

# Implication of Microenterprises' and Entrepreneurs' Characteristics on Microfinance Credit Demand in Kakamega County, Kenya

Obulinji, Humphreys Were

Department of Geography, Egerton University, P.O. Box 536-20115 Egerton, Kenya

Email of author: [humphreysobulinji2015@gmail.com](mailto:humphreysobulinji2015@gmail.com)

## Abstract

The microenterprise (ME) sector is key in Kenya's development process. In Kakamega County, the sector employs 30% of the labour force and continues to register remarkable growth than the agricultural and wage-employment sectors. The sector, therefore, contributes significantly to households' incomes and livelihoods. Despite this, the sector exhibits varied entrepreneurs' and MEs characteristics. Moreover, the sector is faced with a myriad of problems and constraints that affect its development. For instance, entrepreneurs' inaccessibility to credit from mainstream financial institutions has been one of the major constraints to the development of the sector. However, to address this, microfinance institutions (MFIs) have developed credit-friendly programmes, preferably for entrepreneurs in self-help groups (SHGs). This notwithstanding, there still exist variations in MFIs-credit demand and utilization levels among entrepreneurs. It is however, not clear to what extent entrepreneurs' and MEs characteristics vary and their role in influencing MFIs-credit demand and utilization levels among entrepreneurs in Kakamega County, which the study sought to investigate. Descriptive research design was used in this study, with a sample of 267 MFIs-credit assisted entrepreneurs drawn using stratified and proportional random sampling techniques. A semi-structured questionnaire, observations and key informant interviews were used to collect data. Data was analyzed using: descriptive statistics; chi-square, correlation and regression analysis. The study found out that significant differences ( $P < 0.05$ ) exist in entrepreneurs' and MEs' characteristics. Moreover, the study found out that even though these factors significantly ( $P < 0.05$ ) influence credit demand levels among entrepreneurs, they only explain 24.9% of credit demand among entrepreneurs. To improve credit demand and utilization levels among entrepreneurs, the study recommends policies that will: promote education to make entrepreneurs less risk averse; encourage entrepreneurs to diversify their sources of income; and aim to improve business incomes and in particular, prices and markets for MEs products and services.

**Keywords:** Microenterprises, Entrepreneurs, Microfinance Institutions, Credit and Demand Levels.

**DOI:** 10.7176/JPID/62-04

**Publication date:** July 31<sup>st</sup> 2023

## 1. Introduction

In developing countries, including Kenya, the microenterprise (ME) sector is becoming important in the development process. The sector provides solace to majority of the labour force who cannot find jobs in the formal sector. For instance, the sector employs 30% of the labour force and contribute significantly to households' livelihoods (African Development Bank Group [ADB], 2013; Government of Kenya [GoK], 2018a; Grameen Bank, 2020). However, lack of credit has been cited as one of the major factors inhibiting the growth and development of the sector (Grameen Bank, 2020). In Kenya, access to credit from mainstream financial institutions such as banks and Government's grassroots funds by entrepreneurs operating MEs is constrained by high interest rates and structural rigidities, respectively, associated with these credit sources (Association of Microfinance Institutions, 2010; Central Bank of Kenya [CBK], 2007; GoK, 2018a; Kenya Bankers Association, 2011; Kiraka et al, 2013; Waithatu, 2013; Wanzala, 2012). According to Micro and Small Enterprise Federation (2013), Kenya Vision 2030 and The Big Four Agenda, provision of credit is partly meant to improve business capitalization levels and help MEs transit into small, medium and large scale enterprises in the long-run.

The development of the ME-sector in Kenya and in particular Kakamega County is expected to play a major role in deagrarianization of their economies, given that the development of both agriculture and the formal wage employment sectors continue to register comparatively slow growth rates. Thus, the ME-sector, which is characterized by varied entrepreneurs' and businesses' characteristics, paints a more promising future through which majority of the increasing labour force can secure gainful employment and enhance as well as diversify entrepreneurs' households' incomes and livelihoods (GoK, 2018a; 2018b).

To promote the growth of the ME-sector, both the National and Kakamega County Governments, in collaboration with other stakeholders, have embarked on programmes to address problems bedeviling the sector (GoK, 2013; 2018a; 2018b). This aims at raising the much needed and scarce resources in the development of the ME-sector. For instance, development of required infrastructure, training of labour in required skills, provision of credit through grassroots programs, among others, continue to gain momentum (GoK, 2018a; 2018b). Notably, to

address inaccessibility to credit by entrepreneurs in Kakamega County, microfinance institutions (MFIs) have come up with friendly-credit programmes to support entrepreneurs, preferably those who are members of self-help groups (SHGs), operating MEs (GoK, 2018b). This espouses the emerging policy change in development approach, where development partners prefer working directly with grassroots institutions in development programmes. In spite of this, variations in demand and utilization of MFIs-credit among entrepreneurs is evident in Kakamega County, posing a challenge to credit providers on how the uptake of credit can be enhanced (GoK, 2013). Even though this is the case, it is however not clear the extent to which variations in entrepreneurs' and MEs characteristics influence MFIs-credit demand and utilization levels among entrepreneurs in the study area. This information is lacking, yet so critical in any National and County Governments' interventions aimed at improving entrepreneurs' credit demand and utilization levels. This existing knowledge gap informed the purpose of this study, which sought to find out the extent to which entrepreneurs' and MEs characteristics influence MFIs-credit demand levels among entrepreneurs in the study area.

## 2. Theoretical Framework

This study was informed by three theories: the Social Work and Community Radicalism Theory (Alinsky, 1971; Loney, 1983; Midgley, 1986a), Flexible Specialization Model (Piore & Sabel, 1984) and Leon Walras Demand Theory, as cited by Omboi (2011). According to Midgley (1986a), the Social Work and Community Radicalism Theory espouses the emerging policy change in development approach, i.e. from Community Development paradigm to community participation in development, where development partners prefer working directly with grassroots institutions in development programmes and in this case, MFIs and SHGs (ABDG, 2013; Bwalya, 1985; Galtung et al, 1980; Kitching, 1982; Pickering et al, 1996; UNDP, 2007; Midgley 1986b; 1986c; World Bank, 2011; 2013). The reorientation in approach to development is partly in view of the fact that most government ministries, organizations and development programmes: embody a planner's top-down view of rural development; lack effective administrative frameworks to channel development resources at the local level; lack adequate funding due to reducing domestic revenue base; and are characterized by red-tape syndrome associated with government bureaucracy (CARE International, 2000; DFID, 2000; Leys, 1996; Wanzala, 2012; GoK, 1999; 2008a; 2008b; 2008c).

The flexible specialization model as originally proposed by Piore and Sabel (1984), explains how MEs operate in a dynamic, flexible and varied market environment, utilizing either internal or external resources or both to develop characteristic changes besides compete, survive and grow in a competitive market. Schmitz (1989) and Sengendo et al (2001) have used this model in studying entrepreneurs' and MEs' varied and characteristic changes, resulting from utilization of resources, which are critical in any policy intervention in the development of the sector.

Leon Walras Demand theory as cited by Omboi (2011), analyses the relationship between the demand for goods or services and prices. According to Walras, price of a commodity influences its demand. Neo-Walras theorists have used this theory to show that an inverse relationship exists between the price of a commodity and the quantity demanded of the product, other things held equal (Lipsey et al., 1987; Livingston & Ord, 1994; Mudida, 2003; Saleemi, 2000). In addition, Livingston and Ord (1994), note that the demand of a product/service, besides its price, depends also on other factors. First, taste or preference of an individual, which may be influenced by factors such as age, sex, education or religion. In the credit market, this consideration is on implicit and explicit costs of credit, which are added costs to business operators and have to be considered when making a decision to borrow or not to borrow and from which source. Second, availability of other goods. This applies more to close substitutes like in this case, consideration of borrowing credit from commercial formal institutions, formal government subsidized institutions/programmes, or informal credit markets. If formal markets are expensive, borrowers are likely to turn to alternative or informal markets, vice versa. Last, the size of a household's income. If the income increases, they will be able to buy more. This argument holds only for necessity goods such as credit borrowing to finance business operations, otherwise it will not apply to inferior goods. The broad conclusion of this econometric model on analysis of demand is that quantity demanded of a commodity is a factor of income, price of the commodity and price of related commodities, among other non-economic factors. Thus, the three theories provided a framework that informed this study on: policy change in development; the dynamic, competitive and varied MEs production market; and factors that influence entrepreneurs' demand for credit.

## 3. Research Methodology

### 3.1. Study Area

Butere, Mumias, Matungu and Khwisero Sub-counties, which comprised the study area, are located in Kakamega County, Kenya (Figure 1). Agriculture is the mainstay of the sub-counties' economies, employing 95.4% of the labour force and contributing over 50% of households' incomes. However, both incomes and output in the agricultural sector are on the decline. This is attributable to: reducing land sizes; continued use of traditional farming practices; and high cost of modern farm inputs (GoK, 2013; 2018b). Thus, approximately 60% of the populations in the sub-counties are living below the nationally defined poverty income line of Kes. 5,995 per adult

per month (KNBS, 2018; GoK, 2018a; 2018b). Other sectors that contribute to employment and incomes to the labour force are wage employment (0.3%) and informal sector and other activities (4.3%). The Informal sector, comprising mainly MEs, continues to register over 20% annual growth rate, which is remarkably higher compared to other sectors (GoK, 2013). Mumias Town accounts for the lion's share of MEs (22%) due to its location within the sugar cane scheme and proximity to former Mumias Sugar Company (GoK, 2008b; 2018b). Despite the important role the ME-sector plays in the economy of the study area, the sector is faced by a myriad of problems, including: market constraints, lack of required entrepreneurial skills, among others. Also, lack of credit has been identified as one of the major constraints to the development of the sector. However, a number of MFIs have come up with 'friendly' credit programmes that target, preferably members of SHGs engaged in small scale farming and MEs (GoK, 2013; 2018b)

### 3.2. Research Methodology

Descriptive research design was used in this study. According to Mugenda and Mugenda (2003), such a design enables observation of phenomena in its natural setting in order to report, describe, test hypotheses concerning current status of subjects being investigated. It also enables integration of qualitative and quantitative methods of data collection and analysis. The target population comprised 1779 members of SHGs (entrepreneurs) operating MEs located in 40 town/ market centres (Figure 1) and who had secured and serviced (or were still servicing) loans from five MFIs, including: K-Rep, Butere Financial Services Association, Ekeru Financial Services Association, Khwisero Financial Services Association and Pioneer Development Programme between July, 2014 and June, 2015. Stratified and proportional random sampling techniques was used. Stratification was based on source of MFI- credit, town/market centre in which the MEs were located and type of ME. A sample size of 15% (267 credit-assisted entrepreneurs) of the target population was determined using Kathuri and Pals (1993) formula (page 5), with 241 covered in the survey (representing 90% of the selected sample). According to Statistical Package for Social Scientists (SPSS), a sample of 200 and above which is scientifically selected is fairly objective, representative and can be used to infer about population parameters (Chappell, 2003; Rice, 2003).

$$n = \frac{\chi^2 NP (1-P)}{\sigma^2 (N-1) + \chi^2 P (1-P)}$$

Where: n = (required sample size), N = (given population), P = (population proportion assumed to be 0.5),  $\sigma^2$  = (degree of accuracy, assumed to be 5% (0.05)) and  $\chi^2$  = (chi-square at one degree of freedom, which is 3.841). Substituting these values:

$$n = \frac{(3.841)^2 (1779) \times (0.5) (1-0.5)}{(0.5)^2 (1779 - 1) + (3.841)^2 (0.5) (1 - 0.5)} = 267.$$

Data was sourced from entrepreneurs and MFIs through a pre-tested and refined semi-structured questionnaire. Observations and informal interviews with 15 (18%) Key Informant selected using stratified random sampling provided additional primary data. Secondary data was sourced from: business records for owners of MEs; records kept by officials of SHGs; credit officers of MFIs; sub-counties' officials of the Ministry of Labour, Social Security and Services; and officials of local *Jua Kali* Associations. This was done through reviewing and purchase of relevant official records. Data was analyzed through the use of descriptive statistics, cross-tabulations and chi-square statistic. Specifically, descriptive statistics were used to determine entrepreneurs' and MEs' variables. Whereas, chi-square was used to test if selected entrepreneurs' and MEs' variables were statistically different. Analysis and interpretations were both inductive, deductive and context bound. For instance, data was categorized and analyzed based on: source of credit (MFI); ME capitulation levels; and ME category. Correlation and regression analysis were also used to establish strengths and relationships between entrepreneurs' and MEs' characteristics and amounts of credit secured from MFIs. Such analyses ensured effective and valid comparisons to be made between issues investigated in this study.

## 4. Results and Discussion

### 4.1. Entrepreneurs' Socioeconomic Profile

A number of entrepreneurs' socioeconomic characteristics are discussed, including: age-sex distribution, years of schooling, number of income sources and types and levels of occupational training received.

#### 4.1.1 Age-Sex Distribution

The finding of the study shows that 0.4%, 48%, 94.2% and 5.4% of the entrepreneurs covered by the study were in the age brackets 18-24, 33-40, 25-50 and 51+ years, respectively. Further, it was observed that significant differences ( $X^2_{cal} > X^2_c$ ) in entrepreneurs' sex based on ME type exist. Also, both males and females of varying ages were operating businesses across the different types of MEs, implying there is no specific domain for males or females in terms of business type.

The low percentage of entrepreneurs in the age bracket 18-24 years is attributable to the fact that 53.1% of

the entrepreneurs were from four graduates (section 1.4.1.2), who are faced with challenges in meeting MFIs' loaning conditions. For instance, one must be operating a business to secure a loan, yet majority of them had just completed school. Moreover, the apparent absence of female entrepreneurs in the age bracket 18-24 years, imply that either: (a) female entrepreneurs are faced with more challenges than their male counterparts in meeting the conditions for accessing loans from MFIs or (b) female entrepreneurs rely on other credit sources other than MFIs to start or fund their businesses. In support of this analogy, the study found out that 19.1% of entrepreneurs, who were females, depended on their spouses to provide start-up capital, in addition to other financial assistance to their businesses. In this study, however, the proportion of female entrepreneurs was quite significant. They accounted for 48.5% of the total sample surveyed, though 94% of them were aged between 25 and 50 years, courtesy of MFIs friendly-loaning conditions. GoK (2018b), point out that the number of women accessing loans in Kakamega County is on the increase, courtesy of the expanding MFIs loan network in both rural and urban areas, with comparatively favourable loaning conditions. Further, entrepreneurs who were in the age bracket 51+ years were also fewer because they were found either to rely more on non-institutional sources of credit such as past savings or income from other investments. Partly in support of this, research data shows that 46.2% of entrepreneurs aged 51 years and above had more than one occupation.

In spite of entrepreneurs' age-sex characteristics discussed above, data in Table 1 shows that entrepreneur's age was not a significant factor ( $P>0.05$ ) influencing differences in the total loan amounts secured from MFIs by entrepreneurs. This is because MFIs do not restrict entrepreneurs from accessing loans based merely on their age. Despite this, the results in Table 1 confirms that entrepreneurs' age was significantly correlated ( $P<0.05$ ) with the total loans secured by entrepreneurs from MFIs. This implies that as the age of the entrepreneurs advances, they tend to secure more loans because of increased entrepreneurs' total incomes. Table 11 confirms this by showing that entrepreneur's age was significantly correlated with entrepreneur's number of income sources, ME age, ME capitalization and income levels ( $P<0.05$ ). Thus, combinations of these factors create ground for an entrepreneur to be in a position to secure higher levels of credit.

Further, Table 2 indicates that sex of the entrepreneur was not a significant factor ( $P>0.05$ ) in influencing differences in the total loans secured by entrepreneurs from the MFIs. This is because conditions for accessing MFIs loans are not discriminatory to age and sex, but so long an entrepreneur meets MFIs loaning conditions.

#### **4.1.2. Education and Training**

Research data shows that despite significant differences ( $P<0.05$ ) in entrepreneurs' education levels, it is evident that 3 (1.2%) entrepreneurs had no form of schooling and were females operating businesses within the trade category. Notably, 29.8%, 53.1%, 1.7% and 14.2% of the entrepreneurs had attained education levels of up to standard 8 (or below), form 4 (who were the majority), form 6 and college/university, respectively. In spite of this, research finding shows that some MEs, particularly those in the service and artisan categories that require specific skills, were owned/operated by entrepreneurs who had attained post-secondary education and training. Chi-square results in Table 3 shows that education was a significant factor ( $P<0.05$ ) in influencing differences in the total loan amounts secured by entrepreneurs. Moreover, entrepreneurs' education levels were significantly correlated with total loan amounts secured by the entrepreneurs. This is because education makes entrepreneurs become less risk averse in addition to increasing entrepreneurs' awareness of existing loan sources. This finding corroborates evidence from studies by Buss (1999), Komitu (2019), Smith, et al. (2001) and World Bank (2001).

#### **4.1.3. Number of Income Sources**

Chi-square results show that the differences in entrepreneurs' number of income sources based on entrepreneurs' age distribution was significant ( $X^2_{cal}>X^2_c$ ). Further, it is observed that 35.3% of the entrepreneurs depended only on ME business, contributing 100% of their total incomes. However, 60.2% had one additional source of income, with MEs contributing 36.6% of their total income. The rest, accounting for 4.6%, had two additional sources of incomes, with the MEs accounting for 29.5% of their total incomes.

Chi-square results in Table 4 show that entrepreneurs' number of income sources based on age was a significant factor ( $P<0.05$ ) in influencing differences in the total loan amounts secured. Despite this, entrepreneurs' number of income sources was not significantly correlated ( $P>0.05$ ) with total loan amounts secured. It is, thus, the level of income earned that influences entrepreneurs' credit amounts secured rather than the number of income sources. This observation is attributed to the fact that entrepreneur's number of income sources is independent of their total incomes earned.

## **4.2. Microenterprises Characteristics**

### **4.2.1. Types of MEs**

Businesses within the informal sector are broadly classified into three categories: trade, service and artisan/manufacturing (GoK, 2013a). The findings of the study show that MEs in the service, trade and artisan categories accounted for 17.0%, 72.6% and 10.4%, respectively, of the sample studied, indicating that those in trade are the majority. A part from site-businesses, itinerary-businesses were also captured in the sample studied, all of which were in the trade category, accounting for 5.8% of the sample. Itinerary businesses included: cattle

trading, distribution and hawking of manufactured food and non-food items by well-established shopkeepers, rotational market traders in fish and second-hand clothes.

#### 4.2.2. Microenterprise Age

The youngest and oldest business establishments were found to be 5 years and 33 years, respectively, with a mean age of 8 years. Further, it is evident that MEs in the age-group 1-5 years, accounted for 18% of the sample and those over 16 years and above were very few, with none within the service category. Moreover, it is observable that as age increases the frequency of MEs reduces, implying that very few survive for a longer period of time. This finding corroborates that of Central Bureau of Statistics (CBS, 1999), which found out that most MEs do not survive to see their 10<sup>th</sup> birthday.

Despite this age limit, majorities of MEs that were aged 15 years and above were in the trade category and comprised 41.8% of the sample. Further, 84.2% of MEs that were aged over 10 years were operated by entrepreneurs who mainly depended on MEs as their only occupation and source of income. This implies that there is every reason for greater determination to ensure that the MEs do not fail on the part of the entrepreneurs who rely on them as their only source of income and livelihood. The findings of the study show that there was significant differences ( $X^2_{cal} > X^2_{cal}$ ,  $\alpha = 0.05$ ) in ME age, with 74.2% of MEs surveyed having ages between 6 and 15 years.

Further, the results in Table 5 shows that the total loans secured by entrepreneurs from MFIs significantly varied ( $P < 0.05$ ) with the age of MEs. Also, the total loans secured and business age were significantly correlated ( $P < 0.05$ ), implying the older the ME the higher was the total loan secured. Table 11 shows that ME age was significantly correlated with ME income, implying that the older the ME the higher was the income. Further, it is evident from Table 11 that the age of MEs and that of the entrepreneurs were significantly correlated, implying the older the entrepreneur the longer s/he has been in business. Moreover, it is evident in Table 11 that business age was directly related to the age of the entrepreneur, especially for entrepreneurs who depended on ME business as the only occupation and source of income.

#### 4.2.3. MEs Capitalization Levels

The average start-up capital for businesses in the trade, service and artisan categories was found to be Kes. 15,570.31, Kes 30,460.74 and Kes 21,731.30, respectively, comparatively, making it easier for entrepreneurs to start businesses within the trade category. These findings have implications to all stakeholders in Kenya's ME development policy framework and in particular, those engaged in provision of training services and credit facilities to the informal sector activities. For instance, it is imperative for MFIs and other creditors to apportion credit levels based on ME financial needs. The findings of the study indicate that there exist low and varied ME capitalization levels based on ME category, with the lowest and highest being Kes 4,000 and Kes 3,000,000, respectively. In the same order, these levels were observed in MEs within the service and trade categories. This finding corroborates that of CBS (1999), which observed that the capitation level for most MEs hardly exceeds Kes. 5million mark. Also, the Micro and Small Enterprise Act 2013 classifies MEs in Kenya as those businesses with a capitation of up to Kes. 5 million and employing not more than 10 people. The mean ME capitalization level was lowest and highest within the artisan/manufacturing and trade categories, respectively. Further, the study found a wide range in capitalization levels among MEs within the trade category, with majority of the MEs found on both extremes of the continuum and exhibiting comparably larger amounts of business stock than assets, contrary to those in artisan and service categories.

Both Table 6 and Table 11 show that ME capitalization level was significant ( $P < 0.05$ ) in influencing differences in the total amount of credit secured from MFIs by entrepreneurs. In support of this, CBS (1999) also observed that the level of business capitation was an indicator of the size of loan amounts secured. Further, ME capitalization was significantly correlated ( $P < 0.05$ ) to total amounts of credit secured by entrepreneurs from MFIs. The implication of these findings is that those entrepreneurs with higher investment/income levels are likely to consume more loans, vice-versa. Further, it is observed from Table 11 that ME capitalization was significantly correlated with entrepreneurs' education level, number of employees as well as employment volume and ME monthly income. As noted in Table 2(b), the educated are less risk averse, hence they are likely to consume higher loan amounts and invest more than the uneducated.

#### 4.2.4 MEs Income Levels

Overall, MEs' minimum and maximum net monthly incomes were found to be Kes. 3,000 and Kes. 40,000, respectively, with itinerary businesses registering higher incomes, averaging Kes. 25,500. This is because itinerary trading comparatively exhibit spatially broader and rotational markets. Significant differences ( $P < 0.05$ ) in incomes were observed in all MEs categories, with the highest range and variability observed within MEs in the trade category. It was also evident that average ME income levels increased with rising average levels of ME capitalization, though this may not be the case for some MEs in food provisioning and itinerary cattle trading. Such businesses exhibited low capitalization levels with high income ratio. Table 7 shows that ME income was significantly correlated ( $P < 0.05$ ) with the total loans secured by entrepreneurs. Moreover, ME income levels significantly influenced ( $P < 0.05$ ) the differences in the loans amounts secured by entrepreneurs.

Further, Table 11 shows that ME incomes were significantly correlated with ME capitalization levels,

entrepreneurs' education levels, the number of employees and the total employment volume. These findings suggest that the higher the ME income levels, the more the entrepreneurs are able to secure and service higher amounts of credit. Also, the significant correlation between ME capitalization and income suggests that MEs with higher capitalization levels will generate higher business income. Hence, a combination of higher ME income, ME capitalization and entrepreneur's education levels will influence entrepreneurs to secure higher amounts of credit (Kira & He, 2012; Smith et al., 2001).

#### 4.2.5. MEs Employment Levels

It was observed that MEs on average employed two people, with the total number of people employed varying based on ME type and capitalization levels. The average number of people employed and the monthly average employment volume generated in man-hours increased with rising levels of capitalization across all the three types of MEs. Comparatively, however, MEs in the service, trade and artisan categories generated on average 1036 man-hours, 407 man-hours and 574 man-hours, respectively, per month. The high man-hours generated within the service sub-sector is attributed to the fact that the sub-sector employs comparatively: more people given the nature of their production, requiring a higher labour to capital ratio (Mukras, 1993); and businesses operate for longer hours in a day and (seven) days in a week. The findings show that the average monthly man-hours generated from the businesses were found to be statistically different ( $P < 0.05$ ) based on ME type. Table 8 and Table 11 show that the number of people employed and the man-hours (employment volume) generated were significantly correlated with ME income and capitalization levels, ME age, entrepreneurs' age and the total credit secured by entrepreneurs. Thus, the higher the employment level the higher total amount of loans secured.

#### 4.2.6. The Relative Strength of Selected Entrepreneurs' and MEs' Variables in Explaining Total Credit Secured by Entrepreneurs

Besides establishing the role of entrepreneurs' and MEs variables in influencing variability as well as the total credit secured by entrepreneurs, a multivariate regression model was used to establish the relative strength of selected entrepreneur's and ME variables in explaining total credit secured by entrepreneurs. A linear regression model requires the data for both the dependent variable and independent variable(s) to be in ratio form. Thus, independent variables such as entrepreneurs' sex, number of income sources and level of education, whose data is categorical, were excluded from the model. Moreover, a logistic regression model, which requires the independent variable(s) to be either in categorical or ratio form, could not be used to analyze the influence of entrepreneurs' sex, number of income sources and education level because the data for the dependent variable (credit) is in ratio form. Yet, logistic regression model requires the dependent variable to be in categorical form with two alternate attributes that can be assigned numerical values. Hence, the following multivariate linear regression model was used to establish the relative strength of selected entrepreneur's and MEs' variables in explaining total credit secured by entrepreneurs.

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + e.$$

Where:  $y$  = depended variable (total credit secured by the entrepreneur).

$a$  = Constant

$b_i$  = beta coefficients

$x_i$  = independent variables [ME employment volume per month ( $x_1$ ), ME total number of people employed ( $x_2$ ), ME income level ( $x_3$ ), ME capitalization level ( $x_4$ ), ME age ( $x_5$ ) and Age of entrepreneur ( $x_6$ )].

$e$  = Error (stands for factors not included in the model that may have some influence on the depended variable).

The independent variables were entered into the regression model through step-wise regression method. The study also considered the effect of multi-collinearity using tolerance test. Any independent variable that had a tolerance value of more than 0.8 was removed from the model. This is because tolerance test ranges from 0-1 and the closer a variable is to 1, the more related the variables are to the dependent variable. This diagnostic test helped to ensure that the above model used provided robust coefficients. Further, prior tests were done to ensure there was no autocorrelation among independent variables included in the model.

Tables 9 and 10 show the results of the multivariate linear regression analysis from which a number of conclusions are drawn. First, on the basis of significant values, it is only ME income among the independent variables that was found to significantly influence ( $P < 0.01$ ) total credit secured by the entrepreneur. Second, when beta values are considered, the influence of various independent variables on dependent variable in order of magnitude was as follows: ME income ( $\beta = 0.340$  or 34%), ME employment volume per month ( $\beta = 0.213$  or 21.3%), ME capitalization level ( $\beta = 0.179$  or 17.9%), number of people employed in a ME ( $\beta = 0.133$  or 13.3%), ME age ( $\beta = 0.083$  or 8.3%), and entrepreneurs' age ( $\beta = 0.100$  or 10.0%). Three, a summary of the regression model in Table 10 shows that the coefficient of determination ( $R$ ) was 0.499 and that of  $R^2$  was 0.249 (which is equivalent of 24.9%), indicating that the independent variables accounted for only 24.9% of the observed change in the dependent variable. The implication of the regression result is that, even though the independent factors in the regression model were significantly correlated ( $F = 0.000$ ) to total credit secured by entrepreneurs, they only accounted for 24.9% of the dependent variable (total credit secured by the entrepreneurs). Hence, other factors not

considered at the initial conceptualization of the model could also be relevant in explaining levels of total credit secured by entrepreneurs. For instance, factors such as group dynamics, MFIs loaning conditions, entrepreneurs' proximity to MFIs, interest rates charged on loans, among others, could be relevant in explaining entrepreneurs' total credit secured. Discuss these findings.

## 5. Conclusions and Recommendations

### 5.1. Conclusions

Two major conclusions are made from the findings of this study. First, there exist significant differences ( $P < 0.05$ ) in entrepreneurs' socioeconomic profile and ME characteristics based on ME type, including: entrepreneurs' age, sex, education levels, skills attained, number of income sources; and ME age, capitalization, income and employment volume. Majority of the entrepreneurs operating credit-assisted MEs were in the age interval 25-50 years. Female entrepreneurs accounted for almost a half of the sample studied, courtesy of MFI friendly-loaning conditions. Entrepreneurs operating credit-assisted MEs had attained levels of education that range from primary to university level, with majority of them being form four graduates. In spite of this, MEs, particularly those in the service and artisan categories that require specific skills, were owned/operated by entrepreneurs who had attained post-secondary education and training. Thus, education and specific skills remain critical in operation of some MEs. A substantial number of the entrepreneurs relied entirely on ME business as their source of income, while others had one and or two other occupations. Microenterprises in the trade, service and artisan categories were the majority, moderate and least in number, respectively. Majority of MEs were aged between 6 and 15 years, with the youngest and oldest being 5 years and 33 years, respectively, with a mean age of 8 years. Microenterprises exhibited varied capitalization levels, reducing in frequency as capitalization levels increased. The net monthly ME incomes varied too, with incomes increasing with rising levels of capitalization. The average employment level per ME was 2 people, with employment level increasing with rising ME capitalization levels. Comparatively, MEs in the service category generated the highest monthly employment volume.

Second, despite significant differences ( $P < 0.05$ ) in entrepreneurs' and MEs' characteristics, only entrepreneurs' numbers of occupations and education levels; and MEs' age, capitalization, income and employment levels were found to be significant factors ( $P < 0.05$ ) influencing differences in total credit secured by entrepreneurs. Entrepreneurs' age and sex were not. In addition: entrepreneurs' age, education levels; and ME age, income and employment levels were significantly correlated ( $P < 0.05$ ) with total credit secured by entrepreneurs. Entrepreneurs' sex and number of income sources were not. Despite a number of MEs and entrepreneurs' factors being significant in influencing differences in the amount of credit secured, it was established that the change in the depended variable (credit) attributed to the independent variables (ME income, ME employment volume per month, ME capitalization level, ME total employment, ME age, entrepreneurs' age and entrepreneurs' total number of dependants), though significant ( $F = 0.000$ ), explained only 24.9% of the dependent variable. Notably, 75.1% of the depended variable is accounted for by other independent factors not investigated in this study.

### 5.2 Recommendations

Based on the key findings and conclusions of this study, the following recommendations are suggested to National and County Governments, MFIs and entrepreneurs that will have a positive bearing on entrepreneurs' demand for credit (from MFIs):

1. National policies that touch on promotion of education of the citizens are essential. This will make graduates, at whatever level of schooling and who want to join the ME sector, less risk averse and therefore consume more credit. Education also increases entrepreneurs' awareness to available sources of credit.
2. Entrepreneurs should be encouraged to diversify their sources of income by venturing into other economic activities so as to increase and stabilize their incomes. Higher and stable incomes impact positively on entrepreneurs' credit demand.
3. Policies that can offer better prices and wider markets for ME products and services, both at the domestic and international levels are essential. Besides raising MEs incomes, improved markets will also grow ME production capacity (capitalization) levels. Improved ME incomes and capitalization will impact positively on entrepreneurs' credit demand.
4. Further research needs to be done to unravel other factors, other than entrepreneurs' and MEs' characteristics covered by this study, that may be critical in influencing entrepreneurs' demand and utilization of credit.

## References

- Alinsky, S. (1971). *Rules for Radicals*. New York: Random House.
- African Development Bank Group (2013). At the Centre of Africa's Transformation: Strategy, ADBG. [afdb.org/en/about-us/mission-strategy/afdb-strategy](http://afdb.org/en/about-us/mission-strategy/afdb-strategy).

- Bwalya, M. C. (1985). 'The Integrated Development Approach within the Context of Decentralization in Zambia'. In Kiro, F.G (Ed). *Challenging Rural Poverty*. Trenton: Africa World Press, pp. 183 – 186.
- Buss, T. F. (1999). Micro enterprise in international perspective: an overview of issues. *International Journal of Economic Development*, 1(1), 1-28.
- Central Bureau of Statistics (1999). *National Micro and Small Enterprise Baseline Survey 1999, Survey Results*. Conducted by the Central Bureau of Statistics (CBS), International Center for Economic Growth (ICEG) and K-Rep Holdings Ltd. Nairobi, Kenya.
- CARE International. (2000). *Sustainable Livelihoods: Operationalizing Participatory Ways of Applying Sustainable Livelihoods Approaches*. USA. CARE International.
- Chappell, A. (2003). 'An Introduction to Geostatistics'. In Clifford, N. J. and G. Valentine (Eds). *Key Methods in Geography*. London: SAGE Publications Ltd.
- Central Bank of Kenya. (2007). *The Cost of Banking in Kenya*. Nairobi: CBK.
- Department for International Development. (2000). *Sustainable Livelihoods: Current Thinking and Practice*. London: DFID.
- Galtung, J., O'Brien, B., & Prieswerk, R. (Eds). (1980). *Self-reliance: A Strategy for Development*. London: Bogle L'Ouverture.
- Government of Kenya. (2008a). *National Development Plan*. Nairobi: Government Printer.
- Government of Kenya. (1999). *Poverty Eradication Plan*. Nairobi: Government Printer.
- Government of Kenya. (2002). *Butere-Mumias District Development Plan*. Nairobi: Government Printer.
- Government of Kenya. (2008b). *Mumias District Development Plan*. Nairobi: Government Printer.
- Government of Kenya. (2008c). *Butere District Development Plan*. Nairobi: Government Printer.
- Government of Kenya. (2012). *Independent Electoral and Boundaries Commission (IEBC): National Assembly Constituencies and County Assembly Wards Order*. Nairobi: Government Printer.
- Government of Kenya. (2013). *Kakamega County Development Profile (Kenya Vision 2030): Towards a Globally Competitive and Prosperous Nation*. Ministry of Devolution and Planning, May 2013. Nairobi: Government Printer.
- Government of Kenya. (2018a). *Third Medium Term Plan (2018-2022) – Transforming Lives: Advancing Socio-economic Development Through the “Big Four”*. Nairobi: Government Printer.
- Government of Kenya. (2018b). *Kakamega County Integrated Development Plan 2018-2022*. Kakamega: County Government of Kakamega.
- Grameen Bank. (2020). Credit Lending Models. <http://www.grameen.com/credit-lending-models/#>.
- Kitching, G. (1982). *Development and Underdevelopment in Historical Perspective*. London: Methuen.
- Kathuri, J. N., & Pals, A. D. (1993). *Introduction to Educational Research*. Njoro: Egerton Education Media.
- Kenya Bankers Association. (2011). *Commercial Banks Loans and Interest Rates*. Nairobi: KBA.
- Kira, A. R., & He, Z. (2012). The Impact of Firm Characteristics in Access of Financing by Small and Medium-sized Enterprises in Tanzania. <https://www.semanticscholar.org/paper/The-Impact-of-Firm-Characteristics-in-Access-of-by-Kira-He/ead96ed8580d1d8611c872dbfba0e25d78f908a>.
- Kiraka, R., Kobia, M., & Katwalo, A. M. (2013). 'Micro, Small and Medium Enterprise Growth and Innovation in Kenya: A Case Study on the Women Enterprise Fund'. ICBBERF Research Report No 47/13, Dakar.
- Kenya National Bureau of Statistics. (2018). 2015/16 - *Basic Report: Kenya integrated Household Survey Budget*. Nairobi: KNBS.
- Komitu, L. (2019). Determinants of financial credit uptake among women owned self-help group (SHG) projects in Samburu County, Kenya. *International Academic Journal of Information Sciences and Project Management (IAJISPM)*. 3 (4), 488-517. ISSN 2519-7711.
- Loney, M. (1983). *Community against Government*. London: Heinemann.
- Lispsey, R. G., Steiner, P. O & Purvis, D. D. (1987). *Economics (8th ed)*. New York: Harper and Row.
- Livingston, I., & Ord, H. W. (1994). *Economics for Eastern African*. Nairobi: East African Educational publishers.
- Leys, C. (1996). *The Rise and Fall of Development Theory*. Nairobi: EACP.
- Midgley, J. (1986a). 'Community Participation: history, concepts and controversies'. In Midgley, J., A. Hall., M. Hardiman and D. Narine. *Community Participation, Social Development and the State*. London: Methuen and Co. Ltd. pp. 13 – 44.
- Midgley, J. (1986b). 'Community participation, the state and social policy'. In Midgley, J., A. Hall., M. Hardiman and D. Narine. *Community Participation, social development and the State*. London: Methuen and Co. Ltd. pp. 145 – 160.
- Midgley, J. (1986c). 'Participation and Social Work Services'. In Midgley, J., A. Hall., M. Hardiman and D. Narine. *Community Participation, Social Development and the State*. London: Methuen and Co. Ltd. pp. 106 – 144.
- Mukras, M. S. (1993). *Elementary Economics: Theory Application and policy*. Nairobi: East Africa Publishers.
- Mudida, R. (2003). *Modern Economics*. Nairobi: Focus Publication Ltd.
- Mugenda, A. G., & Mugenda, O. M. (2003). *Research Methods, Quantitative and Qualitative Approaches*. African

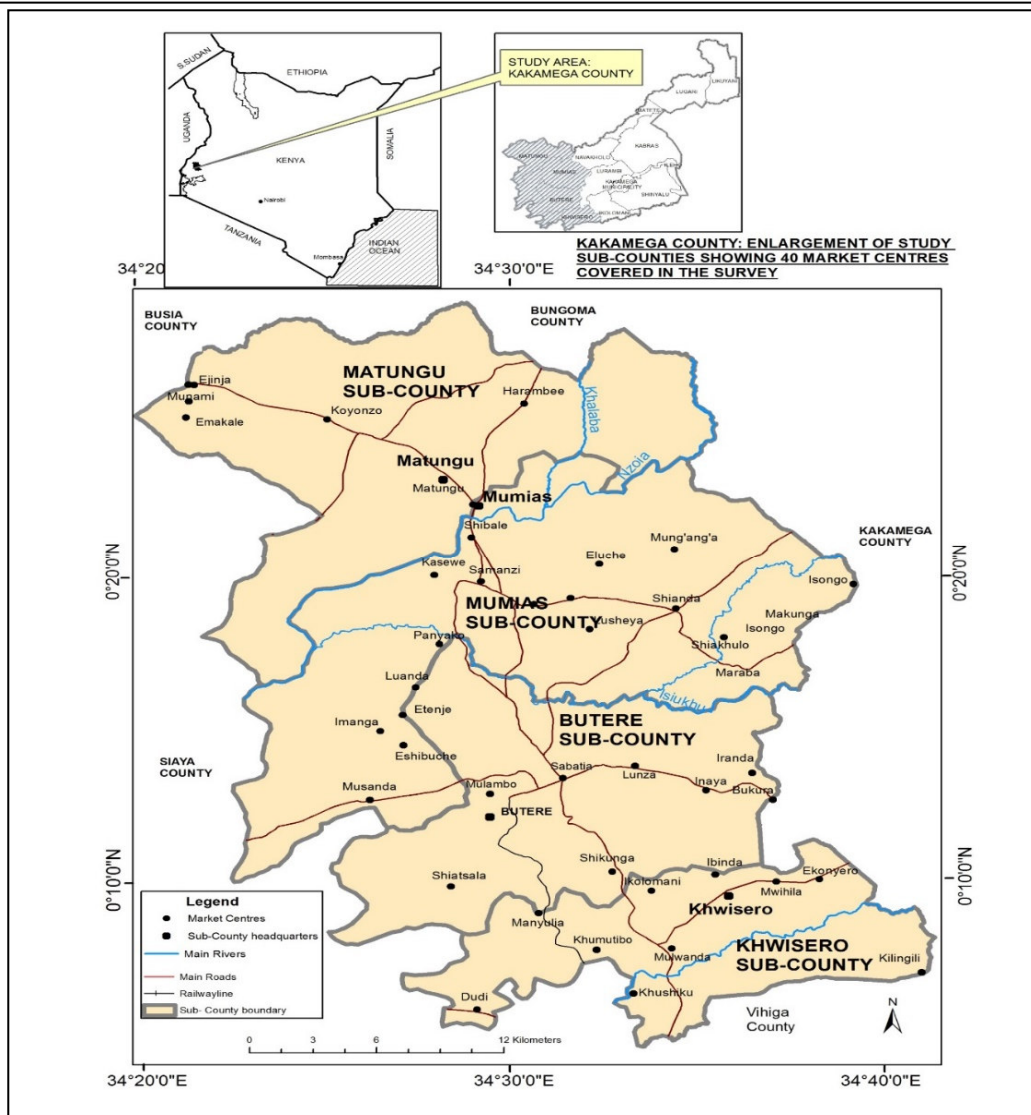


- Centre for Technology Studies (ACTS), Nairobi, Kenya.
- Micro and Small Enterprise Federation. (2013). *Kenya Micro and Small Enterprises (MSEs) Act, 2013*. [newkenya.co.ke/news/latest/east-african/Kenya-039-s-new-law-to-open-the-door-to-investors-in-micro-small/54q8.89931](http://newkenya.co.ke/news/latest/east-african/Kenya-039-s-new-law-to-open-the-door-to-investors-in-micro-small/54q8.89931).
- Omboi, B. M. (2011). Factors that Influence the Demand for Credit among Small-scale Investors: A Case Study of Meru Central District, Kenya. *Research Journal of Finance and Accounting*, 2 (2). [pdfs.semanticscholar.org/8b04/f4b86b97d9211d2710a3fb223e22a9e82803.pdf](https://pdfs.semanticscholar.org/8b04/f4b86b97d9211d2710a3fb223e22a9e82803.pdf).
- Piore, M. J., & Sabbel, C. F. (1984). *The Second Industrial Divide: Possibilities for Prosperity*. New York: Basic Books.
- Pickering, H., Kajura, E., Katongole, G., & Whitworth, J. (1996). Women's groups and individual entrepreneurs: a Ugandan case study. *Gender and Development*, 4 (3), 54 – 60.
- Rice, S. (2003). 'Sampling in Geography', In Clifford, N.J and G. Valentine (Eds). *Key Methods in Geography*. London: SAGE Publications Ltd.
- Schmitz, H. (1989). 'Flexible Specialization—A New Paradigm of Small Scale Industrialization?' Discussion Paper No. 261, Institute of Development Studies, University of Sussex.
- Saleemi, N. A. (2000). *Economics Simplified*. Nairobi: N.A. Saleemi Publishers.
- Sengendo, H., Oyana, T., Nakileza, B., & Musali, P. (2001). 'The Informal sector in Employment Creation in Kampala'. In Alila, P.O and P.Ove Pedersen (Eds). *Negotiating Social Space: East African micro Enterprises*. Eritrea: Africa World Press.
- Smith, D. R., Gordon, A., Meadows, K., & Zwick, K. (2001). *Livelihood Diversification in Uganda: Patterns and Determinants of Change across Two Rural Districts*. Food Policy Institute.
- United Nations Development Programme. (2007). *Human Development Report*. [hdr.undp.org/en/reports/global/hdr2007-8/](http://hdr.undp.org/en/reports/global/hdr2007-8/).
- <https://www.un.org/development/desa/capacity-development/projects/project/unleashing-potentials-of-msmes-for-sdgs/>
- World Bank. (2001). *Africa Poverty at the Millennium: Causes, Complexity and Challenges*. World Bank: USA
- World Bank. (2011). *World Bank Development Approaches and Initiatives*. <http://go.worldbank.org/FWZHYU3220>.
- World Bank. (2013). *Supporting Grassroots Initiatives-World Bank*. <http://go.worldbank.org/2uskoG5T60>.
- Wanzala, O. (2012, November 20). Ministry to Soften Terms of Borrowing from Youth Fund. *Daily Nation Newspaper*. pp 10.
- Waitathu, N. (2013, March 26). Small Businesses to Benefit from New Micro, Small and Medium Enterprises

### Author's Biography

Born in 1967 in Kakamega County, Kenya, the author is a PhD holder in Economic Geography since 2016 and a Lecturer in the Department of Geography, Egerton University, Kenya. Also, the author is currently the Head of Geography Department, Egerton University, Kenya. This paper is part of my PhD research work, which was financially supported by Egerton University and myself.

Development Fund (MSEDF). *Standard Newspaper*. pp 12.



**Figure 1: Map of the Study Area Showing 40 Town/Market Centres within Butere, Mumias, Matungu and Khwisero Sub-Counties where Credit-Assisted MEs were located.**

Source: GoK (2012)

**Table 1: Cross Tabulation of Total Loans Secured Against Entrepreneurs' Age**

Categories of the Total Loans Secured (In Kes)	Frequencies of Entrepreneurs Based on Age Categories (In Years)						Total/ Percent
	18-24	25-32	33-40	41-50	51-60	>61	
<19,999	1	6	19	9	1	0	36(15.0%)
20,000-49,999	0	24	47	27	4	0	102(42.3%)
50,000-99,999	0	5	27	15	2	0	49(20.3%)
100,000-199,999	0	6	17	12	3	2	40(16.6%)
200,000-299,999	0	3	4	2	1	0	10(4.1%)
300,000-399,999	0	0	1	1	0	0	2(0.8%)
500,000-599,999	0	0	0	2	0	0	2(0.8%)
Total	1	44	115	68	11	2	241(100.0%)

$X^2 = 30.078$ ;  $df = 30$ ;  $P = 0.462$  ( $P > 0.05$ ). The Difference is not significant.

Pearson Correlation ( $r$ ) = 0.146.  $P = 0.023$ ,  $P < 0.05$ .  $N = 241$ . Correlation is significant at the 0.05 level, 2-tailed (Table 1).

Source: Research Data, 2015

**Table 2: Cross Tabulation of Total Loans Secured against Entrepreneur's Sex**

Categories of Total Loans Secured (In Kes)	Frequencies of Entrepreneurs Based on Sex		Total/Percentage
	Male	Female	
<19,999	13	23	36(15.0%)
20,000-49,999	47	56	103(42.7%)
50,000-99,999	29	20	49(20.3%)
100,000-199,999	26	15	40(16.6%)
200,000-299,999	5	4	9(3.7%)
300,000-399,999	2	0	2(0.8%)
500,000-599,999	2	0	2(0.8%)
Total	124	117	241(100.0%)

$X^2 = 12.517$ ;  $df = 6$ ;  $P = 0.051$  ( $P > 0.05$ ). The Difference is not significant.

Spearman's Correlation ( $r$ ) = -0.208.  $P = 0.001$ ,  $P > 0.05$ .  $N = 241$ . Correlation is significant but negative.

Source: Research Data, 2015

**Table 3: Cross Tabulation of Total Loans Secured Against Entrepreneurs Education Levels**

Categories of Total Loans Secured (In Kes)	Frequencies of Entrepreneurs Based on Education Levels						Total/percentage
	None/0 Years	Below 8 Years	8 Years	Form 4	Form 6	College/University	
<19,999	2	6	15	10	0	3	36(14.9%)
20,000-49,999	1	11	20	52	0	18	102(42.3%)
50,000-99,999	0	5	11	30	1	2	49(20.3%)
100,000-199,999	0	0	3	28	2	8	41(17.0%)
200,000-299,999	0	0	1	4	1	3	9(3.7%)
300,000-399,999	0	0	0	2	0	0	2(0.8%)
500,000-599,999	0	0	0	2	0	0	2(0.8%)
Total	3	22	50	128	4	34	241(100.0%)

$X^2 = 53.803$ ;  $df = 30$ ;  $P = 0.041$  ( $P < 0.05$ ). The Difference is significant.

Spearman's Correlation ( $r$ ) = 0.285.  $P = 0.000$ ,  $P < 0.05$ .  $N = 241$ . Correlation is significant at the 0.01 level, 2-tailed. (Appendix 4)

Source: Research Data, 2015

**Table 4: Cross Tabulation of Categories of Total Loan Amounts Secured Against Entrepreneurs Number of Income Sources.**

Total Loan Interval 2008-2011 (in Kes)	Number of Income Sources/Entrepreneurs Frequency			Total/Percentage
	ME Only	ME and One More	ME and Two More	
< 19999	14(16.5%)	22(15.2%)	0 (0.0%)	24 (15.0%)
20000-49999	38(44.7%)	62(42.8 %%%)	2 (18.2%)	105 (42.5%)
50000-99999	12(14.1%)	36(24.8%)	1 (9.1%)	52 (20.4%)
100000-199999	14(16.5%)	20(13.8%)	4(36.4%)	45 (16.7%)
200000-299999	4(4.7%)	3(2.1%)	2 (18.2%)	9 (3.8%)
300000-399999	1(1.2%)	2(1.4%)	2 (18.2%)	4 (0.8%)
500000-599999	2(2.4%)	0(0.0%)	0 (0.0%)	2 (0.8%)
Total	85(100.0%)	145(100.0%)	11 (100.0%)	241 (100.0%)

$X^2 = 28.657$ ;  $df = 12$ ;  $P = 0.004$  ( $P < 0.05$ ). The Difference is significant.

Spearman's Correlation ( $r$ ) = 0.078.  $P = 0.230$ ,  $P > 0.05$ .  $N = 241$ . Correlation is not significant at 0.05 level, 2-tailed (Appendix 4).

Source: Research Data, 2015

**Table 5: Cross Tabulation of Categories of Total Loans Secured Against ME Age**

Categories of Total Loans Secured (In Kes)	ME Age-Interval (In Years) Frequencies						Total/Percentage
	1-5	6-10	11-15	16-20	21-25	31-35	
<19,999	14	14	6	1	1	0	36(14.9%)
20,000-49,999	19	46	32	2	3	1	103(42.7%)
50,000-99,999	4	17	24	3	1	0	49(20.3%)
100,000-199,999	4	15	17	1	3	0	40(16.6%)
200,000-299,999	1	5	2	1	0	0	9(3.7%)
300,000-399,999	1	0	0	1	0	0	2(0.8%)
500,000-599,999	0	0	1	1	0	0	2(0.8%)
Total	43	97	82	10	8	1	241(100.0%)

$X^2 = 53.706$ ;  $df = 30$ ;  $P = 0.005$  ( $P < 0.05$ ). The Difference is significant. Pearson Correlation ( $r$ ) = 0.117.  $P = 0.005$ ,  $P < 0.05$ .  $N=241$ . Correlation is significant (Appendix 4)

Source: Research Data, 2015.

**Table 6: Cross Tabulation of Categories of Total Loans Secured Against ME Capitalization**

ME Capitalization Categories (In Kes '000)	Categories of Total Loans Secured (In Kes) and ME Frequencies							Total
	<19,999	20,000–49,999	50,000–99,999	100,000–199,999	200,000–299,999	300,000–399,999	500,000–599,999	
0 – 15	16	7	3	0	0	0	0	26
15.001 – 30	16	33	7	1	0	0	0	57
30.001 – 45	1	18	5	5	1	0	0	30
45.001 – 60	0	4	6	1	0	0	0	11
60.001 – 75	0	2	1	0	0	1	0	4
75.001 – 90	3	4	3	4	0	0	0	14
90.001-105	0	1	4	2	1	0	1	9
105.001-200	1	17	13	8	4	0	0	43
200.001-600	0	16	5	17	3	1	1	43
600.001 – 1000	0	0	1	1	0	0	0	2
1,000.001-3000	0	0	1	1	0	0	0	2
Total	37	102	49	40	9	2	2	241

$X^2 = 176.112$ ;  $df = 60$ ;  $P = 0.000$  ( $P < 0.05$ ). The Difference is significant.

Pearson Correlation ( $r$ ) = 0.291.  $P = 0.000$ ,  $P < 0.05$ .  $N=241$ . Correlation is significant (appendix 4).

Source: Research Data, 2015.

**Table 7: Cross Tabulation of Categories of Total Loans Secured Against ME Net Monthly Income**

ME Net Monthly Range of Income (In Ksh)	Categories of Total Loans Secured (In Kes) and ME Frequencies							Total/Percentage
	<19,999	20,000-49,999	50,000-99,999	100,000-199,999	200,000-299,999	300,000-399,999	500,000-599,999	
1,001-3,000	2	0	2	0	0	0	0	4(1.7%)
3,001-6,000	10	12	3	0	0	0	0	25(10.4%)
6,001-10,000	18	26	9	7	0	1	0	61(25.3%)
10,001-15,000	4	39	11	12	0	0	0	66(27.4%)
15,001-20,000	2	14	12	6	4	0	0	38(15.8%)
20,001-28,000	0	8	8	6	1	0	1	24(9.6%)
28,001-35,000	0	1	3	8	2	0	1	15(6.2%)
35,001+	0	3	1	1	2	1	0	8(3.3%)
Total	36	103	49	40	9	2	2	241(100.0%)

$X^2 = 123.553$ ;  $df = 42$ ;  $P = 0.000$  ( $P < 0.05$ ). The Difference is significant.

Pearson Correlation ( $r$ ) = 0.421.  $P = 0.01$  (2-tailed),  $P < 0.05$ .  $N=241$ . Correlation is Significant (Table 11)

Source: Research Data, 2015

**Table 8: Cross Tabulation of Categories of Total Loans Secured against ME Number of employees**

ME Total Number of Employees	Categories of Total loans Secured (in Kes) and ME Frequencies							Total/ Percentage
	<19,999	20,000-49,999	50,000-99,999	100,000-199,999	200,000-299,999	300,000-399,999	500,000-599,999	
1	7	26	11	7	0	0	0	51(21.2%)
2	11	56	34	32	12	6	4	155(64.3%)
3	0	7	10	4	3	1	1	26(10.8%)
4	0	0	4	3	1	0	0	9(3.7%)
Total	18	89	59	46	16	7	5	241(100.0%)

$X^2 = 58.714$ ;  $df=24$ ;  $P=0.000$  ( $P<0.05$ ). The difference is significant.

Pearson Correlation ( $r$ ) = 0.277.  $P = 0.01$ (2-tailed),  $P<0.05$ .  $N=241$ . Correlation is significant (Appendix 4).

Source: Research Data, 2015.

**Table 9: Multivariate Linear Regression Analysis of Total Loans Secured (Depended Variable) Versus Selected Entrepreneur's and MEs' Characteristics (Independent Variables)**

	Un-standardized Coefficients		Standardized Coefficients	t	Significance (P values)
	B	Standard Error	Beta		
Constant	-10074.565	20239.846		-0.498	0.619
Age of entrepreneur	9161.811	6065.633	0.100	1.510	0.132
ME Age	1498.171	1098.446	0.083	1.364	0.174
ME Capitalization Level	0.062	0.026	0.179	2.367	0.019
ME Income Level	2.954	0.580	0.340	5.095	0.000
ME Total Employment (Number of People)	-7224.068	4760.832	0.133	-1.517	0.131
ME Employment Volume (per Month)	17.629	7.045	0.213	2.502	0.013

Dependent Variable: Total Loan Secured by Entrepreneur.

Source: Research Data, 2015.

**Table 10: Significance Levels of Independent Variables in the Multivariate Linear Regression Model**

Model	R	Adjusted R Square	Standard Error Of the Estimate	Change Statistics					
				R Square Change	F Change	df1	df2	Significance F Change	
1	0.499(a)	0.249	0.227	67238.84961	0.249	11.043	7	233	0.000

Predators: (Constant), ME Employment Volume (per Month), ME Total Employment (Number of People), ME Income Level, ME Capitalization Level, ME Age and Age of entrepreneur.

Source: Research Data, 2015.

**TABLE 11: RESULTS OF CORRELATION ANALYSES BETWEEN ENTREPRENEURS' AND MEs CHARACTERISTICS AND THE TOTAL AMOUNT OF CREDIT SECURED BY ENTREPRENEURS FROM MFIs.**

**Correlation Analysis of Total Loans Secured Versus Entrepreneurs' and MEs Characteristics (Ratio Data).**

Variables	Pearson Correlation	Total Loans Secured By Entrepreneurs	Age of Entrepreneurs	Total Dependants	Age Of MEs (2008)	MEs Capitalization (2008)	MEs Total Number of Employees (2008)	MEs Net Monthly Incomes (2008)	MEs Total Employment Volume (2007)
Total Loans Secured By Entrepreneurs	Correlation Coefficient	1.000	.146(*)	.081	.175(**)	.291(**)	.277(**)	.421(**)	.298(**)
	Sig. (2-tailed)		.023	.208	.006	.000	.000	.000	.000
	N	241	241	241	241	241	241	241	241
Age of Entrepreneurs	Correlation Coefficient	.146(*)	1.000	.476(**)	.305(**)	.091	.116	.067	.077
	Sig. (2-tailed)	.023		.000	.000	.160	.073	.303	.236
	N	241	241	241	241	241	241	241	241
Total Dependants	Correlation Coefficient	.081	.476(**)	1.000	.260(**)	.079	.149(*)	.075	.126
	Sig. (2-tailed)	.208	.000		.000	.224	.021	.245	.052
	N	241	241	241	241	241	241	241	241
Age of MEs (2008)	Correlation Coefficient	.175(**)	.305(**)	.260(**)	1.000	.082	.073	.150(*)	.028
	Sig. (2-tailed)	.006	.000	.000		.203	.259	.020	.670
	N	241	241	241	241	241	241	241	241
MEs Capitalization (2008)	Correlation Coefficient	.291(**)	.091	.079	.082	1.000	.274(**)	.330(**)	.264(**)
	Sig. (2-tailed)	.000	.160	.224	.203		.000	.000	.000
	N	241	241	241	241	241	241	241	241
MEs Total Number of Employees (2008)	Correlation Coefficient	.277(**)	.116	.149(*)	.073	.274(**)	1.000	.546(**)	.744(**)
	Sig. (2-tailed)	.000	.073	.021	.259	.000		.000	.000
	N	241	241	241	241	241	241	241	241
MEs Net Monthly Incomes (2008)	Correlation Coefficient	.421(**)	.067	.075	.150(*)	.330(**)	.546(**)	1.000	.401(**)
	Sig. (2-tailed)	.000	.303	.245	.020	.000	.000		.000
	N	241	241	241	241	241	241	241	241
MEs Total Employment Volume (2007)	Correlation Coefficient	.298(**)	.077	.126	.028	.264(**)	.744(**)	.401(**)	1.000
	Sig. (2-tailed)	.000	.236	.052	.670	.000	.000	.000	
	N	241	241	241	241	241	241	241	241

\*Correlation is significant at the 0.05 level (2-tailed)

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

Source: Research Data, 2015