DECLARATION

This research project is my own work and to the best of the information available to me has never been presented for the award of any academic degree in any institution.

Signature………………………………    Date ……………………………………………

Antony Mwaura Waithera

Reg. No. X50/82116/2015

This research academic project has been submitted to the school of Economics, University of Nairobi with my consent as University Supervisor.

Signature………………………………    Date ……………………………………………

Dr. Joy Kiiru

School of Economics

University of Nairobi.
DEDICATION

I dedicate this work to my loving mother Mary Waithera, my financier Mr. Mathias Nganga Kamau and my valuable friends: Mary Wambui, Collins Ogaro, Stephen Maina and Willy Akala for their immense support, love and prayers. They in one way or the other shaped this work through constructive criticism.
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I also want to appreciate my dear mother, Mary Waithera who is my biggest pillar. Thank you for the moral support and for your words of encouragement when things seemed tough and I almost gave up. Thank you for making me smile even in the lowest of moments. To all my friends who contributed to the success of this research in one way or the other, thank you.
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<td>ASCAs</td>
<td>Accumulating Savings and Credit Associations</td>
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<td>CBK</td>
<td>Central Bank of Kenya</td>
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<td>CRBs</td>
<td>Credit Reference Bureaus</td>
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<td>C-WES</td>
<td>Constituency Women Enterprise Scheme</td>
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<td>C-YES</td>
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<td>DTMs</td>
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ABSTRACT

Kenya has witnessed a 50% increase in financial inclusion in the last decade. This growth has seen the percentage of the financially included people rise from 60.7% in 2006 to 75.3% in 2015. Despite the growth, access to microcredit remains a challenge with only 31.4% of the populace accessing microcredit (FinAccess National Survey, 2016). Access to microcredit financing is paramount as it gives the low-income people the means to advance their lives and enables them to provide for their families. It also enables them to raise their household incomes, build on assets, and decrease their vulnerability to disasters. Women, rural residents and the poor have the least access to credit facilities in Kenya. This study, therefore, sought to empirically examine the factors that influence access to microcredit financing in Kenya.

The study used the FinAccess Survey, 2016 dataset. Descriptive statistics and probit model were used for data analysis. The probit regression indicates that; gender, earnings and education level are positive and significant factors that influence access to microcredit financing in Kenya.

Based on the findings, it is recommended that; MFIs should move towards a more gender-balanced portfolio to benefit all the poor; the government should also come up with policies that focus on factors that enhance access to education across all levels to ensure higher transition rates from primary to secondary and tertiary levels so as to boost productive capacity. Further, it is recommended that both the county and national governments should initiate schemes that would create permanent employment for the youth, women and the poor to enable them have a permanent and reliable stream of income.
CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Kenya’s Vision 2030 envisions the financial sector to be: “A vibrant and globally competitive financial sector driving high levels of savings and financing Kenya’s investment needs”. The financial sector is ranked the sixth priority sector, playing a critical role in mobilising savings to finance the envisioned rise in investments (Republic of Kenya, 2007).

Access to credit substitutes individuals’ need for self-financing hence reducing the risk of premature liquidation of investments that arises as a result of unpredictable future financial crises (Okurut, 2008). Similarly, the ability to predictably borrow or save by individuals enhances consumption smoothing across time periods. In this regard, access to financial services especially credit financing would place the poor on a higher utility curve overall.

Ghosh et al. (1999) observed that credit is requisite in financing investments in working and fixed capital. According to Mujeri (2015), access to a fully operational financial system can empower individuals economically and socially, particularly the poor people and women. This allows them to integrate better into the economy and contribute actively to development.

Bank credit is one of the most widespread sources of finance for businesses in Kenya. Extension of credit facilities has been regarded as a vital tool for raising incomes through mobilization of resources to more productive uses (Kimutai and Ambrose, 2013).

Even though there have been extensive financial sector reforms over the past few decades, most Sub-Saharan African countries are still faced with a severe financial development gap. Access to finance for the underprivileged is a major deterrent to economic growth (Allen et al., 2012).

Over the years, Kenyans have encountered difficulties in obtaining bank credit more so the disavantaged in the society. This has largely been attributed to lack of physical collateral that banks normally request for as loan guarantee (Gaitho, 2013). According to FinAccess National Survey 2013, 25.4 percent of Kenya’s population is left out from access to financial services.
Okurut (2008) and Okurut et al. (2009) observed that probability of default increases with the rise in poverty and that the poor are deemed to have low repayment capacity. This explains why rural residents are excluded by the traditional commercial banks from credit access facilities, since rural areas in Kenya are characterised by poverty and hardships.

Microfinance, therefore, comes in to bridge this gap and address the concern of lack of access to financial services encountered by such households. Microfinance is a collection of banking practices centred on accepting small savings deposits and providing small loans normally without collateral (Robinson, 2001).

The Asian Development Bank (ADB) (2011) further defines microfinance as “the provision of a broad range of financial services such as deposits, loans, payment services, money transfers, and insurance to poor and low-income households and their microenterprises.”

Microfinance is divided into three broad categories which include: micro-credit, micro-savings and micro-insurance (EY, 2014). The core business of microfinance is the provision of microcredit - small loans to the working poor. According to Deutsche Bank Research (2007), the loans typically amount to a local currency (Euros) equivalent to just below USD 100 (starting) and can, eventually increase to several times this amount subject to geographical region. For instance, in Central Asia and Eastern Europe, loans amount to approximately USD 1,600 on average while in Asia they amount to around USD 150.

Kasim and Jayasooria (2001) defined microcredit as the process of loaning capital to the poor people so that they can invest in self-employment. This paper exclusively focused on microcredit. This is because most investments in Kenya are financed by debt thus constrained access to credit is an impediment to economic growth. Expanding access to bank and micro credit financing in Kenya may consequently lead to increase in investments and hence economic growth. This study will therefore seek to investigate the socioeconomic factors influencing access to microcredit financing in Kenya.
1.2 The Microfinance Industry

Globally, initial efforts to offer financial services to the unbanked were largely spurred by the structural adjustment policies (SAPs) with an aim of poverty reduction and poverty alleviation. Governments also supported subsidized credit schemes which targeted specific groups and were tied to specific productive activities (Burritt, 2003).

Kenya’s microfinance sector is made up of a large and assorted group of institutions which can be categorised into formal subsidised, formal non-subsidised and informal groups. The formal subsidised category consists of formally registered organisations whose financial activities are unregulated. The microfinance sector has however received massive support from both the government and NGOs. By 2015, an estimated USD 80 Million had been received by the industry from donors and GoK (Foundation for Sustainable Development). The main institutional players in this group are MFIs registered as NGOS, companies limited by guarantee and limited liability companies. Formal non-subsidised MFIs constitute of formally registered, licenced and regulated institutions. It comprises of the traditional MFIs, microfinance banks, SACCOs, savings bank (post bank) and commercial banks downscaling to offer microfinance services.

The informal MFIs encompass grassroots organisations which include: Accumulating Savings And Credit Associations (ASCAs), Rotating Savings Credit Associations (ROSCAs), money lenders and friends and relatives. The informal MFIs which mostly engage in savings transactions and are member based remain unregulated. This implies that non-members can neither borrow nor save in these particular institutions. The informal microfinance sector is said to be large but due to the informality, the number of informal organizations is not known with certainty and therefore, the amount of money transacted is unknown but it amounts into billions of Kenya shillings annually (Dondo, 2007). Further, the deposit-taking MFIs can be categorized into two: nationwide MFIs and the community MFIs with a minimum capital requirement of Kenya Shillings sixty million and Kenya Shillings twenty million respectively (Mwatela, 2008).

The microfinance industry is highly concentrated with more than 70% of the market being served by Kenya Women Finance Trust, Jamii Bora and Faulu Kenya. Similarly, there are high levels of concentration within the SACCOs (Cracknell, 2012) It is good to note that these are institutions that have transformed from traditional MFIs to MFBs. Transformation of microcredit programmes into banks serving solely low income clients in Kenya first happened back in 1999 when K-Rep
became the first commercial bank in Kenya to serve exclusively the impoverished clients, and the first NGO in Africa to convert into a regulated financial institution (Central Bank of Kenya, 2013).

The microfinance industry has been growing in Kenya in terms of increased number of branches, growing number of borrowers, total assets and loan portfolio. According to the 2014 Kenyan Micro Finance Sector Report, total assets of the sector grew to KES 315.7 billion as at December 2013 registering an annual growth of 15.1%. The loan book also increased to an impressive KES 40.2 billion realizing an annual growth of 35.2%.

1.2.1 Credit Schemes by the GoK to Enhance Access to Microcredit financing in Kenya

Lack of credit access is a major impediment to the growth and development of micro, small and medium enterprises (MSMEs) especially those that are owned by the youth and women. This is principally due to the lenders’ behaviour in terms of hedging against the risks of borrowers by asking collateral from them, which they lack, coupled with information asymmetry (Mwangi and Ouma, 2012). Different credit schemes have been designed to avail credit to segments of the society that suffer poor or no access to credit. This paper will look at the Youth Enterprise Development Fund (YEDF) and Women Enterprise Fund (WEF).

The Youth Enterprise Development Fund (YEDF)

Even though young people lack skills on how to successfully manage enterprises, those who opt for self-employment are normally faced with difficulties in relation to access to capital (World Bank, 2005). A majority of the financial institutions are unwilling to lend to the youth due to their lack of collateral (Mburung’a, 2014). Youth organizations are often hesitant to advance loans to the youth since they find it hard to monitor the loan recipients. Some NGOs call for the loan recipients to have existing businesses, join SACCOs and have some savings among other requirements (World Bank, 2005).

As a way of responding to these challenges facing the youth and the escalating unemployment rates, the GoK founded the Youth Enterprise Development Fund (YEDF) on 8<sup>th</sup> December 2006.
through Legal Notice No. 167 as one of the strategies of addressing youth unemployment. YEDF focuses on multiple areas, which include providing capital to young entrepreneurs, facilitate linkages in supply chains, avail business development services, and create market opportunities for the products produced by the youth enterprises (Ministry of Youth Affairs and Sports, 2009).

The YEDF has three lending components: Constituency Youth Enterprise Scheme (C-YES), Easy Youth Enterprise Scheme (EYES) and financial intermediaries. The C-YES funds (maximum of Ksh. 50,000) are intended for youth owned enterprises and are available to them through their registered youth groups in their respective constituencies nationwide. The C-YES gives loans to qualified youth groups at 0% interest rate, with a one-off deduction of 5% administrative fee. The fund is administered, monitored and managed by YEDF through the community committees at the constituency level. The EYES scheme finances project by individuals who are members of the group(s) that have finished repaying the C-YES loan.

**Women Enterprise Fund (WEF)**

Acknowledging the financial, social and economic challenges that Kenyan women face, the GoK set up the Women Enterprise Fund (WEF). WEFs introduction was geared towards creating and enhancing affordable access to finances for Kenyan women who were facing difficulties in accessing funds from the existing MFIs and commercial banks (Ijaza et.al, 2014). The Women Enterprise Fund is a Semi-Autonomous Government Agency under the Ministry of Gender, Children and Social Development that was initiated and established by the GoK in 2007 through Legal Notice No. 147.

The fund has five mandates which include:- provision of loans to women through credible MFIs, SACCOs and registered NGOs involved in micro-financing; attracting and facilitating investment in MSMEs’ oriented infrastructures such as business incubators or business markets that benefit women enterprises; supporting women-oriented MSMEs to develop linkages with large business enterprises; facilitate the marketing of products and services produced by women enterprises in both international and domestic markets and finally to support capacity building of the beneficiaries of the fund in their institutions (Women Enterprise Fund Strategic Plan, 2009/2012).
The Women Enterprise Fund (WEF) has two other divisions which include: The Constituency Women Enterprise Scheme (C-WES) and the Financial Intermediaries Partner (FIP). The Constituency Women Enterprise Scheme (C-WES Tuinuke loan) is a division of the WEF that is tasked to ensure that all women at the constituency level, more so those residing in remote areas, access funds. C-WES extends interest and collateral free credit to women as a form of economic empowerment with a one-off deduction of 5% administrative fee repayable within 12 months but with a grace period of 2-1 months depending on amounts. It adopts group lending methodology to advance loans to women (Women Enterprise Fund, 2015).

Unlike C-WES, under Financial Intermediaries Partners (FIP Jimarishe loan), the loan is given to self-help groups, individual women, or women-owned companies at an interest rate of eight percent per annum on reducing balance. The fund advances a maximum loan of Kenya Shillings two million per borrower with repayment period of up to a maximum of 36 months; and flexible security depending on the financial intermediary involved. (Women Enterprise Fund, 2015).

1.2.2 Regulatory Framework and operation of MFIs
Microfinance banks (MFBs) and deposit taking microfinance institutions (DTMs) are prudentially regulated by the Central Bank of Kenya under the Microfinance Act, 2006 and the Microfinance (Deposit Taking Institutions) Regulations, 2008. The Act and the regulations lay down the legal, regulatory and supervisory structure for the microfinance industry in Kenya. The law (Microfinance Act 2006) restricts the licenced DTMs to offer credit, savings and remittance products and services. Most DTMs and MFBs have adopted both individual lending and group lending methodologies where loan decisions are based on character and reputation especially on the group lending methodology and backed by little, if any, conventional security. (Rosengard and Rai 2001)

1.3 Statement of the Problem
Kenya’s vision 2030 goal for equity and poverty elimination is to reduce the number of people living in absolute poverty to the lowest possible proportion of the total population. Therefore, access to microcredit being one of the tools that aids in poverty reduction may significantly contribute to the achievement of this goal.
The financial sector in Kenya has been growing rapidly over the years and so is the Microfinance industry. According to the FinAccess National Survey 2016, Kenya has witnessed a 50% increase in financial inclusion in the last decade. This growth has seen the percentage of the financially included people rise from 60.7% in 2006 to 75.3% in 2015. Despite the growth, access to microcredit remains a challenge with only 31.4% of the populace accessing microcredit (FinAccess National Survey, 2016). According to the survey, female clients, rural residents and the poor had the least access to credit facilities. These facts form the basis of the motivation for this study: what bars people from access to microcredit financing?

Although a vast amount of research has been carried out on access to microfinance in various African countries, most studies have focused on the micro-savings and micro-insurance aspects of microfinance. To the best of my knowledge, most studies dealing with factors influencing credit access in Kenya have either been regional case studies or studies based on socio groupings of who gets the credit, that is, a particular household group like women, youth, the disabled, or the rural poor (Akoten et al., 2006; Mwangi and Ouma, 2012; Mwongera, 2014).

This study therefore aims at examining the socioeconomic factors influencing access to microcredit financing on a national scale in Kenya, regardless of the type of borrower.

1.4 Research question

How do socioeconomic factors influence access to microcredit financing in Kenya?

1.5 Objectives of the Study
The general objective of this research study is to identify the socioeconomic factors that influence access to microcredit financing in Kenya. Specifically, the study will:

1. Identify the socio-economic characteristics of microcredit borrowers in Kenya.

2. Examine how socio-economic characteristics of borrowers influence their access to microcredit financing.

3. Draw policy recommendations from the findings generated.
1.6 Hypothesis Testing
The study will test the following hypothesis:

I. Women have lower probability of access to microcredit financing than men.
II. Rural residents have lower probability of access to microcredit financing than urban residents.
III. Education level of an individual has a positive effect on access to microcredit financing.
IV. Income of an individuals has a positive effect on access to microcredit financing.
V. Youth have lower probability of access to microcredit financing than the aged.
VI. Married individuals have a higher probability of accessing microcredit than the unmarried.

1.7 Significance of the study
Access to credit has received great attention from both academicians and policymakers due to its significance as a source of finance to investments which spur economic growth. Scholars have established that access to microcredit financing serves to improve the livelihood of the poor by placing small businesses at a position where they are able to take advantage of investment opportunities.

This study will contribute to the pool of available literature concerning socioeconomic factors influencing access to microcredit financing. It will also draw policy recommendations which will help to inform policymakers on policy options that will enhance access to microcredit financing in Kenya.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

According to Marshall and Rossman (2006:25), literature review encapsulates the process of situating a study within ongoing discourse about the topic and developing the specific intellectual tradition to which the study is linked. This chapter presents the theoretical literature which is based on credit rationing theories and the empirical literature which presents the general consensus by different scholars who carried out similar and related studies.

2.2 Theoretical Literature

Theoretical literature will be based on the credit rationing theories. Serrano and Sackey, 2015 defined Credit rationing as a situation where borrowers do not get the full amount of credit they applied for or worse still, they do not get credit at all despite being willing to pay the prevailing interest rates. This primarily results from the existence of information asymmetry. It is thus a situation in which the equilibrium interest rate does not ensure efficient credit allocation; hence, rationing is done as an alternative of non-price mechanism allocation.

The “Availability Doctrine” failed to successfully explain credit rationing but Stiglitz and Weiss (1981) later derived it from adverse selection and moral hazard in finance (Myerson, 2012). Subsequently, different scholars have come up to explain credit and justify credit rationing, building on Stiglitz and Weiss (SW) model. But, the bottom line is that credit rationing is viewed as a permanent disequilibrium phenomenon where demand for loanable fund exceeds the supply.

The “Availability Doctrine.”

The availability doctrine was first advanced by Roosa (1951), Scott (1957a, b), Lindbeck (1962) and Parker (1972). The doctrine attempted to give an alternative explanation to the working of the monetary policy work in the presence of interest inelastic investors. According to this theory, lending by banks is limited to availability of funds. The amount of funds that banks can attract
determines the volume of loans that they can avail to the demanders of loanable funds. This supply constraint, therefore, results to credit rationing. Consequently, equilibrium in the credit market is purely determined by the supply conditions and real economic activity.

**Stiglitz and Weiss Model of Credit Rationing**

Stiglitz and Weiss’s model is based on the idea that while borrower’s repayment capacity may be known by banks on the basis of the expected returns from their projects, the borrower’s risk is unknown to bankers. This is due to the existence of information asymmetry. The lender, therefore, is unable to differentiate between bad and good risk borrowers. According to Stiglitz and Weiss (1981), an increase in the rates of interest may adversely influence the combination of bad and good borrowers as a result of adverse selection and incentive effects.

**Adverse Selection Theory of Credit Rationing**

Stiglitz and Weiss (1981) pointed out that an increase in the rates of interest may adversely influence the combination of bad and good risk borrowers as a result of adverse selection. The adverse selection effects state that borrowers who have predetermined perception that their loan repayment probability is low are more probable to remain in the high-interest rates applicants’ loan pool. They maintained that interest rates influence the riskiness of loans (i.e. the quality of loans).

They also argue that interest rates serve as a screening device through which banks can be able to differentiate between risky and less risky borrowers.

As interest rates shoot, low-risk borrowers are discouraged from borrowing and, therefore, will leave the pool of loan applicants. When the lending rate rises, low-risk borrowers will no longer apply for credit because they have already lost interest for the loan. Increase in interest rates generates two opposite effects on the profitability of the bank. The first effect is negative: increase in interest rates increases the bank’s risk portfolio. The second effect is positive which is brought about by the increase in the net interest income. In such a scenario, at the quoted interest rates, demand for credit may exceed the supply. This phenomenon is known as equilibrium credit rationing (Bellier, Sayeh and Serve, 2012).
The implication is that supply of loans is an inverse function of the interest rate. The initial rise in the interest rate may increase the supply of loanable funds as it increases the expected profitability of the bank. Nevertheless, the two do not have a monotonic relationship. Beyond a certain point, with increase in interest rates, expected profitability of the bank increases but at a declining rate up to an optimal point where the profitability falls as interest rates rise (Figure 1 below). Point Z is the equilibrium point. However, at this point an excess demand for credit may persist, causing interest rates to rise further. Consequently, a higher profitability is expected by bankers. Contrary to expectations, banks refuse to advance loans beyond this equilibrium point because doing so will lead to a fall in banks’ expected profitability. Therefore, banks will not lend beyond the equilibrium point even if there is an increase in either interest rate or excess demand for loans in the market.

Figure 1. There exists an interest rate which maximizes the expected return to the bank

Moral hazard Theory of Credit Rationing

Moral hazard is captured in what Stiglitz and Weiss referred to as the incentive effect. The incentive effect suggests that because higher interest rates reduce the successful projects’ expected net returns, borrowers may be forced to switch from the low risk projects to high risk projects; where there is a low probability of success but the expected return will be high in case the projects do not fail. As interest rates shoot, low risk borrowers are discouraged from borrowing and therefore will leave the pool of loan applicants.

Moral hazard concerns the risk that arises because of the behaviour of the borrower after the contract is made. After an entrepreneur successfully borrows a loan to finance a new investment
project, the probability of its success may be highly determined by the entrepreneurial efforts; which a bank is unable to monitor directly. To encourage such hidden efforts, there is a need for the borrower to anticipate substantial profits from his venture's success (moral hazard rents). Consequently, this need to allow entrepreneurs to keep sufficient profit from their successful investments can impose an upper limit on the rates of interest that banks can charge (interest rate ceiling). As a result, rise in interest rates might not occur even when there is excess demand for funds by qualified borrowers. Borrowers end up getting less credit amounts than they applied for or none at all (Myerson, 2012).

**Non-price mechanism credit rationing and Microfinance**

Due to information asymmetry problems, credit markets are characterized by a rationing equilibrium which is inefficient (Malhotra, 2015). At this point, the market forces of demand and supply are not allowed to work and hence markets do not clear. Increasing interest rates forces the good risk borrowers to withdraw from the credit market since they are not willing to pay such high interest rates. Similarly, setting of collateral requirements lowers the borrowers’ utility and kicks some individuals out of the formal credit market (Stiglitz and Weiss, 1981).

Consequently, governments in developing countries set up financial institutions which provide subsidized credit to the rural and urban poor who are excluded from bank credit. Microfinance has created both economic and social impact to the poor, the challenges posed by rural credit markets in developing countries notwithstanding (Malhotra, 2015).

**2.3 Empirical Literature**

**Access to Microcredit and its benefits**

Microcredit financing is the process of loaning capital to the poor people so that they can invest in self-employment; and is committed to the provision of small loan amounts to micro entrepreneurs who invest in their businesses, plough back the returns hence enable them to grow out of impoverishment not only in the short-run but also in the long-run (Furlane, 2013).

According to Karanja et al. (2014), access to flexible and affordable financial services including microcredit financing empowers and equips the underprivileged in our society to match out of
poverty in a self-determined and sustained way. Kasim and Jayasooria (2001) noted that one of the ways to reduce poverty particularly among the hard-core poor is through microcredit as it has the ability to mitigate the heat of the economic turmoil by raising productivity of self-employment in an economy’s informal sector.

Micro-borrowers are often excluded by the conventional financial institutions due to their loaning models hence end up getting credit from informal money lenders and/or pawnshops who charge exorbitant interest rates. An example is the Philippines, where usurers often charge interest rates of up to 1000% p.a for a monthly loan unlike MFIs which charge interest rates ranging from 15% to 70% p.a. (Deutsche Bank Research, 2007).

Abdulsalam and Tukur (2014) in their study in Nigeria found out that microcredit financing enables businesses to increase the value of capital (physical assets) acquired by the firms while increasing employment generation by the firms due to business expansion.

### 2.4 Review of Models Used

Different scholars used different models to analyse determinants of access to credit. However, most of the scholars such as Zeller et. al (1994); Rand (2006); Baiyegunhi et. al (2010); Quoc (2012) and Clamara et. al (2014) converged to the use of the probit model in their analysis.


### 2.5 Review of the Variables

Several factors influence access to microcredit financing. These factors can be categorised as borrowers’ socioeconomic characteristics and the loan terms imposed by lenders (Zeller, 1994). These factors include age, education level, gender, wealth, marital status, distance to bank, location (rural or urban), household size, household income, among others as discussed below.
Age of the Borrower

Most studies have found a positive and significant relation between access to credit and age of the borrower. (Okurut, 2008; Okurut et al., 2009; Peprah, 2012; Clamara et al., 2014; Mwangi and Sichei, (n.d); Mwangi and Kihiu, 2012; Zeller, 1994; Akoten et al., 2006). This is in accordance with the wealth accumulation theory that assumes that older people have accumulated enough physical resources in their lifetime, thereby making them more credit worthy. However, some studies such as (Bakhshoodeh and Karami, 2008; Rand, 2007; Baiyegunhi et al., 2010) realised a negative and significant relationship between age of the borrower and access to credit.

Education Level

Okurut, (2006), (2008), Bakhshoodeh and Karami (2008), Peprah, (2012), Clamara et al., (2014), Kacem and Zouari, (2013) and Mwangi and Sichei, (n.d) established that education level is a positive and significant determinant to credit access. The intuition is based on the idea that education builds human capital hence enhancing the effective use of credit.

On the contrary, studies by Rand (2007) and Zeller (1994) showed that years of schooling have a negative correlation with access to credit. The negative correlation is a reflection of the possibility that highly educated applicants have lower credit demands, hence are more likely to know when their loan application will be rejected, refraining from application.

Income

Different scholars independently investigated the relationship between access to credit and size of the applicant’s income. They converged to a conclusion that there is a positive and significant relationship between the two (Okurut et al., 2009; Okurut, 2008; Okurut, 2006; Clamara et al., 2014; Zeller et al., 1994; Okurut and Schoombee, 2007; Mwangi and Kihiu, 2012; Mwangi and Sichei, n.d).
The intuition is that when lending out funds, financial institutions are primarily concerned with the loan repayment. High income is seen as collateral for loan thus they use the borrowers’ income as a measure of repayment capacity.

**Marital Status**

According to Quoc (2012) marital status has a positive and significant relationship with access to credit. Mwangi and Kihiu (2012) also found marital status to be significant in explaining access to informal services. Informal service providers bank heavily on marital status given the fact that married people appear to be more responsible thus are more trusted. Married individuals are also seen to have at least more than one source of income thereby increasing their repayment capacity.

**Gender**

Most writers agree that gender is an influential factor to credit access. Mwangi and Kihiu (2012); Okurut (2006); Okurut (2008) and Clamara et al. (2014) showed that being male increases the chances of individuals’ access to credit. This view was also supported by Rand (2007) who found that male-owned firms in Vietnam obtained credit more frequently in comparison to female-owned firms implying easier access. Similar results were obtained by Okurut and Schoombee (2007). The conclusion is that in the African context, household resources and businesses are normally controlled by men, making them more creditworthy.

**Wealth**

Different scholars (Okurut et al., 2009; Bakhshoodeh and Karami, 2008; Baiyegunhi et al., 2010; Clamara et al., 2014; Quac, 2012; Okurut and Schoombee, 2007; Baiyegunhi et al., 2010; Zeller, 1994) established that financial institutions use the wealth of borrowers as a measure of their repayment capacity. The value of visible assets is used as collateral whereby in the event of default, lenders will liquidate the assetsto recover the outstanding amounts.

**Location**

access to credit and a household being located in rural regions. Due to information asymmetry, financial institutions may prefer to opt to borrowers operating in their vicinity since it is easy to monitor them. This is so because most financial institutions are located in urban areas. However, Rand (2007) found that living in rural areas positively relates to credit access.

**Household Size**

Studies by Mwangi and Sichei (n.d), Mwangi and Kihiu (2012), Okurut (2006) and Okurut and Schoombee (2007) revealed a positive and statistically significant relationship between the size of the household and household access to bank credit.

A large family acts as labour in production and therefore has high income thereby increasing their repayment capacity. In contrast, Okurut (2006) and Mwangi and Kihiu (2012) found a negative link between access to credit and household size. The intuition is that larger households may be perceived to have lower repayment capacity hence a higher probability of being constrained in their access to credit.

**Other Variables**

Peprah (2012) revealed that well-being in terms of good health of clients has a positive and significant influence on access to credit. Rand (2007) also found the firm size to have a positive relation to credit access. Bigger firms are more likely to access credit compared to smaller ones. Clamara et al. (2014) suggested that formality in the legal registration of a company has a positive correlation to credit access.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Theoretical Framework

Binary response regression models are used when the dependent variable is binary. Various probability models (linear probability model (LPM), probit, logit and tobit) have been used extensively to empirically model the factors influencing access to credit. The dependent variable being access to credit, is assigned a value of 1 if there is access and 0 otherwise. The binary response model is derived from an underlying latent variable model (Wooldridge & Weeks, 2002).

\[ y^* = \beta_0 + x_i\beta_i + \varepsilon_i \]  \hspace{1cm} (1)

Where \( y^* \) = latent variable, \( \beta_0 \) = constant, \( x_i \) = vector of observable household characteristics, \( \beta_i \) is vector of i parameters; \( i = 1, 2, 3, \ldots, n \) and \( \varepsilon \) is the error term.

We adopt a random utility model by Mc Fadden, (1981) which can be modified to suit Wooldridge, (2002) latent variable model. The probit model has been used for estimation of factors that influence access to microcredit financing. Access to microcredit financing was captured as a dummy (\( y = 1 \) if household received microcredit loan, 0 if otherwise).

The binary response regression model is explained on the basis of rational choice view of consumers’ behaviour (Wooldridge & Weeks, 2002); (Gujarati, 2008). A rational borrower would maximize utility by making a choice that yields the highest utility.

Such that:

\[ y = 1 \text{ if } y^* > 0 \text{ and } y = 0 \text{ if } y^* < 0 \]

\[ p[y = 1 \mid x] = p[y^* > 0 \mid x] \]  \hspace{1cm} (2)

The probability of a borrower accessing micro credit from a MFI was given as:

\[ [y = 1 \mid x] = p[Z_{i1} > Z_{i2}] \]
\[ P \left[ \beta_0 + x_i \beta_{i1} + \varepsilon_1 - \beta_0 - x_i \beta_{i2} - \varepsilon_2 > 0 \mid x \right] \] 

(3)

\[ P \left[ x_i (\beta_{i1} - \beta_{i2}) + (\varepsilon_1 - \varepsilon_2) > 0 \mid x \right] \]

\[ P \left[ x_i \beta + \varepsilon \right] \]

\[ y = x_i \beta + \varepsilon \] 

(4)

Where \( Z_{i1} \) is utility from accessing micro credit from MFI and \( Z_{i2} \) is utility from accessing micro credit elsewhere with all the other variables as earlier defined.

3.2 Model specification

The probit model was applied to identify the factors influencing access to microcredit financing in Kenya. The choice of the probit model over the other binary response models was based on both convenience and the limitations of other models. Additionally, it was informed by the fact that based on literature review, most studies (Zeller et. al, 1994; Rand, 2007; Bakhshoodeh and Karami, 2008; Baiyegunhi et. al, 2010; Quoc, 2012; Clamara et. al, 2014) adopted the probit model in their empirical analysis of factors influencing the probability of access to credit. The model obtained above was estimated as:

\[ y = x_i \beta + \varepsilon \quad i = 1,2,3, \ldots, n \] 

(5)

Where: \( y \) is a dummy dependent variable, precisely; \( y = 1 \) if there is access to microcredit and \( y = 0 \) otherwise.

\( x_i \) is a vector of household characteristics that are in relation to the reviewed literature, \( \beta \) is a vector of unknown parameters to be estimated and \( \varepsilon \) is an error term, \( \varepsilon \sim (0,1) \)
3.3 Estimation Method

The probit model was used to determine the factors influencing access to microcredit financing with our equation being:

\[ P(\text{Access to microcredit financing} = 1) = \theta[\beta_0 + \beta_1(\text{Location}) + \beta_2(\text{Gender}) + \beta_3(\text{Age}) + \beta_4(\text{Marital status}) + \beta_5(\text{Education}) + \beta_6(\text{Hold Size}) + \beta_7(\text{Earnings})] \] (6)

3.4 Variable Measurement and A priori Expectation

Dependent variable

The dependent variable of the study was access to microcredit financing (1 if household accessed microcredit financing, 0 otherwise). Microcredit financing in this study is defined as credit from SACCOs, formal MFIs, Chamas (translated as groups), moneylenders, employers, neighbours, friends, shopkeepers and farm produce buyers.

Independent variables

The independent variables for which data was available includes location, gender, age, marital status, education level, household size, earnings and business sector. The definitions of these variables including the expected signs are presented in table 3.1 below.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Definition</th>
<th>Expected Sign</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dependent variable</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 3.1: Variable Measurement and A priori Expectations
Access to Microcredit Financing

Microcredit access was captured as a dummy and was constructed as follows: 1 = access to microcredit financing (whether in full amount applied for or partial) and 0 = no access to microcredit financing

<table>
<thead>
<tr>
<th>Independent Variables</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Location</td>
<td>Dummy (1 = Urban, 0 otherwise)</td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>Dummy (1 = female, 0 Otherwise)</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>Age of the borrower in complete years</td>
<td></td>
</tr>
<tr>
<td>Marital Status</td>
<td>Dummy (1 = Married, 0 otherwise)</td>
<td></td>
</tr>
<tr>
<td>Education Level</td>
<td>Number of years of schooling of the borrower</td>
<td></td>
</tr>
<tr>
<td>Household size</td>
<td>Number of family members in the household</td>
<td></td>
</tr>
<tr>
<td>Earnings</td>
<td>Monthly earnings of the borrower</td>
<td></td>
</tr>
</tbody>
</table>

3.5 Data Sources

The study used data from the nationally representative FinAccess 2016 household survey, to establish the factors that determine access to microcredit financing in Kenya. The survey was carried out over a period of three months beginning 18th August 2015 to 15th October 2015. The survey, which is the fourth in a series of surveys measuring the drivers and usage of financial services in Kenya was officially launched on 18 February 2016. FinAccess household surveys measure demand for and access to financial services among Kenyan adults in a nationally representative survey which is based on the KNBS NASSEP V national household sampling frame.
A target sample of 10,008 interviews were generated from 834 clusters across Kenya with a total of 14 households targeted per cluster. A total of 13 sub-regional county clusters were used as the representative sample. Further, one respondent aged 16 years and above was randomly selected per household.

The 2016 FinAccess survey dataset was chosen because it has a national coverage of representative households countrywide and it also gives information on household and individual characteristics, such as gender, education level, income source, age, location and household size among others. It is also the most recent complete data available on financial access by households. It provided the required information for the study as informed by literature.
CHAPTER FOUR

VARIABLES ESTIMATION AND RESULTS

4.1 Introduction
This chapter presents the descriptive statistics and the econometric model results of the factors that influence access to microcredit financing in Kenya. It is organised as follows: section 4.2 presents the descriptive analysis of the data using frequency distribution tables and percentages while sections 4.3(a) and 4.3(b) present the probit model results and marginal effects respectively.

4.2 Descriptive statistics
The main objective of this research was to examine how socio-economic characteristics of borrowers affect their access to microcredit financing in Kenya. This section discusses and describes these characteristics of individuals who sought microfinance credit. They include gender, marital status, education level and location of the borrower. Frequency tables and percentages have been used to present the data. All the tables were obtained based on the data of 1,009 microcredit borrowers.

4.2.1 Socio-economic Characteristics
These include: gender, marital status, level of education and location of borrowers (Rural/Urban).

4.2.1.1 Gender of borrowers
With regard to sex, the variable gender took the value of 1 for female borrowers and 0 otherwise.

Chart 4.1: Gender of borrowers

![Gender Distribution Chart]

Male 35.6%
Female 64.4%

Source: author’s computation from the FinAccess 2016 dataset. (Statistically significant at 1%)
Out of a sample of 1,009 respondents, 359 were male representing 35.6% while 650 were female representing 64.4%. A research by Deutsche Bank Research (2007) revealed that women, especially in Asia form the vast majority of microfinance borrowers. The prevalence of female borrowers reflects the fact that they are more reliable debtors because, as a result of tighter social and family ties, they often adopt less risky investment strategies leading to lower rates of default for MFIs (Deutsche Bank Research, 2007).

Additionally, majority of MFI clients being women can be explained by the fact that most MFIs target women. This is because they are generally one of the most vulnerable segments of society. MFIs also target female micro entrepreneurs for the reason that studies have shown that they are the ‘change’ agents of the family. They spend a greater fraction of their income on the wellbeing of their households as opposed to men (CARE International, 2016).

4.2.1.2 Marital Status of Borrowers
The study also inquired to establish the marital status of the respondents. This is illustrated in table 4.2 below.

Table 4.2: Marital Status of Borrowers

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>157</td>
<td>15.6</td>
</tr>
<tr>
<td>Divorced</td>
<td>21</td>
<td>2.1</td>
</tr>
<tr>
<td>Widowed</td>
<td>94</td>
<td>9.3</td>
</tr>
<tr>
<td>Married</td>
<td>734</td>
<td>72.7</td>
</tr>
<tr>
<td>Engaged*</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td>Total</td>
<td>1009</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset. (Statistically insignificant at 1%)
*Engaged. The youth are under this category of engaged and they are regarded as high risk clients since they lack stability and can easily relocate making it hard to recover loans from them. Majority, 734 (72.7%) of the microfinance clients were married, 15.6% were single, 9.3% were widowed while 2.1% were divorced. These results are consistent with the study by Ajagbe (2012) in Nigeria who found out that majority of small scale entrepreneurs who access microcredit are married. The rationale is that married people are more likely to be stable as compared to their counterpart, therefore they are deemed to be more reliable by financial institutions and this makes them more likely to demand credit. Further, most married people have got huge financial responsibilities and therefore, will seek loans to bridge their financial gap.

4.2.1.3 Education level of Borrowers

<table>
<thead>
<tr>
<th>Level of Education</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>66</td>
<td>6.5</td>
</tr>
<tr>
<td>Primary</td>
<td>510</td>
<td>50.6</td>
</tr>
<tr>
<td>Secondary</td>
<td>307</td>
<td>30.4</td>
</tr>
<tr>
<td>Tertiary</td>
<td>126</td>
<td>12.5</td>
</tr>
<tr>
<td>Total</td>
<td>1009</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset. (Statistically significant at 1%)

Majority of the borrowers attained primary education with a percentage of 50.6, followed by those who attained secondary school education level with a percentage of 30.4. The minority of the borrowers attained tertiary education. The results support the findings by Ajagbe (2012) in Nigeria who found out that only a few small scale entrepreneurs who accessed microcredit had attained
university level of education. This could be because most graduates get white-collar jobs and therefore will not be operating small businesses which require microloans. However, it is clear that all the borrowers had gained at least one level of education.

4.2.1.4 Location of Borrowers

Chart 4.4: Location of Borrowers

Source: author’s computation from the FinAccess 2016 dataset. (Statistically insignificant at 1%)

With regards to location, the results revealed that majority (61.2%) of the borrowers were rural residents while the minority (38.8%) were urban residents.

This is in line with the findings by Rand (2007) in Vietnam who established that a relatively large proportion of enterprises/individuals in rural provinces are debt holders as compared to their counterparts in urban cities. Additionally, he noted that most of government microcredit is allocated to rural areas thereby rural applicants standing out to be the majority. In Kenya, most formal financial institutions are located in urban centres, therefore, the high transport cost and long distances constrains rural residents from accessing these institutions resulting to borrowing from MFIs most of which are informal.

4.2.2 Other Descriptive Statistics

4.2.2.1 Business Sector

The table 4.5 below shows information about distribution of core business sectors.

Table 4.5: Business Sector
<table>
<thead>
<tr>
<th>Business Sector</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>40</td>
<td>13.0</td>
</tr>
<tr>
<td>Trading/Retail</td>
<td>205</td>
<td>66.8</td>
</tr>
<tr>
<td>Services</td>
<td>62</td>
<td>20.2</td>
</tr>
<tr>
<td>Total</td>
<td>307</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset.

From the table above, we see that 66.8% of the microfinance clients engage in trade/retail business, 18.6% in services and 13.0% in manufacturing businesses. Nevertheless, it is not astounding that the leading economic activity is that of trading/retail followed by service. This principally owes to the small capital requirement to start such businesses. Furthermore, the fact that the least number of borrowers engaged in manufacturing business can be explained by the fact that; this kind of businesses require massive investment (capital) which MFIs cannot provide; and hence majority of manufacturers would turn to commercial banks for such huge loan amounts.

These results support the findings by Kiraka et al. (2013) who observed that majority of women microentrepreneurs (who are majority of MFI clients) in Kenya engage in trade and services type of businesses while only a few are in manufacturing and information technology sectors.

### 4.2.2.2 Reasons for borrowing

Money is essential for various purposes depending on a household’s preferences. One of the major drivers for liquidity demand is consumption smoothing. While commercial banks might charge relatively lower interest rates, MFIs are perceived to be the cheaper compared to shylocks whose interest rates are above 100%. The study sought to establish why people borrow from MFIs as opposed to other lending institutions and the findings are presented in table 4.6 below.

<table>
<thead>
<tr>
<th>Reasons for borrowing</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
</table>

Table 4.6: Reasons for borrowing from MFIs
<table>
<thead>
<tr>
<th>Low interest on loan</th>
<th>235</th>
<th>23.3</th>
</tr>
</thead>
<tbody>
<tr>
<td>No collateral needed</td>
<td>211</td>
<td>20.9</td>
</tr>
<tr>
<td>Fast processing time</td>
<td>173</td>
<td>17.1</td>
</tr>
<tr>
<td>Flexible loan amount</td>
<td>41</td>
<td>4.1</td>
</tr>
<tr>
<td>Flexible repayment terms</td>
<td>107</td>
<td>10.6</td>
</tr>
<tr>
<td>No guarantor needed</td>
<td>59</td>
<td>5.8</td>
</tr>
<tr>
<td>No other option available</td>
<td>126</td>
<td>12.5</td>
</tr>
<tr>
<td>Other</td>
<td>57</td>
<td>5.7</td>
</tr>
<tr>
<td>Total</td>
<td>1009</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset.

The results of this study revealed that 23.3% of the MFI clients borrowed from MFIs because they perceived that MFIs charge low interest on loans, 20.9% because they did not require any form of collateral in order to secure a loan and 17.1% for the sole reason that they believed MFIs would process their loan requests fast, therefore, getting the loan in time. Further, 14.7% of the borrowers applied for loans from MFIs because of the institutions’ flexible repayment terms and flexible loan amounts while 5.8% borrowed for the reason that they needed no guarantor to secure a loan. A significant percentage (12.5%) of the clients borrowed because they had no other option available (maybe they did not qualify for loans from other financial institutions) apart from MFIs.

**4.2.2.3 Collateral Used**

While some MFIs and group lending schemes might require collateral, the collateral is in form of readily available resources ranging from household items, livestock and ID cards. The research
sought to establish what form of collateral the MFI clients offer to MFIs in order to successfully apply for loans. Below is a table showing the various forms of collateral that the borrowers used.

*Table 4.7: Collateral Used*

<table>
<thead>
<tr>
<th>Collateral Used</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Land / title deed</td>
<td>15</td>
<td>1.9</td>
</tr>
<tr>
<td>National Identity Card</td>
<td>72</td>
<td>9.0</td>
</tr>
<tr>
<td>Livestock</td>
<td>19</td>
<td>2.4</td>
</tr>
<tr>
<td>Salary</td>
<td>56</td>
<td>7.0</td>
</tr>
<tr>
<td>Household asset</td>
<td>53</td>
<td>6.6</td>
</tr>
<tr>
<td>Other</td>
<td>58</td>
<td>7.3</td>
</tr>
<tr>
<td>No collateral needed</td>
<td>526</td>
<td>65.8</td>
</tr>
<tr>
<td>Total</td>
<td>799</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset.

The results showed that approximately 66 percent of borrowers did not require collateral in order to access credit. 9 percent and 7 percent of the borrowers required national identity card and salary as collateral respectively for them to secure loans from MFIs. Land/title deed was found to be a less important type of collateral with only 1.9 percent of borrowers pledging it for collateral. The transaction between MFIS and their clients in relation to credit is based on trust and social capital as opposed to individuals pledging collateral.

Traditional forms of collateral are considered inimical to the spirit of advancing microcredit to the financially excluded population of developing countries. Literature on the subject shows how
microfinance has replaced physical collateral with collateral substitutes which include denial of future credit and use of social sanctions (Aslam and Azmat, 2012).

According to Roodman (2006), MFIs also use social capital manifested in form of friends and family network and group lending as a form of collateral substitute. In the case of group lending, members of the group are severally and jointly liable for all loans taken out; therefore, they are individually liable for each other’s loans and hence no need of physical collateral. This, therefore, explains why majority of borrowers did not require collateral in order to get loans and just few required physical capital (land) as collateral.

4.2.2.4 Frequency of Repayment

\textbf{Table 4.8: Frequency of Repayment}

<table>
<thead>
<tr>
<th>Frequency of Repayment</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daily</td>
<td>10</td>
<td>1.0</td>
</tr>
<tr>
<td>Weekly</td>
<td>96</td>
<td>9.5</td>
</tr>
<tr>
<td>Monthly</td>
<td>496</td>
<td>49.2</td>
</tr>
<tr>
<td>Irregularly*</td>
<td>362</td>
<td>35.9</td>
</tr>
<tr>
<td>Not started repaying</td>
<td>26</td>
<td>2.5</td>
</tr>
<tr>
<td>Other</td>
<td>19</td>
<td>1.9</td>
</tr>
<tr>
<td>Total</td>
<td>1009</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset.

Irregularly* meaning small instalments are made as repayment whenever the money is available.
Conventionally, MFIs adopt a weekly repayment schedule with repayment starting one to two weeks after the loan has been disbursed. Weekly repayment by MFI clients is believed to minimize the risk of default in the absence of collateral and render lending to the poor viable.

On the contrary, the results showed that majority (49.2.7%) of the microfinance clients repaid their loans on a monthly basis while only 1.0% of the borrowers preferred to repay their loans on a daily basis. 35.9% of the borrowers repaid their loans whenever they had money available while 1.9% had not yet kicked off with the repayment.

Vast research has been done to test this hypothesis but results from these studies showed that reduced repayment flexibility does not affect the repayment rate. Field and Pande (2007) found that switching from weekly to monthly instalments did not affect client repayment capacity. Mensah et al. (2013) also found out that there is no correlation between repayment schedule and loan default. However, he observed that clients given less repayment period had higher rate of default more than the ones given a longer period of time. Therefore, the majority of clients repaying on a monthly basis can be justified by the fact that longer repayment period encourages longer term investments in between the instalments hence, it may improve customers’ long run repayment capacity due to the income generated (Mensah et al., 2013).

4.2.2.5 Loan Disbursement and Repayment by Mobile Money

Table 4.9: Loan Disbursement and Repayment by Mobile Money

<table>
<thead>
<tr>
<th>Response</th>
<th>Loan Disbursement by Mobile Money</th>
<th>Loan Repayment by Mobile Money</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage (%)</td>
</tr>
<tr>
<td>Yes</td>
<td>60</td>
<td>6.0</td>
</tr>
<tr>
<td>No</td>
<td>949</td>
<td>94.0</td>
</tr>
<tr>
<td>Total</td>
<td>1009</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset.
It is evident from the results that only 6% of MFI clients received their loan payout via mobile money. 94% of the clients’ loans were disbursed through other platforms other than mobile money.

The results further suggested that a bigger group of microfinance clientele, 93.5%, did not repay their loans by use of mobile money. Only 6.5% of the borrowers repaid their loans by use of mobile money. Investing in mobile bank programs increases MFIs’ operating cost via administrative expenses.

These results could be explained by the findings by Gant (2012) that; ceteris paribus, banks that have a mobile banking program are associated with a certain percentage increase in operating expenses per loan portfolio. Further, regulations make it hard to disburse loans in a cost-efficient way. Maximum limits on the mobile payment system can force MFIs to make loan disbursements in several small instalments, which may lead to an increase in the costs for the clients in form of withdrawal charges (Yousif et al., 2013). As a result, many MFIs may be reluctant to adopt the mobile banking system, hence the low disbursement and repayment rates via mobile phone.

4.2.2.6 Late Repayment

Chart 4.10

Source: author’s computation from the FinAccess 2016 dataset.

The study found out that majority of the MFI clients; 79.6% repay their loan in time. Only 20.6% of the borrowers made late repayment. These results are consistent with findings by Khan (2014) in Pakistan who got almost similar results (82.26% rate of repayment and 17.74% default/late repayment rate).
The high repayment rate can be explained by the fact that most MFIs employ group lending methodology which mitigates the risk of default and late repayment. However, the repayment rate can be improved by development a proper mechanism for monitoring clients by microfinance institutions or provision of appropriate guidelines concerning effective loan utilization (Khan, 2014).

4.2.2.7 Consequences of Late Repayment

Table 4.11 below shows the consequences of late repayment.

*Table 4.11: Consequences of Late Repayment*

<table>
<thead>
<tr>
<th>Consequences of Late Repayment</th>
<th>Frequency</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing, you were forgiven</td>
<td>106</td>
<td>58.9</td>
</tr>
<tr>
<td>Paid a fine, then continued repaying loan</td>
<td>64</td>
<td>35.6</td>
</tr>
<tr>
<td>Physical harassment</td>
<td>5</td>
<td>2.8</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>1.6</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>1.1</td>
</tr>
<tr>
<td>Total</td>
<td>180</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset.

If borrowed money is not put into productive activities, then there is a high probability that the borrower will face difficulties when repayment time comes, thereby defaulting or making late repayment which attracts consequences.

On the contrary, the study found out that a great percentage of individuals (58.9%) who did not repay their loans on time were forgiven and therefore no action was taken against them. 35.6% of those who made late repayments paid a fine and later continued repaying their outstanding loans.
while only 2.5% experienced physical harassment from the MFI officers. The results conformed with the findings by Asongo and Idama (2014) that a considerable percentage of microfinance client who make late repayments are forgiven or rather no action is taken against them whereas only a few are forced to pay through physical harassments such as being taken to the police.

**4.2.2.8 Use of Microfinance Loan**

Microfinance clients must make difficult decisions with respect to loan usage. More often than not, they are faced with the question of whether to fully invest all the loan money or to use some of the amounts to settle immediate domestic and personal needs. Khan (2014) observed that microfinance clients use their loans for both income generation through investment in small businesses and consumption smoothing - to meet domestic needs of their families. The table below shows the different uses into which the borrowers put the borrowed money.

*Table 4.12: Use of Microfinance Loan*

<table>
<thead>
<tr>
<th>Use of Microfinance Loan</th>
<th>Freq</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>For emergency (burial, medical)</td>
<td>299</td>
<td>29.6</td>
</tr>
<tr>
<td>For education of yourself, children or siblings or others</td>
<td>273</td>
<td>27.1</td>
</tr>
<tr>
<td>For meeting day-to-day ordinary household needs</td>
<td>225</td>
<td>22.3</td>
</tr>
<tr>
<td>For expanding your business</td>
<td>74</td>
<td>7.3</td>
</tr>
<tr>
<td>For personal reasons (clothes, shoes, own travel)</td>
<td>44</td>
<td>4.4</td>
</tr>
<tr>
<td>For agricultural inputs – seeds, fertilizer, insemination</td>
<td>38</td>
<td>3.8</td>
</tr>
<tr>
<td>For starting up a new business</td>
<td>29</td>
<td>2.9</td>
</tr>
<tr>
<td>For improving a house</td>
<td>26</td>
<td>2.6</td>
</tr>
<tr>
<td>To acquire household goods</td>
<td>23</td>
<td>2.3</td>
</tr>
<tr>
<td>To pay off debts</td>
<td>23</td>
<td>2.3</td>
</tr>
<tr>
<td>For agricultural improvements e.g. irrigation, fencing</td>
<td>20</td>
<td>2.0</td>
</tr>
<tr>
<td>Purchase land</td>
<td>17</td>
<td>1.7</td>
</tr>
<tr>
<td>Purpose</td>
<td>Count</td>
<td>Percent</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>-------</td>
<td>---------</td>
</tr>
<tr>
<td>For purchase of livestock /cattle</td>
<td>17</td>
<td>1.7</td>
</tr>
<tr>
<td>Purchase or build a house for your family to live in</td>
<td>16</td>
<td>1.6</td>
</tr>
<tr>
<td>Purchase or build a house to rent out</td>
<td>11</td>
<td>1.1</td>
</tr>
<tr>
<td>For social reasons (wedding, bride price)</td>
<td>10</td>
<td>1.0</td>
</tr>
<tr>
<td>For purchasing a car or motorcycle</td>
<td>10</td>
<td>1.0</td>
</tr>
<tr>
<td>Repay for someone else who was unable to repay</td>
<td>9</td>
<td>0.9</td>
</tr>
<tr>
<td>To pay for farm labour</td>
<td>7</td>
<td>0.7</td>
</tr>
<tr>
<td>For later in life/old age</td>
<td>4</td>
<td>0.4</td>
</tr>
<tr>
<td>For agricultural implements – plough, hoe, tractor</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td>To transport farm produce to market</td>
<td>3</td>
<td>0.3</td>
</tr>
<tr>
<td>For purchase of shares/stocks/bonds/T-bills</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>Other purposes</td>
<td>2</td>
<td>0.2</td>
</tr>
<tr>
<td>Total</td>
<td>1009</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: author’s computation from the FinAccess 2016 dataset.

The results indicated that most individuals (29.6%) borrowed for the purpose of financing emergencies such as funerals and medical bills. The second most use of the loans was to finance education (27.1%). In Kenya, quality education is expensive and hence quite a good number of people tend to borrow in order to finance education; either for themselves, children or siblings.

The third most use of the loans was to finance the day-to-day financial needs -immediate consumption (22.3%) of the borrowers. From a social point of view, it is not necessarily bad for households to borrow so as to smooth consumption.

Further, the results showed that only two people borrowed to finance purchase of shares/stocks/bonds/T-bills. This can be explained by the fact that these kind of investments require huge chunks of money to invest in and hence a microloan cannot be appropriate. Other
uses of the loan included purchase of land and livestock (2.4%), payment of farm labour, agricultural related uses among others as presented in the table above.

These results are in support of the findings by Khan (2014) and Okurut et al. (2014) in Pakistan and Botswana respectively who found out that; loans by microfinance clients are mainly used to smooth consumption as opposed to productive business investments. However, a caveat is issued that; borrowing to finance domestic needs may create a vicious cycle of debt hence poverty among the borrowers more so because MFI loans attract higher interest rates as compared to the interest rates by the conventional commercial banks.

4.3 (a) Regression Results

The primary objective of the study is to examine empirically the factors that determine access to microcredit financing in Kenya. The dependent variable of the study is access to microcredit.

Microcredit financing in this study is defined as credit from SACCOs, formal MFIs, Chamas (translated as groups), shopkeepers, moneylender, employers, neighbours, friends and farm produce buyers. It was captured as a dummy and was constructed as follows: 1 = access to microcredit (whether in full amount applied for or partial) and 0 = no access to microcredit.

Table 4.13 below presents the econometric results from the probit model. The estimated variables are jointly statistically significant based on the value of LR chi² (=244.01) and the joint probability (Prob > chi² = 0.0000).
### Table 4.13: Probit Regression Results

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Coefficient</th>
<th>Z-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban</td>
<td>-0.0258</td>
<td>-0.58</td>
<td>0.559</td>
</tr>
<tr>
<td>Female</td>
<td>0.1704</td>
<td>3.94</td>
<td>0.000***</td>
</tr>
<tr>
<td>Log of Age</td>
<td>-0.0754</td>
<td>-1.30</td>
<td>0.195</td>
</tr>
<tr>
<td>Single</td>
<td>-0.1354</td>
<td>-0.98</td>
<td>0.329</td>
</tr>
<tr>
<td>Widowed</td>
<td>0.2108</td>
<td>1.45</td>
<td>0.147</td>
</tr>
<tr>
<td>Married</td>
<td>0.2012</td>
<td>1.53</td>
<td>0.126</td>
</tr>
<tr>
<td>Primary</td>
<td>0.4340</td>
<td>5.94</td>
<td>0.000***</td>
</tr>
<tr>
<td>Secondary</td>
<td>0.5251</td>
<td>6.57</td>
<td>0.000***</td>
</tr>
<tr>
<td>Tertiary</td>
<td>0.8241</td>
<td>6.69</td>
<td>0.000***</td>
</tr>
<tr>
<td>Log of Household Size</td>
<td>0.0048</td>
<td>0.14</td>
<td>0.888</td>
</tr>
<tr>
<td>Log of Earnings</td>
<td>0.0517</td>
<td>5.67</td>
<td>0.000***</td>
</tr>
<tr>
<td>Constant</td>
<td>-1.8532</td>
<td>-6.69</td>
<td>0.000***</td>
</tr>
<tr>
<td>Number of observations</td>
<td></td>
<td></td>
<td>6112</td>
</tr>
<tr>
<td>LR chi2 (15)</td>
<td></td>
<td></td>
<td>244.01</td>
</tr>
</tbody>
</table>
Microcredit, as defined earlier is the provision of tiny loan amounts to informal micro entrepreneurs in the society. From the results presented in table 4.13 above, four out of the explanatory variables were found to be statistically insignificant while six of the variables were significant at 1% level. Location, age, marital status and household size were found to be insignificant influencers of access to microcredit financing.

The results revealed that being female is a positive and significant determinant of access to microcredit finance in Kenya. In most communities in Kenya and the world over, men typically have social and political power, and also tend to be in control of most of the household and family resources.

Consequently, men are viewed to be more creditworthy increasing their likelihood of access to bank credit. As a result, women are excluded from bank credit access and hence turn to microfinance credit which is offered collateral free or with “little” collateral.

These results are, therefore, consistent with a priori expectations and with the findings by Mwangi and Kihiu, (2012), Akoten et al., (2006), Zeller, (1994), Zeller et al, (1994) and Mawngi and Siche, (n.d) who found that being female is positively related to access to MFI and informal credit. In Kenyan context, the results could be explained by the fact that at their inception, most microfinance institutions in Kenya exclusively targeted female clients. Example of these MFIs is Kenya Women Finance Trust (KWFT) and Pamoja Women Development Programme (PAWDEP).

Earnings (monthly earnings) were found to be positively and significantly related to access to microcredit at 1 percent level. This indicates that individuals with monthly earnings are more likely to access microcredit as compared to those that do not have any source of income. In addition to the findings being consistent with a priori expectations, they were consistent with the

<table>
<thead>
<tr>
<th>Prob &gt; chi²</th>
<th>0.0000</th>
</tr>
</thead>
</table>

*** Significant at 1%
findings by other scholars who established similar relationship (see Clamara et al., 2014; Mwangi and Kihiu, 2012; Okurut et al., 2009; Okurut, 2008; Okurut and Schoombee, 2007; Okurut, 2006; Zeller et al., 1994; Mwangi and Sichei, n.d). The intuition is that when lending out funds, financial institutions including MFIs are primarily concerned with loan repayment. Income is seen as collateral for loan thus they use the borrowers’ income as a measure of repayment capacity.

It is evident from the results that education level is a positive and highly statistically significant (at 1% level) determinant of access to microcredit financing. Those borrowers who attained primary, secondary, technical and university education had a positive and significant relationship with access to microcredit financing.

By implication, education increases the efficiency of choices made by individuals and serves to enlighten them on the different financial services available as well as creating awareness on the best way to manage the available services.

Further, education builds human capital resulting into a higher earning power, therefore, the income serves to increase their repayment capacity.

These results are as expected and are consistent with findings by various scholars (see Clamara et al., 2014; Kacem and Zouari, 2013; Mwangi and Kihiu, 2012; Peprah, 2012; Okurut et al., 2009; Bakhshoodeh and Karami, 2008; Okurut, 2008; Okurut, 2006 and Mwangi and Sichei, n.d) who establish a positive relationship between access to credit and education level.
4.3 (b) Marginal Effects (M.E) After Probit

The marginal effect of an explanatory variable is the partial derivative of a given function of the covariates and coefficients of the preceding estimation. Marginal effects (M.E) measure the probable immediate change in the endogenous variable as a function of a change in the exogenous variable while holding the other covariates constant (SAS Institute Inc., 2008), Principles of Economics by Robert Mudida. The calculation of marginal effects is different for the discrete / categorical and continuous variables. With binary exogenous variables, M.E measure discrete change, that is, how the predicted probabilities change as the binary explanatory variable changes from 0 to 1. On the other hand, M.E for continuous variables measures the instantaneous rate of change (Williams, 2015). In relation to this study, the M.E of the probit model shows the change in the probability of access to microcredit by MFI clients for a unit increase in the exogenous variables. Table 4.14 below presents the marginal effects when estimating the probit model of households’ access microcredit in Kenya.

Table 4.14: Marginal Effects After Probit

<table>
<thead>
<tr>
<th>Variable Name</th>
<th>Coefficient</th>
<th>z-statistic</th>
<th>Probability</th>
</tr>
</thead>
<tbody>
<tr>
<td>Urban*</td>
<td>-0.0058</td>
<td>-0.59</td>
<td>0.558</td>
</tr>
<tr>
<td>Female*</td>
<td>0.038</td>
<td>4.02</td>
<td>0.000</td>
</tr>
<tr>
<td>Log of Age</td>
<td>-0.0171</td>
<td>-1.3</td>
<td>0.195</td>
</tr>
<tr>
<td>Single*</td>
<td>-0.0295</td>
<td>-1.02</td>
<td>0.308</td>
</tr>
<tr>
<td>Widowed*</td>
<td>0.052</td>
<td>1.34</td>
<td>0.179</td>
</tr>
<tr>
<td>Married*</td>
<td>0.0443</td>
<td>1.58</td>
<td>0.114</td>
</tr>
<tr>
<td>Primary*</td>
<td>0.099</td>
<td>5.97</td>
<td>0.000</td>
</tr>
<tr>
<td>Secondary*</td>
<td>0.1339</td>
<td>6.01</td>
<td>0.000</td>
</tr>
<tr>
<td>Tertiary</td>
<td>0.2581</td>
<td>5.59</td>
<td>0.000</td>
</tr>
<tr>
<td>Log of Household Size</td>
<td>0.0011</td>
<td>0.14</td>
<td>0.888</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------</td>
<td>------</td>
<td>-------</td>
</tr>
<tr>
<td>Log of Earnings</td>
<td>0.0117</td>
<td>5.71</td>
<td>0.000</td>
</tr>
<tr>
<td>( Y = \text{Pr (microfinance)} ) (predict) = .1439729</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: author’s computation.

The results suggested that being female increases the probability of accessing microcredit by 3.8% as compared to being male. This is probably because as discussed earlier, most MFIs target women.

Generally, women have been denied credit access from traditional commercial banks and that’s why they are targeted by microfinance (Peprah, 2012).

Further, they indicated that individuals who had attained primary level of education increased their likelihood of accessing microcredit by 9.9% while those who had attained secondary level of education increased their likelihood of accessing microcredit by 13.4%.

Borrowers with tertiary level of education increased their probability of accessing microcredit by approximately 25.8%. These tabulations clearly show that education level has a positive link with microcredit access, in that; the higher the level of education, the higher the likelihood of accessing microcredit.

With reference to earnings, the results revealed a positive link between earnings and access to microcredit. Individuals who had constant monthly earnings increased their chance of access to microcredit by 1.2%.
CHAPTER FIVE

SUMMARY OF RESULTS, POLICY RECOMMENDATIONS AND CONCLUSION

5.1 Introduction

This chapter presents a summary of the findings of the study and policy recommendations drawn from the study. The first section gives the summary of findings while the second part gives conclusion and policy recommendations drawn.

5.2 Summary of Findings

Using FinAccess Survey 2016 data, the study sought to assess the socioeconomic factors influencing access to microcredit financing in Kenya. Specifically, the study aimed at examining the socio-economic characteristics of microcredit borrowers in Kenya; estimating the key factors influencing access to microcredit finance in Kenya and drawing policy implications from the findings generated. With regard to socio-economic characteristics, the study revealed that majority of MFI clients in Kenya are women and that most of the borrowers were married. Further, the results showed that in relation to the level of education, majority of the borrowers attained primary level of education. Rural clients were also found to be the majority among microcredit borrowers whereas most of the clients engaged in trading/retail business activities.

Interestingly, the key determinants of access to microcredit in Kenya were not unique from other developing countries such as Nigeria, Ghana, and Uganda among others. It is evident from the probit results that female clients have an upper hand when it comes to access to microcredit. Education level was also found to have a positive link with access to microcredit with clients who attained university level of education having the highest probability of accessing microcredit.

On the contrary, earnings (monthly earnings) exhibited a negative and significant relationship with access to microcredit. Both manufacturing and trade businesses were found to have a positive and significant correlation with access to microcredit. On the same note, the results showed that
individuals who engaged in manufacturing activities had a higher likelihood of accessing microcredit as compared to their counterparts in the and trading business.

5.3 Conclusion and Policy Recommendations
The positive and significant correlation between being female and access to microcredit implies that microfinance is heading towards the right direction of achieving one of its objectives of women’s empowerment. It also shows that microfinance has the potential to contribute significantly to gender equality in the financial markets. Therefore, it is recommended that MFIs should move towards a more gender-balanced portfolio to benefit all the poor.

Education level was found to be a positive and highly significant determinant of access to microcredit, with the probability of access increasing with higher education levels. This implies that education enhances access to microcredit. Efforts have been made by the Government of Kenya to enhance access to education by rolling out programs such as the free primary education. Since education improves access to microcredit and productivity, the government should come up with policies that enhance access to education across all levels. This is because higher education enlightens people on the different financial services available; increases the efficiency of choices made by individuals and makes them arrive at informed loan-decisions to increase productivity. This can be achieved by ensuring that funds disbursed to the Ministry of Education and devolved governments are strictly monitored to make sure that students benefit from them through bursaries and sponsorships and also to avoid instances of embezzlement.

Earnings (monthly earnings) were found to be negatively and significantly related to access to microcredit. This indicates that individuals with monthly earnings are more likely to access microcredit as compared to those that do not have any source of income.

The national government has in the past conceived programmes that would create employment for the youth such as “Kazi kwa Vijana” – loosely translated as “Employment for the Youths”. However, this programme did not work out in solving the unemployment problem since it offers temporary employment for the youth.
Therefore, it is recommended that both the county and national governments should initiate schemes that would create permanent employment for the youths, women and the poor to enable them have a permanent and reliable stream of income; preferably monthly earnings. This will open avenues for them to get access to microcredit since monthly income enhances access to microcredit through improvement of repayment capacity.

Only a few MFI clients (the least number) engage in manufacturing business while the majority engage in trade/retail businesses. This is despite there being a positive relationship between both manufacturing and trade business sectors and access to microcredit. This concentration in lowvalue sectors is not good for the economy because it leads to market saturation but little economic growth. Therefore, it is of importance that the MFIs take it upon themselves to encourage their clients to engage in viable and productive businesses which will have a tangible impact on economic growth and on top of that, give training on business management skills in order to at least help the clients make proper use of the loans.

5.4 Recommendation for further Research
This study mainly dealt with the demand side factors that influence access to microcredit financing. The author recommends that a study on the supply side factors determining access to microcredit should be done.

5.5 Limitations of the Study
The study was mainly limited by the data set used since not all the variables of interest (as informed by the literature) were captured by the FinAccess Survey, 2016 dataset.
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