefore, if the group member engages in a risky project from a safer one (moral hazard) there is high chances that the members will pay the liability. The challenges associated with group lending as illustrated by Savita, (2007) are additional costs that are formation, trainings on group procedures and increased level of supervision.

Peer group systems overcome the integral difficulties related with credit restrictions and asymmetric information in financial markets. Precisely, in a society where there is lack of security by the borrowers, group lending mitigates problems relating to moral hazard, adverse selection, contract enforcement and state verification. Ghatak et al, (1999) indicates that group lending with joint liability restrains such problems by transferring the monitoring role onto the borrowers themselves. The act of monitoring is less costly to the lender if done by the borrowers since the group members can identify each other easily and trail peers should circumstance arise.

A comparative study by Kendi & Kodongo (2013) of the preference of FI's individual lending against group lending found out that FI's in Kenya have a preference to lend to individuals. In the research, the author analyzed how group (joint liability) lending models affect repayment rates by examining what countervailing processes may affect repayments not analyzed.

Gine and Karlan (2006) indicates that both individual and group lending models has no change in loan repayment. The lending models do not influence high or low repayments. The impact of the models reveals improvement when screening, monitoring and other strategies are applied.

Carpana et al (2010) in a field experiment involving MFIs in India indicates that clients changed from individual to group liability contract, the result revealed significant improvement on loan repayment. This is contrary to a finding by Gine and Karlan (2010), the study reveals threefold result, and first that individual and group-lending model has no effect on repayment performance in either the short-run or long run. Switching group to individual liability resulted to a larger lending group implying more outreach, the total disbursement and profit remained constant because the average loan size was small. Secondly, the loan officers were reluctant to form new group despite no increase in default. Lastly, irrespective of the significance of screening and monitoring strategies, the study does not find value addition economically meaningful to higher default in reference to period and time of the study.

The social penalty strategy adopted by group to defaulting members may result to high repayment than individual lending. A conclusion that failure to put pressure or sanctions against group members in default, loan repayment in group may be high or low compared to individual lending (Bumbie, M. (2013).

Lending models attracts different level of credit risk. The financial institutions in Kenya opt for individual lending despite high default rates as compared to group lending (Kodongo and Kendi, 2013). Loan repayment challenges are critical issue of FIs that has raised concerns (Godquin, 2004). The default rate is high which primary cause of the failure of Financial Institutions is. Adverse selection and Moral hazard problems emanating from information asymmetries have contributed to the same. The lenders cannot predict the outcome of loan repayment rate and therefore to mitigate such problems the lender should develop a rapport with the borrower. This should be through a close monitoring, frequent meetings and an introduction of a reward system based on factors considered (Ochung, 2013). Loan default may be by choice or circumstance surrounding at the time (Hoque, 2000), Ozdmir and Boran (2004)). Joint liability in group lending is debatable; members of a group would prefer individual loans since repercussions on group loans in case of default could

be unbearable.

Financial Institutions have adopted positive incentives to motivate borrowers. They are categorized into future Interest Rate reduction, Trainings, Cash Back and flexible duration of the loan. A study by Banerjee et al. (1994) illustrates how joint liability lending has helped to overcome the ex-ante moral hazard problem an element of monitoring, by demonstrating how local information aids the borrowers' role as monitors since they can enforce higher fines on their peers whenever there is defaulting. The promoters of lending believe that the laid down approaches are effective since members of the group are in a better position to select trusted

Peers monitor how the group member uses the loan proceeds and impose repayment well than the lending organization. The members of the group are also in a better position to assess whether default is due to intentional motives or are out of the borrower's control. Thus, the group can enforce repayment in the case of strategic default, and in the case of an honest default, it can offer insurance services (Kumar, et al, 2012).

The element of joint liability linked with group lending reduces liquidity risk of default but on the other hand, problem of free riding emanates. The problem dictates the liquidity risk effect hence results to unattractiveness of group lending with repeat of projects, indefinitely the joint liability feature makes it easy for the members of the group to exercise peer sanction. This rather makes the group lending attractive in comparison to individual lending (Besley & Coate (1995).

Reviews of literature covered above are studies on lending from different perspectives. The researcher noted the hence the study on lending model and loan repayment among Financial Institutions in Kakamega Municipality.

MATERIALS AND METHODS

The researchers adopted descriptive research design to enable data collection and description of current state of affairs of the respondents. The target population was seventeen financial institutions operating in Kakamega Municipality(twelve banks and five microcredit finance institutions) as per the Kakamega County Integrated Development Plan 2018-2022 Pg. 38.

Sekaran (2006) in the study, identifies that the process of data collection involves putting together and measuring information in reference to all variables of interest in an established systematic manner by allowing the study to adequately answer the research question, hypothesis testing and conduct an evaluation of the outcome. The study comprised both primary and secondary data. The primary data collection employed self-administered questionnaire to the respondents. The researcher adopted drop and pick later method of collection. The study used both qualitative and quantitative data. Questionnaire was used to collect qualitative data while quantitative data was collected from secondary source which is the Central Bank's Bank Supervision Annual Report from 2007 - 2017.

Mosby (2009) defines data analysis as sorting, coding and tabularizing information needed to achieve quantitative or qualitative analyses in reference to research design and suitable to the data. The data analysis tool depended on the data type either quantitative or qualitative (Walsh & Wigen, 2003). Data collected from the banks were analyzed using descriptive and inferential statistics. In particular, descriptive statistics encompassed percentages, means and standard deviations while inferential statistics was generated from regression analysis.

The regression models were as follows;

$$Y = b_0 + b_1 grp_1 + b_2 instG + \varepsilon$$

$$Y = \alpha_1 + \alpha_2 ind_l + \alpha_2 InstL + \varepsilon$$

Where;

Y= loan repayment

ß = 0, 1, 2 and 3 are the regression coefficients

Grpl = group loan model

Indl = individual loan model

InstG = financial institution characteristics on group lending

InstI = financial institution characteristics on individual lending

ε = error term

DATA ANALYSIS, RESULTS AND DISCUSSIONS

Responses from commercial banks constituted 52.3% of the total response while responses from microfinance institutions constituted 47.7% of the total responses. This study further found out that majority of respondents has more than 10 years working experience with their institution. Respondents who had worked for less than 5 years were only 2.3%, those between 6-10 years were 43.2%, 11-15 years were 45.5% and above 16 years were 9.1%. These responses distributed by their titles are as shown in the table below;

Table 1: Distribution of respondents by title

Respondents by Titles	Frequency	Percent
Bank Manager	5	11.4
Credit Officer	32	72.7
Account Relationship Manager	7	15.9
Total	**44**	**100.0**

Source: Researcher's Analysis (2018)

Analysis of lending models adopted both by commercial banks and microfinance institutions revealed that 11.4% of the financial institutions only offer group lending. This group comprised the microfinance institutions. 15.9% of the financial institutions only offer individual lending and this group comprised the commercial banks. However, 72.7% of the financial institutions offer both Group and Individual Lending. This shows clearly that these two models are popular amongst commercial banks and microfinance institutions.

Descriptive Statistics

This section contains descriptive statistics for all the variables used in this study.

In this study, institutional characteristic was an independent variable. The choice of this independent variable was that it measures the unique features of the bank that influence loan repayment that is unique to each lending model. Respondents were subjected to 7 statements that were measuring financial institutional characteristics. The scale on financial institution characteristics measured the indicators using a five likert-scale. The analyses of seven indicators of financial institution characteristics are presented in Table below.

Table 2: The Extent to which Financial Institution Characteristics Affect the Loan Repayment Granted under Individual Lending

Institutional Characteristics		
	Mean	**SD**
Size of loan	2.84	1.06
Repayment period	3.2	1.02
Number of Instalments	3.09	1.01
Interest rate	3.2	1.11
Legal procedures to defaults	3.23	0.83
Credit rationing	2.95	1.06
Loan supervision/monitoring	3.57	1.32

Source: Researcher's Analysis (2019)

In response to the opinion on the extent to which size of loan affected individual loan repayments, majority of the respondents indicated that loan size affect loan repayment moderately with a mean of 2.84 and a SD of 1.06. On whether repayment period affect loan repayment for individual borrowers, the findings showed that repayment period affect loan repayment for individual borrowers to a moderate extent with a mean of 3.2 and a SD of 1.02. Number of instalments indicates the amount a borrower is committing to pay over a given period of time. This could put a lot of strain on the borrower. In response to whether number of instalments affects individual loan repayments, the findings show that it affects to a moderate level with a mean of 3.09 and a SD of 1.01.

Other bank characteristics such as Interest rate, Legal procedures to defaults, Credit rationing was also found to affect individual loan repayment moderately with a mean of 3.2, 3.23 and 2.95 and a SD of 1.11, 0.83 and 1.06 respectively. Loan monitoring/supervision were found to affect loan repayment to a great extent with the mean of 3.57 and a SD of 1.32.

Table 3: The Extent to which Financial Institution Characteristics Affect the Loan Repayment Granted under Group Lending

Institutional Characteristics		
	Mean	**SD**
Size of loan	3.48	2.91
Repayment period	2.93	0.9
Number of Instalments	3.07	0.82
Interest rate	3.45	0.87
Legal procedures to defaults	3.09	1.03
Credit rationing	3.23	0.99
Loan supervision/monitoring	3.84	1.24

From the findings recorded in the table above, respondents agreed that loan size, affect loan repayment under group loaning to a great extent with a mean of 3.48 and a SD of 2.91. This is in contrast with the findings for loan repayment under individual loaning model where the extent was just moderate.

On the extent to which loan supervision/monitoring affect loan repayment under group lending, majority agreed that it affects it to a great extent. The findings on extent of the effect of loan monitoring on loan repayment for both models were 3.84 and 3.57 for group model and individual model respectively. Just like in individual lending model, the findings of the study indicates that repayment periods, number of instalments, interest rates, legal procedures and credit rationing affect loan repayment moderately with means of 2.93, 3.07, 3.45, 3.09 and 3.23 respectively.

Group lending is an innovation meant to avail credit to the poor households and at the same time address the problem of information asymmetry in lending. In this study, this lending model was treated as independent variable. The choice of this independent variable was that it measures the unique features of group lending that influence loan repayment that is unique to group lending model. In order to obtain data on the effect of group lending model on loan repayment, respondents were asked to respond to 6 statements that were measuring group lending model. The scale on this variable measured the indicators using a five likert-scale. The results of analyses of six indicators of group lending are presented in Table below.

Table 4: Descriptive results Group Lending Model and Loan Repayments

	Strongly Disagree		Disagree		Uncertain		Agree		Strongly Agree		Total	
	N	%	N	%	N	%	N	%	N	%	Mean	SD
Group membership	4	9.10%	5	11.40%	2	4.50%	22	50.00%	11	25.00%	**3.7**	**1.23**
Joint liability	4	9.10%	6	13.60%	5	11.40%	17	38.60%	12	27.30%	**3.61**	**1.28**
Group reputation	0	0.00%	7	15.90%	8	18.20%	28	63.60%	1	2.30%	**3.52**	**0.79**
Credit rationing	1	2.30%	8	18.20%	12	27.30%	22	50.00%	1	2.30%	**3.32**	**0.88**
Future access to credit	1	2.30%	12	27.30%	8	18.20%	21	47.70%	2	4.50%	**3.25**	**0.99**
Group financial training	0	0.00%	8	18.20%	2	4.50%	24	54.50%	10	22.70%	**3.82**	**0.99**

Lending groups are formed voluntarily. On group membership, 50% of respondents agreed that it affects loan repayment with 25% of the respondents strongly agreeing. On the other hand, 11.40% of the respondents disagreed that group membership affects loan repayment with 9.10% totally disagreeing. In total 75% of the respondents agreed that group membership affects loan repayment. 11.40% of the respondents were uncertain. This result is in line with Al-Azzam and Sarangi (2005).

Concerning joint liability, 38.60% of the respondents agreed with 27.30% strongly agreeing that joint liability affects loan repayment. On the contrary, 13.60% of the respondents disagreed with 9.10% voicing strong disagreement that joint liability affects loan repayment. In summary, this measure scored a mean of 3. 61 and a SD of 1.28 indicating that majority of the respondents hold the view that joint liability affects loan repayment. That means, in group lending, individuals who borrow loans are liable for themselves as well as for other individual borrowers in the group. This explains why respondents agreed that joint liability affects loan repayment.

On whether a group's reputation affects loan repayment, 63.60% of the respondents agreed with 2.30% strongly agreeing that a group's concern for its reputation affects loan repayment. However, 15.90% disagreed and 18.20% were uncertain. This result showed that majority (65.90%) of the respondents agreed that group reputation affects loan repayment.

Response from bank officials on whether credit rationing affect loan repayment, opinions were split right in the middle, with 52.3% of the respondents agreeing, 27.30% of the respondents were uncertain and only 20.3% disagreed that credit rationing affects loan repayment. Therefore, the mean response was 3.32 with a SD of 0.88 indicating that slightly over 50% of respondents agreed that credit rationing affect loan repayment. A similar response concerning whether future access to credit affect loan repayment was found with 52.2% agreeing, 18.20% were uncertain while 29.6% disagreed.

Group financial training appears to be one of the measures that directly affect loan repayment with 73.20% of the respondent agreeing. Only 4.50% were uncertain and 18.20% of the respondents held a contrary opinion that group financial training affect loan repayment. In summary, the mean response was 3.82 with SD of 0.99.

The table below indicates the findings of analysis of the extent to which measures of individual lending model affects loan repayment.

Table 5: Individual Lending Model and Loan Repayments

	Strongly disagree		Disagree		Uncertain		Agree		Strongly agree		Total	
	N	%	N	%	N	%	N	%	N	%	Mean	SD
Availability of loan collateral	0	0.00%	7	15.90%	2	4.50%	22	50.00%	13	29.50%	3.93	1
Availability of co-signers/guarantors	2	4.50%	4	9.10%	7	15.90%	18	40.90%	13	29.50%	3.82	1.11
Individual borrower's reputation	1	2.30%	12	27.30%	6	13.60%	23	52.30%	2	4.50%	3.3	1
Credit rationing	2	4.50%	16	36.40%	11	25.00%	13	29.50%	2	4.50%	2.93	1.02
Future access to credit	4	9.10%	10	22.70%	12	27.30%	18	40.90%	0	0.00%	3	1.01
Individual financial training	1	2.30%	18	40.90%	7	15.90%	11	25.00%	7	15.90%	3.11	1.19

The nature of loan contract has been established to affect loan repayment. This study sought to find out the effect individual lending model have on loan repayment. To achieve this objective, individual lending model was measured using six unique features of individual lending model. The scale on this variable measured the indicators using a five likert-scale. The results of analyses of six indicators of individual lending are presented in Table below.

Concerning whether availability of loan Collateral affects individual's current loan repayment, 50.00% of the respondents agreed with 29.50% strongly agreeing that availability of collateral affects loan repayment. On the contrary, 15.90% of the respondents disagreed and 4.50% were uncertain whether loan collateral affects loan repayment. In summary, this measure scored a mean of 3.93 indicating that respondents agreed with this assertion.

With regard to availability of guarantors, this study found out that 40.90% agreed with 29.50% of the respondents strongly agreed that it affects loan repayments. However, 13.60% disagreed with this assertion while 15.90% were uncertain about its effects. Whereas lenders take into account guarantorship and referrals, few studies have attempted to examine how personal loan guarantees and referrals affect loan repayment. In an attempt to fill this gap, the results of this study established that 70.40% of respondents agreed that availability of quarantorship affects loan repayments. This finding is consistent with that of Charles and Mori (2016) which established that meaning that referees/guarantors have a positive effect in ensuring customers pay on time.

On whether an individual's reputation affects loan repayment, 52.30% of the respondents agreed with 4.50% strongly agreeing that an individual's concern for his/her reputation affects loan repayment. However, 27.30% disagreed with 2.30% strongly disagreeing while 13.60% were uncertain. This result showed that 56.80% of the respondents agreed that group reputation affects loan repayment. Response from bank officials on whether credit rationing affect loan repayment, majority felt that it does not with 40.9% of the respondents disagreeing, while 25.00% were uncertain.

Table: 6: The Extent to Which Individual Repay Loans

	No Extent		Little Extent		Moderate Extent		Great Extent		Very Great Extent		Total	
	N	%	N	%	N	%	N	%	N	%	Mean	SD
Individual loan borrowers always repays loan on time	0	0.0%	0	0.0%	1	2.3%	28	63.6%	15	34.1%	4.32	.52
Individual loan borrowers always delays to repay	0	0.0%	33	75.0%	10	22.7%	1	2.3%	0	0.0%	2.27	.50
Individual loan borrowers always failed to repay	1	2.3%	28	63.6%	11	25.0%	3	6.8%	1	2.3%	2.43	.76

Concerning whether individual borrowers repay loans on time, 97.7% of the respondents agreed that individual loan borrowers repay loans on time with a mean of 4.32 and a SD of .52. On the other hand, 2.3% respondents agreed that borrowers delay to repay on time and 9.1% agreed that Individual loan borrowers usually default on repayments. This means that individual loan borrowers usually repay loans on time.

Table: 7: The Extent to Which Group (Joint Collateral) Borrowers Repay Loans

	No Extent		Little Extent		Moderate Extent		Great Extent		Very Great Extent		Total	
	N	%	N	%	N	%	N	%	N	%	Mean	SD
Group loan borrowers always repays loan on time	1	2.3%	3	6.8%	16	36.4%	20	45.5%	4	9.1%	3.52	.85
Group loan borrowers always delays to repay	1	2.3%	2	4.5%	17	38.6%	15	34.1%	9	20.5%	3.66	.94
Group loan borrowers always failed to repay	0	0.0%	3	6.8%	23	52.3%	10	22.7%	8	18.2%	3.52	.88

Concerning whether individual borrowers repay loans on time, only 54.6% of the respondents agreed that individual loan borrowers repay loans on time with a mean of 3.52 and a SD of .85. On the other hand majority of the respondents (20.5%) agreed that group borrower delay to repay on time and 18.2% agreed that group loan borrowers usually default on repayments. This means that group loan borrowers affect loan repayments negatively and therefore they increase non-repayment of loans.

In order to statistically confirm the findings from the respondents, simple regression analysis was done for each independent variable against the dependent variables and the results are as follows.

A simple linear regression was run to determine the equation connecting Group Lending Model and Loan Repayment. The aggregate on Group Lending Model was determined as a summation of the scores on individual items in Group Lending Model scale. Similarly, the scores on the Loan Repayment scale were also determined. The simple regression result is as shown in table below.

Table: 8: Model Summary of Group Lending and Loan Repayment

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.135[a]	.018	-.005	.55544

a. Predictors: (Constant), Group Components Combined

The regression equation above show that a unit change in individual lending results into an increase (standardised coefficient .135, P = .381) in loan repayment by 1.8%.

To show whether the regression equation was statistically significant, ANOVA was computed as provided in the table below;

Table 9: ANOVA Table

ANOVA[a]						
Model		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
1	Regression	.241	1	.241	.783	.381[b]
	Residual	12.957	42	.309		
	Total	13.199	43			

a. Dependent Variable: Loan Repayment
b. Predictors: (Constant), Group components combined

The ANOVA table shows that linear regression model does not significantly fit the data with F (1, 42) = .783 at $p<0.05$ (p= .381). This means that, group lending has no statistically significant effect on loan repayment among financial institutions at Kakamega Municipality.

The coefficients of the model are as shown below;

Table 10: Table of Coefficients on Group Lending and Loan Repayment

Coefficients							
Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**	**95.0% Confidence Interval for B**	
	B	**Std. Error**	**Beta**			**Lower Bound**	**Upper Bound**
(Constant)	2.810	.542		5.180	.000	1.715	3.905
Group components combined	.129	.146	.135	.885	.381	-.165	.424

a. Dependent Variable: Loan Repayment

A simple linear regression was run to determine the equation connecting Individual Lending Model and Loan Repayment. The aggregate on Individual Lending Model was determined as a summation of the scores on individual items in Individual Lending Model scale. Similarly, the scores on the Loan Repayment scale were also determined. The simple regression result is as shown in table below.

Table 11

Model Summary				
Model	**R**	**R Square**	**Adjusted R Square**	**Std. Error of the Estimate**
1	.433[a]	.187	.168	.50538

a. Predictors: (Constant), Individual components combined

The regression equation above show that a unit change in individual lending results into a reduction (standardised coefficient -.433, P = 0.003) in loan repayment by 18.7%.

To show whether the regression equation was statistically significant, ANOVA was computed as provided in the table below;

Table 12: ANOVA

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.472	1	2.472	9.677	.003[b]
	Residual	10.727	42	.255		
	Total	13.199	43			

a. Dependent Variable: Loan Repayment
b. Predictors: (Constant), Individual components combined

The ANOVA table shows that linear regression model significantly fits the data with F (1, 42) = 9.677 at $p<0.05$ ($p= .003$). This means that, group lending has a statistically significant effect on loan repayment among financial institutions at Kakamega Municipality.

The coefficients of the model are as shown below;

Table 13: Coefficients

Coefficients								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B	
		B	Std. Error	Beta			Lower Bound	Upper Bound
1	(Constant)	4.401	.367		11.992	.000	3.660	5.141
	Individual Loan Model	-.335	.108	-.433	-3.111	.003	-.553	-.118

a. Dependent Variable: Loan Repayment

A simple linear regression was run to determine the equation connecting financial institution characteristics and Loan Repayment granted under individual lending. The aggregate on financial institution characteristics was determined as a summation of the scores on individual items in financial institution characteristics scale. Similarly, the scores on the Loan Repayment scale were also determined. The simple regression result is as shown in table below.

Table 14

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.434[a]	.188	.149	.51113

a. Predictors: (Constant), Individual characteristics combined, Individual components combined

The study findings established the model is reliable in estimating the probability of loan repayment at 18.8%. In order to test significance of the model, ANOVA was done and the results indicate that the model is significant ($p=0.014$) as shown in the table below.

Table 15 ANOVA Table

ANOVA[a]						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2.487	2	1.244	4.761	.014[b]
	Residual	10.711	41	.261		
	Total	13.199	43			

a. Dependent Variable: Loan Repayment
b. Predictors: (Constant), Individual characteristics combined, Individual components combined

Coefficients of the regression equation for the joint effect of individual model and bank characteristics on loan repayment are as shown in the table below.

Table 16: Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.321	.494		8.748	.000
	Individual components combined	-.334	.109	-.431	-3.055	.004
	Individual characteristics combined	.024	.099	.035	.246	.807

a. Dependent Variable: Loan Repayment

The regression model was as follows;

$Y = b_0 + b_1IndL + b_2instG + \varepsilon$

ß = 0, 1, 2 are the regression coefficients

Indl = individual loan model

InstG = financial institution characteristics on individual lending

ε = error term

Therefore, the equation can be rewritten as:

Y = 4.321-.334IndL + 0. .024instI + ε

From the equation, it is indicated that individual model has a negative effect on loan repayment and is statistically significant while institutional characteristics have a positive effect on loan repayment.

A regression was run to determine the joint effect of bank characteristics and group lending model on loan repayment. The results are summarised as follows.

Table 17: Model summary, Group Lending, Bank Characteristics and Loan Repayment

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.149[a]	.022	-.026	.56109

a. Predictors: (Constant), Group components combined, Group characteristics combined

The study findings established the model estimates the probability of loan repayment at 2.2%. In order to test significance of the model, ANOVA was done and the results indicate that the model is not significant (p=0.633) as shown in the table below.

Table 18: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.291	2	.146	.462	.633[b]
	Residual	12.908	41	.315		
	Total	13.199	43			

a. Dependent Variable: Loan Repayment
b. Predictors: (Constant), Group components combined, Group characteristics combined

Coefficients of the regression equation for the joint effect of individual model and bank characteristics on loan repayment are as shown in the table below.

Table 19: Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.672	.649		4.120	.000
	Group characteristics combined	.052	.131	.062	.397	.693
	Group components combined	.121	.149	.127	.817	.419

a. Dependent Variable: Loan Repayment

The regression model was as follows;

$Y = b_0 + b_1 grpL + b_2 instG + \varepsilon$

ß = 0, 1, 2 are the regression coefficients

Indl = group lending model

InstG = financial institution characteristics on group lending

ε = error term

Therefore, the equation can be rewritten as:

$Y = 2.672 + 0.121 grpL + \varepsilon$

From the equation, it is indicated that group lending model and institutional characteristics has a positive effect on loan repayment but not statistically significant. This could mean that group lending and bank characteristics play an important moderating role on loan repayment.

DISCUSSION ON FINDINGS, CONCLUSION AND RECOMMENDATIONS

The findings of this study suggest that Individual lending are less costly in comparison to group lending. Individual lending enables FI to reduce loan risk through portfolio diversification. There is potential to attract a range of borrowers thereby leading to growth and strengthening of financial stand in the market. This explains why individual lending is preferred by financial institutions in Kakamega County where all of the banks offered individual lending and only three offered group lending.

Moreover, the results of this study may suggest, consistent with (Kodongo and Kendi, 2013) that Individual lending is effective than group lending in alleviating the risk of delinquencies and default among financial institution clients. It therefore confirms financial institutions preference for individual lending to group lending.

Group lending is presumed to improve the rate of repayment through monitoring, peer selection and enforcement. However, according to the findings of this study, group lending had no significant effect on loan repayment. Therefore, findings of this study are consistent with the findings of Musyoka (2013) and partially with those of Gine and Karlan (2006) with respect to group lending.

This study sought to examine effect of lending model on loan repayment among commercial banks in Kakamega County-Kenya. The Loan repayment was the independent while independent variables were group lending model, individual lending model and financial institutions characteristics. This chapter summarizes the research findings on the descriptive and inferential statistics. Summary of discussions of the study objective has also been done including the assessment of the meaning of the results. The conclusions and recommendations relate directly to the specific research objective.

This study found out that not many financial institutions offer group lending whereby only three banks offered both group lending and individual lending. Majority of the respondents were credit offices that are mandated to manage credit at the financial institutions as such had the required experience to respond to the questionnaire.

To examine the effect of group lending model on loan repayment, the study established that group lending model has a positive but not significant effect with loan repayments. Specifically, a unit increase in group lending increases loan repayments by 0.022 units. This could mean that group lending model has a moderating role on loan repayments.

On the effect of individual lending model on loan repayment, this study established a negative and significant effect. That is a unit increase in individual loan reduces non-repayment by 0.188 units.

This paper empirically tests the theoretical predictions about loan repayment in group lending and individual lending programs. The study employed data from bank and microfinance officers to test the significance of individual lending and group lending on loan repayments. Though not overwhelmingly manifested, individual lending programmes have a ensures loan are timely paid while the positive effects of group lending was not statistically significant, suggesting that group lending could play an important moderating role on loan repayment.

Based on the findings of the study, this study concludes that Group lending has no statistically significant effect on loan repayments, but plays a moderating role on loan repayments. This means that if financial institutions want to lend members of a group, they need to ensure joint liability and that member of a group should not be related so as to avoid collusion. Secondly, individual lending reduces delinquencies and defaults, therefore lenders should ensure that individual borrowers have collateral since availability of collateral reduces non-performing loans. Institutions that only rely on guarantors will still experience non-loan repayment since availability of a guarantor does not guarantee loan repayment.

The study limited itself to lending model and loan repayment among Financial Institutions in Kakamega Municipality - Kenya. The researcher therefore recommends further research on other deposit taking institutions like Savings and Credit Cooperatives (SACCOS) and Youth Enterprises Development Fund (YEDF). Another proposed area to further study is comparative analysis on lending model and loan repayment among Financial Institutions in other urban centres.

REFERENCES

1. *Armendáriz de Aghion, B. (1999). On the design of a credit agreement with monitoring. Journal of Development Economics, 60(1), 79-104.*
2. *Armendáriz de Aghion, B., & Morduch, J. (2000). Microfinance beyond group lending. The Economics of transition, 8(2), 401-420.*
3. *Armendáriz de Aghion, B., & Morduch, J. (2005). The economics of microfinance. The MIT Press, Cambridge, Massachusetts Association of Microfinance Institutions in Kenya: http://www.aFIkenya.com*
4. *Banerjee, A., Besley, T., & Guinnane, T. (1994). Thy neighbor's keeper: the design of a credit cooperative with theory and a test. Quarterly Journal of Economics,109 (2), 491–515.*
5. *Besley, T. & Coate, S. (1995). Group lending, loan repayments and social collateral, Journal Of Development Economics, 46 (1), 1–18*
6. *Besley, T. (1995). Savings, credit and insurance. Handbook of development economics, 3,2123-2207. Amsterdam: North-Holland.*
7. *Bumbie, M. (2013). Determinants of repayment performance of group and individual lending In Microfinance: A case study in Upper West Region of Ghana.*
8. *Dul, J & T Hak (2008) Case Study Methodology in Business Research*
9. *Egli, D. (2004). Progressive lending as an enforcement mechanism in microfinance programs. Review of Development Economics, 8, 505-520.*
10. *Ghatak. (1999). Group lending, local information and peer selection. Journal of Development Economics, 60:27-50.*
11. *Ghatak, M. & Guinnane, T.W. (1999). The economics of lending with joint liability: theory And practice. Journal of Development Economics, 60:195-228.*
12. *Gine, X. and Karlan. (2006). Group versus Individual Liability: Evidence from a Field Experiment in the Philipines. Working Paper.*
13. *Gine X. and Dean S. Karlan. (2010). Group Verses Individual Liability: Long Term Evidence from Philippine Microcredit Lending Groups.*
14. *Kendi, G. L. & Kodongo, O. (2013) Individual lending versus group lending: An evaluation with Kenya's microfinance data. Review of Development Finance 3: 99–108*
15. *Kiragu, E. M., & Sakwa, M. (2013). Effect of group lending mechanisms on enterprise of rural women in Kenya: A survey of Kenyenye district, Kisii county.*
16. *Interdisciplinary Journal of Contemporary Research in Business.Vol4. No 12. Kothari, C. (2006, 2014). Research Methodology, methods and techniques (2nd & 3rd Ed). New Delhi: New Age International.*
17. *Milgo, (2013). Effect of joint Liability lending models on loan repayments among Micro Finance Institutions in Kenya*

18. *Mugenda, O. M.; Mugenda, A. G. (1999). Research method: Quantitative and Qualitative approaches. Acts press, Nairobi, Kenya.*
19. *Ochung,(2013).Factors affecting loan repayment among customers of commercial banks in Kenya, case of Barclays Bank of Kenya, Nairobi County*
20. *Okpugie, G. (2009). High Microfinance Interest Rates Cause Loan Defaults in Nigeria, The Guardian, Nigeria.*
21. *Olomola, A.S. (1999). The nature and determinants of rural loan repayment performance in Nigeria: The case of FADU's micro-credit programme. NISER monograph series NO Ibadan.*
22. *Stiglitz, J. E. (1990). Peer monitoring and credit markets. The world bank economic review, 4(3), 351-366.*
23. *Van Tassel, E. (1999). Group lending under asymmetric information Journal of Development Economics, 60, 3-25.*
24. *Wanja, (2015) The Effect of Microfinance services on the Financial Performance of Small and Medium Enterprises in Embu County, Kenya*
25. *Yunus, M. (1999): Banker to the Poor – Micro-Lending and the Battle against World Poverty, Pacific Affairs, New York.*