EFFECT OF MEMBERSHIP OUTREACH ON OPERATIONAL SELF-SUFFICIENCY OF MICROFINANCE BANKS IN KENYA

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DECLARATION

I, the undersigned, declare that this project is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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DEDICATION

The research is dedicated to my family for their support and encouragement. May God bless them abundantly.

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I am grateful to many individuals for their support towards the successful and timely completion of this research work. To begin with, I take this opportunity to express my deepest gratitude to God for blessing me with good health, clarity of mind and focused attention without which, successful completion of this work would not have been possible. His name is glorified forever.

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ABSTRACT

Microfinance has become an important tool in providing financial access and safety net to the poor. Microfinance plays a key role in poverty alleviation across the world, both in policy, academic discussions and in general practice (Ghatak, 1999). Outreach of MFBs in Kenya has been inadequate with possible impact on their operational self-sufficiency. However, little is known on how membership outreach affects Operational self-sufficiency leaving a big knowledge gap that informed this study. The objective of this study is to establish the relationship between membership outreach and Operational self-sufficiency of Microfinance Banks in Kenya. This study is valuable to regulators, practitioners and policy makers in the microfinance space. The study implemented a descriptive survey research design on a target sample of 12 MFBs registered as at end December 2015. Secondary data was collected from data filled by the MFBs with CBK for a 5 year period (2011 – 2015). The study used stepwise multiple linear regression models to analyze the data. The findings showed that outreach as measured by deposit values of MFBs has positive and significant effect on operational self-sufficiency. Further, operational expenses ratio, non-interest income to total income ratio, nonperforming loans ratio, and operational expenses to total expenses ratios have negative but significance impact on operational self-sufficiency. The study further found that MFBs that have a wide membership outreach are generally self-sufficient and profitable. The study recommends that MFBs should employ rigorous strategies to build a quality loan book to impact positively on operational self-sufficiency. Besides they should deploy technology to enhance their deposit collections and reduce their operations cost, thus, enhance their operational self-sufficiency. The study recommends that for MFBs should focus on achieving operational self-sufficiency in order to cut on subsidies, survive and sustain growth. They should further attract new customers through promotions as this would improve MFBs outreach hence improve financial performance and profitability and lowering operating costs.

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ABBREVIATIONS

AMFI-K	The Association of Micro Finance Institutions of Kenya
CBK	Central Bank of Kenya
CGAP	Consultative Group to Assist the Poor
DTMs	Deposit Taking Microfinance
FSAs	Financial Services Association
FSS	Financial Self Sufficiency
GDP	Gross Domestic Product
JLT	Joint liability Theory
KWFT	Kenya Women Finance Trust
MFI	Micro Finance Institution
MFIs	Micro Finance Institutions
MFB	Micro finance Banks
MSEs	Micro and Small Enterprises
NGOs	Non-Governmental Organisations
OSS	Operational Self Sufficiency
ROSCAs	Rotating Savings and Credit Associations
ROA	Return on Asset
ROE	Return on Equity
SACCOs	Savings and Credit Cooperative Societies
SDI	Subsidy Dependence Index
UNCFCD	United Nations Capital Development funds
UNDP	United Nations Development Program

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Microfinance plays a pivotal role in poverty alleviation across the world, both in policy, scholarly discussions and in practice (Ghatak, 1999). Global initiatives to lift people out poverty will be better achieved by integrating MFIs in the poverty eradication programs. This is due crucial part that MFIs play in calling out low-income recipients, small-scale farmers and the poor (Rangarajan, 2008). He further reiterates that the poor who are the majority of the total populace must be set on national motivation if the objective of fiscally including individuals is to be accomplished.

Fin Access (2009) affirms the impressive strides that Kenya has realized over the past 5 years in financial inclusion via the use of mobile technology .While formal inclusion has yet to match levels in Southern Africa, the proportion of the population that is completely financially included in Kenya is higher than any other sub-Saharan Africa. The report cites MFI activities and financial technology as being among drivers of financial inclusion in Kenya (Fin Access, 2009).

Rangarajan (2008) posits that financial access by poor people and monetarily impeded gatherings is a key element for destitution diminishment and social union. It is a basic piece of activities to advance comprehensive development as giving access to back is a type of strengthening for the poor and vulnerable groups. MFIs, even though still a small actor in the Kenyan financial sector, they have a profound outreach in both urban and rural areas by reaching the underserved (Fin Access, 2009). According to CGAP (2004),

Microfinance has become an important tool in providing access to basic financial services to the poor. By lending small amounts with compulsory savings and regular payments to groups and individuals, MFIs enable the poor to raise and diversify earnings, build assets, and a create safety net against unforeseen externalities (CGAP, 2004).

Microfinance Institutions provide financials products that are customized to provide informal and formal financial needs of the poor. The flexible loan terms inherent in MFI advance contracts have made augmentation of little credits to the poor conceivable and have been acknowledged yet with energy (Mwangi, 2012). Loan repayment rates across MFIs Institution have extremely heightened, even close to 100 %.

Various researchers and scholars have evaluated the influence of Microfinance activities for the various forms of outreach .The areas of outreach have mainly been on efficient and effective delivery of money related administrations to the poor in poor or rejected zones, women and people frequently shunned from microfinance, for example, agriculturists or young people between 16-25 years old (Mwangi, 2012).

Matu (2008) conducted research on the sustainability and lucrativeness of microfinance in Kenya. He concluded that efficacy and effectiveness in delivery of financial services to the poor was a main challenge facing financial institutions seeking to serve the bottom of the pyramid. Rangarajan (2008) postulates that there is a growing consensus that breath of finance needs to be extended by ensuring that appropriate products are available to everyone and enabling clients to understand and efficiently access financial services.

Rangarajan (2008) further notes that the financially excluded need a variety of relevant financial services to meet their varying needs. The most important financial services are vulnerability reducing instruments that are integrated with livelihood promotion and income protection to really financially include the poor would require providing a range of relevant products. Subsequently, unless major risks are simultaneously mitigated, exposure to one type of risk may wipe out an entire income and the poor may fall into a cycle of inclusion and exclusion.

Sharma (2001) underlines the importance of sustainability as it is crucial for increasing outreach to achieve the prime objective of reaching the poorer segments of the society. For an MFI to be sustainable, the institutional development support should include diversified ownership structure and effective governance, differentiated financial services, information communication systems, accounting policies and practices, management of loan book , lending procedures and financial technology for managing transaction costs.

Similarly factors such as risk management, well trained human resources, proper pricing, savings mobilization, efficient operations, and vision according to Seibel (1999) are factors that need to be given adequate attention for MFIs to be viable. Fin Access (2009) indicators suggests that between the years 2006 and 2009, utilization of MFI services in Kenya multiplied by two, from 1.7% to 3.4% of Kenyan populace. Despite the huge market potential, majority of MFIs in Kenya are informal, unregulated and have limited scope as credit providers .This has limited their funding sources , further weakening their

lending capacity to supply efficient financial services and limits their growth prospects (Matu, 2008). According to (CBK, 2014) prudential requirements enable Microfinance Deposit Taking Institutions to pursue outreach, manage resources properly, which ultimately improves the efficiency and loan costs

1.1.1 Membership Outreach

Outreach as a concept is multidimensional and has six aspects (Meyer, 2002). The various outreach factors are profundity, extensiveness, and value to users, cost to users, length, and scope (Meyer, 2002). Navanjas, Schreiner, Meyer, & Gonzalez-Vega (2011) define depth of outreach as the social value of the output of a microfinance organization and are usually tested by the gender or poverty levels of borrowers.

Membership outreach relates to the breadth aspect and is indexed by the number of poor clients served by the MFIs since the poor are the ones who neglect to access credit from formal money related foundations since they neglect to flag that they can reimburse their advance (Conning, 2012). The membership outreach also called the breadth of outreach is achieved by ensuring that a range of appropriate loan services to a large number of poor people served by an MFI (Meyer, 2002). Membership outreach is measured by the number of active clients at a given point in time. Number of clients includes borrowers, depositors and other clients that currently access financial services (CGAP, 2006). MFI's usually reach more borrowers than savers and so the membership outreach is skewed toward borrowers than savers (Lafoucarde et al. 2006).

Other forms of outreach consider the estimate or the terms of credit gets, the cost and exchange costs borne by clients, the budgetary and hierarchical quality of the loan specialist, and the quantity of items offered, including stores (Meyer et al. 2011). Certain MFIs achieve broader membership outreach by targeted expansion to serve the user clusters that are most disadvantaged such as the female gender, small-scale farmers and or people with limited incomes (Lafoucarde et al. 2005).

1.1.2 Operational Self Sufficiency

According to CGAP (2004), Operational self-sufficiency is a quota of the financial capacity of an MFI in coverage of costs through operating revenues. The relationship assesses the ability of an MFI to cover the financial, operational expenses from the core revenues .In addition to operating expense, money related cost and advance misfortune arrangement cost is incorporated into this count, as they are a typical (and noteworthy) cost of working a MFB (CGAP, 2004).

Churchill & Gronkiewicz (2006) opines that if the OSS proportion is more prominent than 100 percent, then the MFB is regarded to take care of the majority of its expenses through claim operations and is not depending on commitments or endowments from benefactors to survive. According to (UNCDF, 2009) OSS essentially discusses to the future sustainability of the MFI's Business model without falling back on donor funds or subsidies. For MFIs, it is critical to achieve a positive OSS in order to preserve a viable model, supplementary growth in their procedures and win market share in a sustainable manner (Lafoucarde et al. 2005).

According to Christen (2012) MFIs have been competent in the presentation of a market-driven solution to address the shortage of financial services to the poverty-stricken. Conversely, even though poor have proved to be themselves trustworthy as credit reimbursement rates have move to more than 95%, microfinance organizations (MFIs) are still regularly not able to realize profitable and sustainable operational income and therefore rely heavily on subsidies. An important factor for the concern about financial performance for MFIs has been the increasing criticism for failed subsidized credit programs.

Profitability of MFIs was not highly regarded at the beginning of the movement. Policy makers and donors for Microfinance have started to call for profitability of MFIs from the 1980s and 1990s when the Microfinance sector began to thrive (Cull et al. 2013). The Rural Finance Program at the Ohio State University demonstrated that the working of enduring, lasting monetary foundations requires that they turn out to be monetarily manageable (Armendáriz de Aghion & Morduch 2005).

1.1.3 Membership Outreach & Operational Self Sufficiency

Operational self-sustainability is achieved when operating income adequately covers operational costs such as earnings, provisions, loan losses, and other clerical expenses (Kerera, 2007). If an MFI is operationally self-sufficient then it is expected that the MFI

will be financially sustainable. According to Meyer (2004), membership outreach fixates on the quantity of consumers utilizing the services of a Microfinance Institution.

According to Christen et al. (1995); Otero & Rhyne (1994), outreach and monetary maintainability variables are complimentary. As the quantity of customers' increase, MFIs have a tendency to appreciate economies of scale and thus decreases costs which help them to be monetarily practical. Conversely, Hulme & Mosely (1996) argued that there is backwards relationship amongst effort and money related manageability. The contention set forth is that expanded effort implies higher exchange expense of obtaining data on credit history of clients, which could impact negatively on financially unsustainable.

A study by Cull & Morduch (2007) on the execution of driving MFIs in 49 nations found that over portion of studied MFIs were gainful even in the wake of making alteration of dies down. It likewise recognized no proof of tradeoff between being productive and achieving poor people.

Cull & Morduch (2007) further examined outreach and profitability numbers for 124 institutions from 49 countries and found that the most profitable lenders are those that serve the poor to the least extent while those focusing on the poor are the most subsidy-reliant. The survey does not find any indication to the effect that raising interest rates or cost-minimization leads to greater profitability.

Conning (1999) examines the contractual design issues faced by microfinance organizations that tries to maximize outreach among the poor whilst remaining

sustainable. The basis of the trade-off, he suggests, is due to the dear appraisal, monitoring and control system towards the opaque borrowers which serve as substitutes for collateral. He analyzes the data for 72 MFIs and suggests that MFIs targeting poor clients must charge higher lending rates, have higher staff cost, and be less leveraged. In another cross-country study covering 114 MFIs from 62 countries, Hatarska & Nadolnyak (2007) examine whether regulation affects outreach and operational sustainability of MFIs and find no direct linkages.

Paxton & Fruman (1998) postulates that while ordinarily one would expect membership outreach to impact on the operational self-sufficiency of MFI's the exact nature of this effect remains controversial due to conflicting results obtained by different researchers further theorises that it is not possible to presume precisely on whether outreach and profitability have a mutually exclusive relationship .Likewise , It is difficult to conclude that outreach is a limitation to profitability and vice versa.

1.1.4 Microfinance Banks in Kenya

Micro finance organizations rose in Kenya in the 1980s, despite the fact that early trials began around 30 year prior in Bangladesh, Brazil and a couple of different nations (The Microfinance Gateway, 2005). The Kenya Microfinance part industry has various contending establishments, which differ in degree, business introduction, direction, custom, item range, estimate and geological scope. These establishments run from casual associations, for example, Rotating Savings and Credit Associations (ROSCAs), Financial Services Associations (FSAs), there are likewise Savings and credit co-agent

social orders (Sacco's) and NGOs that run MFIs. Additionally, there are retail banks that are down scaling to serve the bottom of the, pyramid (Dondo, 2003).

Dondo (2003) asserts that the majority of institutions providing microcredit services in Kenya use the Gramin model of solidarity group guarantee as security for small business loans which have a typical maturity of about 6 months. Microfinance Institutions in Kenya provide various financial services ranging from deposit products, credit facilities, money transfer and insurance to the economically poor, farmers, low income groups and owners of small micro scale enterprises across the country, using innovative delivery platforms (Dondo, 2003).

The first Deposit Taking Microfinance Institutions (DTMs) were licensed in 2009 under the Microfinance Act 2006, Microfinance regulations 2008 and are supervised by the CBK and Besides the 13 regulated deposits taking institution, there exist other financial providers such as Credit Only Microfinance institutions and various banks that play actively in the microfinance space (Mix market, 2015). For an institution to operate as bank in Kenya, It has to maintain prescribed liquidity levels and operate based on the prudential rules set by Central Bank Of Kenya from time to time .In Kenya there are two main classes of microfinance institutions namely deposit taking and credit only institutions (Njoroge, 2012).

Central Bank of Kenya (2015) contends that as at the year ended 2015, there were 13 MFBs licensed and regulated by the Central Bank of Kenya (CBK). The 13 regulated Microfinance banks (MFBs) accounted for Kes 69 Billion in net assets, 342,000 loan

accounts and 932,000 deposit accounts. The 13 MFBs also had Kes 11.5 Billion in aggregate Capital.

With aggregated and weighted average information, the data is biased towards 3 large MFBs that control over 50% of the MFI market share in various financial parameters. The branch network grew from 97 retail outlets in 2014 to 109 retail outlets in 2015 while the marketing offices grew from 74 to 88. As at December 31, 2015 there were 1,142 third party agents. The increase in outreach was occasioned by expansion of MFBs' networks and increase in number of microfinance banks during the year 2015 (CBK, 2015).

1.2 Research Problem

Microfinance has become an important tool in delivering access to basic financial services to the poor and underserved. Through loaning little sums with mandatory reserve funds and successive reimbursements to gatherings and people, microfinance establishments (MFIs) empower the poor to manufacture wage, make resources, and provides a safety net against unexpected external shocks (CGAP, 2004). Micro finance institutions still address multiple hindrances operation wise. Operating costs and financial expenses are very high, and on average, revenues remain lower than in other financial players (Brown, 2005). Brown (2005) in his study theorizes that efficiency in terms of cost per borrower is lowest for African MFIs. The MFIs for the study were grouped according to regions and examined on variables such as outreach, financial structure, financial performance, efficiency and portfolio quality.

Morduch (1999) however argues that there is a concern on whether MFIs can fully address issues of poverty without falling back on subsidies and donations. He further postulates that the high loan recovery rates are not necessarily a panacea for Operational Self-Sufficiency.

MFBs in Kenya are composed of clients and member-based institutions. Most of the MFBs serve the poor, most of whom live in the rural areas and peri urban slum areas, have limited or no access to formal financial service due to high transaction costs and perceived risks. They solely rely on MFIs for critical financial services. However, outreach of MFBs has been very limited negating the operational self-sufficiency inherent in economies of scale and scope (Ayele, 2014).

Meyer (2002) noticed that the poor need access to monetary administration on long haul premise instead of only a one-time money related support. Fleeting advances bother the welfare of poor people (Navajas et al., 2000). Meyer (2002) likewise expressed that MFI winds up being unsustainable because of low reimbursement rate or un-appearance of assets guaranteed by contributors or governments.

Reliance on subsidized donor funding has led to low repayments and poor fund management as the MFIs focused more on social welfare of the poor groups and less worries on institutional execution (Kipesha & Zhang, 2013).This has made outreach the most important avenue to ensure sustainability of MFIs. In addition, many potential customers still stay undeserved and the interest for small scale money related administrations far surpasses the right now accessible supply (Gibson, 2012).

Daiju & Hidenobu (2014) study found that large institutions were much more efficient and stable relative to small institutions. In addition, the proficiency of local foundations is superior to that of outside partners. Moreover, the study reasoned that establishments that are huge are more vigorous and operationally stable have ability to create benefits all the more proficiently. The organizations that are more broadened are more productive. This study however did not include membership outreach as a determinant variable.

Another study by Yenesew (2014) on the elements of financial performance among MFI's in Ethiopia found that age of the Microfinance Institutions, gearing ratio, capital to asset ratio and market concentration were not significant determinants of financial performance of MFI's. Fukasawa & Schafer (2011) found that s outreach of an MFI, write-off ratio and regional differences were significant in determining the OSS of MFIs in Eastern Europe and Central Asia. They also found that neither an MFI's depositors-to-borrowers ratio nor its deposits-to-loan portfolio ratio were significant determinants of an MFI's OSS.

Locally, a few studies have been done to determine the effect of outreach on financial performance of MFI's. Ngumo (2012) examined the outcome of membership outreach on financial performance of MFI's in Kenya and found a constructive association between the two variables. A study by Githinji (2008) on elements impacting manageability of microfinance organizations in Kenya found that majority of microfinance institutions in Kenya are below the market mean sustainability as measured by both the return on assets and on equity.

In another study by Kidzuga (2013) on the relationship between financial sustainability and outreach of microfinance institutions in Kenya it was found that an increase in branches, average number of active clients and a high percentage of women clients have a positive influence on the depth of outreach.

Chemini'ngwa (2013) too studied the relationship between MFI outreach factors and financial sustainability in Kenya and found that depth of outreach significantly affects financial sustainability of MFIs in Kenya. From the above review it is clear that very few studies have focused on the effect of membership outreach on the operational self-sufficiency of MFB's in Kenya. Save for Ngumo (2012) the few studies that have been done did not focus on the membership outreach as a determinant of OSS of Microfinance Banks. There is inadequate knowledge on the relationship between membership outreach and operational self-sufficiency of MFB's in Kenya. This therefore study sought to build more knowledge around this relationship.

1.3 Research Objective

The objective of the study is -:

i. To establish the relationship between membership outreach and operational self-sufficiency of Microfinance banks in Kenya.

1.4 Value of the Study

The findings of this study might be valuable to the stakeholders in the MFI sector namely the donors who finance the sector and managers of MFBs. Policy makers in the

industry who are the regulators of the sector as well as scholars may gain from the findings of the study. The study can be useful to members of the Association of Micro finance Institutions (AMFI) in planning entry and business expansion strategy in the market.

The managers of Microfinance institutions can use the findings of the study to develop and or improve on their strategic plans either to purse or reduce growth strategy based on the outreach membership. The findings of the study might equally have implications on the donors as they can be better informed on the financial needs of the sector.

Policy makers and regulators in the MFI sector might benefit from this study by using the findings of the study to develop and implement informed policy initiatives that are geared towards growing and stabilizing the sector. They could for example propose incentives to be given to the Microfinance Banks (MFBs) to continue lending to the poor should the study find a negative correlation between membership outreach and Operational Self-Sufficiency of Microfinance Banks.

To scholars, the findings of the study can advance the literature on microfinance and add onto the inadequate body of existing knowledge arising from the few studies have been done so far.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter examines the theoretical and empirical literature on micro financing with a bias to membership outreach and operational self-sufficiency. Specifically, it looks at the theories of micro financing, in-depth analysis of the concept of membership outreach, operational self-sufficiency of MFBs and the conceptual argument.

2.2 Theoretical Review

Under theoretical review, we look at three theories of micro financing namely joint liability theory, Present biased, quasi hyperbolic preference theory and the Institutionist theory of micro financing.

2.2.1 Joint Liability Theory

This theory of micro financing is borrowed for the Joint Liability Contracts (JLCs). In examining JLCs, economists have fixated their attention both the influences of joint liability on lending group and the conduct of debtors. Additionally, economists have focused on the ideal analogy that loaning to clusters as opposed to persons spreads the risks and is an approach to decrease transactions expenses (Ghatak, 1999).

According to Fischer & Ghatak (2010), the concept of joint liability can be translated in numerous ways, which can be gathered under two groupings. Firstly, under the express joint risk contract, when one borrower can't benefit their advance, amass individuals are lawfully required to pool assets and reimburse in her stead. Such reimbursements can be

put into impact through the danger of basic discipline, commonly the danger of refusal of future credit to all individuals from the defaulting bunch, or by drawing on a required gathering reserve funds subsidize that generally serves as guarantee

Second, the view of joint obligation can be inferred. That is, borrowers trust that if a gathering part defaults on an individual advance get, the entire gathering will be excluded for future advances regardless of the possibility that the loaning contract does not indicate this discipline. One shape in which this can happen is if the microfinance association itself winds down credit programs or even closes its operations when confronted with repeating misconduct that debilitates manageability. (Fischer & Ghatak 2010).

Ghatak & Guinnane (1999) examined the key systems through which JLCs could enhance reimbursement rates and the welfare of credit-obliged borrowers. hese all have, in like manner, the conviction that joint obligation can help the significant difficulties confronting smaller scale loan specialists, for example, screening, checking, examining, and implementation by using the nearby data and social capital that exist among borrowers.

Fischer & Ghatak (2011) theorized that joint liability contracts can show improvement over traditional banking for two reasons; First, individuals from an affectionate group may have more subjective data around each other (that is, each other's honesty, arranges, activities, and states) than outcasts. Second, a bank has restricted lawful and social degree for budgetary approvals against needy individuals who default on an advance, since, by definition, they are poor. On the other hand, their neighbors might have the capacity to

authorize viable non-monetary or social assents at a much lower cost. An establishment that encourages poor borrowers with the correct motivators to use data about their neighbors and to implement non-monetary assents to reprobate borrowers can in this way perform superior to an ordinary bank.

2.2.2 Present-Biased, Quasi-Hyperbolic Preference Theory

This theory was proposed by Fischer & Ghatak (2011) as an alternative to the joint liability theory keeping in mind the end goal to acquire the conviction of numerous microfinance professionals that customers advantage from the budgetary train required by a successive reimbursement arrange Their reasoning is driven by a general view among experts that incessant reimbursement is pivotal to accomplishing high advance reimbursement rates from microfinance clients.

According to this theory, if borrowers are have a bias towards the present loan status, regular reimbursement can drive up the maximum loan size for clients that pay up with a view of borrowing a higher loan threshold. Instinctively, when borrowers are present-biased, there is a substantial temptation to defaulting on any large loan repayment. When these payments are spread out for a longer tenor, the immediate credit reimbursement trouble at any given time is littler and in this way less subject to default allurement. Visit reimbursement arrange additionally demonstrates that at the season of the primary portion settlement, the prizes (ordinarily access to future advances) are remote from the advance reimbursement choice and in this manner even more vigorously reduced (Fischer & Ghatak, 2011).

Fisher & Ghatak (2011) theorized that frequent repayment structure lowers the incentive compatibility constraint for borrowers that have a bias towards the present even though the benefits have an inherent cost. They observe that frequent repayment structure drives an opportunity cost of group commitment on the borrowers but increases the coordinate expenses on the microfinance loan specialist. It may likewise twist the inclination of borrowers towards ventures that create reliably small returns. The ideal recurrence of reimbursement in this manner offsets the expenses against the positive motivating force impacts.

2.2.3 Institutionist Theory of Micro Financing

This theory is also called the financial systems approach to micro financing. The model is associated with Robinson (2001). According to this theory, MFIs should adopt a commercial approach when providing microfinance services. The theory recommends that lenders should finance their loan book from locally mobilized deposits, commercial debts and from the revenue reserves.

According to Woller (1999), the Institutionist see money related extending as the fundamental target of Microfinance Institutions. Here, money related developing alludes to making maintainable monetary intermediation for the advantage of poor people and the underserved. Institutionist attests that money related supportability as measured by productivity ought to be granted key attention and precedence by all MFIs (Brau & Woller, 2004). Their hypothesis is derived from the datum that in multiple situations support to microfinance programs is uncertain and inconsistent and so over reliance on

donor support may hurt MFIs financial performance. The Institutionist concludes that, unless a MFI can support itself fiscally, it won't have the capacity to meets its social goal of serving the poor.

2.3 Determinants of Operational Self Sufficiency of Microfinance Banks

Studies on determinants of Operational Self-sufficiency have revolved around four main factors namely; Bank size, Ownership structure, soundness of the financial institution and diversion rate. These factors are discussed below.

2.3.1 Bank Size

Daibu & Hidenobu (2005) noted that large banks drives efficiency and provides a stronger franchise that supports a large client base .The strong inherent capacities in large banks leads to robust benefit and facilitates the bank's efficient collection of deposits and creation of loans. Even though Berger et al. (2005) and Brissimis et al. (2008) found a positive connection between's bank effectiveness and size, Bonin et al. (2005) found that bigger banks are less productive in some transitional economies. Furthermore, Havrylchyk (2006) found that the monetary execution of Polish banks has no huge connection to bank measure.

2.3.2 Ownership Structure

Most studies find that in creating nations, outside claimed banks are more proficient than neighborhood banks (Bonin et al., 2005) .The elucidation is that remote possessed banks from created nations may have entry to prevalent advances and may have undergone

rigorous regulatory reviews at their country of domicile. The foreign entities may have admission to latest technological innovations and platform for evaluating complex quantitative information (Grigorian & Manole, 2002). Berger et al (2005) notes that the foreign- banks may have some weaknesses in assessing qualitative information on the local operations and country peculiarities. Havrylchy (2006) examined Polish banks and concluded that Greenfield foreign-owned bank are more competent than foreign-owned banks that established brown- field operations. His finding indicates that entry and operations strategy adopted by foreign owned bank impacts on overall efficiency.

2.3.3 Soundness of Financial Institution

Extensive research has attempted to recognize the dependability of a bank as one of a bank's efficiency drivers. Daiju & Hidenobu (2014) found that irrepressible and steady banks may effortlessly mobilize low cost securities from their clients. This is because they require less means to yield the bank's merchandizes and they cut waste because there is public confidence and a positive reputation towards their operations. Accordingly, soundness of a financial institution is expected to be positively correlated with bank efficiency. Grigorian & Manole (2002) and Brissimis et al. (2008) broke down the relationship amongst dependability and bank proficiency in transitioning economies, and Chortarea et al. (2013) additionally concentrated on bank effectiveness in 27 EU nations. These concentrates collectively found that soundness of bank has a fundamentally positive association with bank productivity.

2.3.4 Diversification Rate

Numerous studies have primarily inspected the relationship amongst enhancement and bank dangers, or bank valuation (yet there is no unmistakable confirmation of a connection between bank productivity and broadening (Baele et al., 2007). Hypothetically, it is hazy whether the profits from bank broadening can surpass the cost. Diversification of banks into loosely related activities away from their intermediation role tends to increase the complexity of bank operations and may compound operational risks. The much sought after efficiency levels may be realized if the array of data available across the business is effectively mined. The economies of degree might be genuinely helpful as data acquired through the loaning business can be advantageous in other charge based business sections (Daiju & Hidenobu 2005).

2.4 Emperical Review on Membership Outreach and Operational Self Sufficiency

In Africa, various studies have been conducted on matters related to performance of Micro Finance Institutions. Adongo & Stork (2005) inspected the variables affecting the budgetary maintainability of chose Microfinance Institutions in Namibia found that degree of unsustainability was most reduced for long haul small scale moneylenders and was most noteworthy for multi-reason co-agents required in the arrangement of microfinance. The study did not reveal signs that a lower for every capita wage in the microfinance target assemble may impede the positive financial performance of the selected microfinance institutions

Ngomo (2012) directed a research on the influence of outreach on fiscal presentation of microfinance institutions in Kenya. The study involved a census survey of the 52 MFI's operating in Kenya for the last five years and both primary and secondary data was used. With the help of regression investigation model in information analysis, the survey found a statistically significant correlation between number of borrowers and net income. The study recommended that MFIs enthused about enhance their monetary execution ought to deal with expanding the quantity of dynamic borrowers to impact on money related wage.

A study by Githinji (2008) on aspects affecting sustainability of microfinance organizations in Kenya found that majority of microfinance institutions in Kenya are below the market mean sustainability as measured by both the return on assets as well as return on equity. The study further found that the average size of savings had a positive influence on return on assets and that this relationship was positive. On the challenges, the study found that the major challenges facing microfinance institutions in Kenya are funding, repayment default and government regulations. Low profits and number of clients were not found to be major challenges facing the sector. Descriptive survey design was used and the population of interest consisted of all the 30 microfinance institutions that operate within Nairobi.

Lafourcaede et al (2006) did a study on the effort and monetary execution of African MFIs. Blend (microfinance Information trade) gathered MFI information through nation level systems and contracted specialists. To be incorporated into the study, data should have been of three-precious stone quality as characterized by MIX (it needed to

incorporate 2002 and 2003 budgetary and effort data, with inspected explanations where conceivable). The study discovered MFIs in Africa are lively and perform positively with respect to partners in other worldwide locales. African MFIs lead the world in investment funds activation in both the quantity of customers served and the total volume of reserve funds on store.

Kidzuga (2013) studied the correlation between budgetary manageability and effort of microfinance establishments in Kenya. The study grasped a graphic overview plan approach to identify what levels of financial and depth of outreach has been achieved. A sample of 30 MFIs was selected. Regression model was conveyed to set up the relationship amongst maintainability and effort. The study found that an expansion in branches, normal number of dynamic customers and a high rate of ladies customers positively affect the profundity of effort. The study presumed that spread of the branch arrange affected the money related maintainability of MFIs all things considered. The concentrate additionally infers that the expansion in number of branches enhances the effort figure and administrations offered and branch vicinity prompted increment in number of clients.

Another study by Chemini'ngwa (2013) on the the relationship between MFI outreach services and financial sustainability in Kenya found that depth of outreach significantly affects financial sustainability of MFIs in Kenya. The study recommended that that microfinance institution in Kenya should increase their average loan sizes as this will improve financial sustainability. In this study, the population for the study was

composed of 46 retail and deposit taking microfinance institutions in Kenya. Secondary data was collected from 8 purposively selected microfinance institutions reporting voluntarily their financial reports on the MIX portal over the period 2007-2011. Multi-regression analysis was then carried out on a panel data collected in order to establish relationships between variables. The study employed ANOVA tool for Inference.

In other studies by Albert (2012) on the determinants of Operational Sustainability of Micro Finance Institutions in Kenya, it was found that are Capital/ asset ratio and Operating expenses/Loan Portfolio are the key determinants of operational sustainability of MFI's in Kenya. This study targeted 30 microfinance institutions (MFIs) listed from the Association of Microfinance Institutions (AMFI) in Kenya that provide financial services to low income groups in Kenya.

Kimamo (2013) examined the relationship between financial outreach and financial performance of Microfinance Institutions in Kenya. Using a purposive sampling technique employed on a population of 39 MFls registered with AMFI and with the help of secondary data spanning five years from 2008 to 2012 the study found a strong negative correlation between financial outreach and financial performance.

2.5 Conceptual Framework

Conceptual framework is a presentation demonstrating the relationship between the autonomous and ward factors. It determines the working meaning of a variable and empowers a straightforward clarification of the stream of hypothetical system utilized by the study (Mugenda & Mugenda, 2003). The dependent variable is operational self-

sufficiency as measured by the Operating revenue to expense ratio. The independent variables are: operational expenses ratio, loan loss provision to total income ratio, operational expenses to total expenses ratio, non-interest income to total income ratio and membership outreach (Figure 2.1).

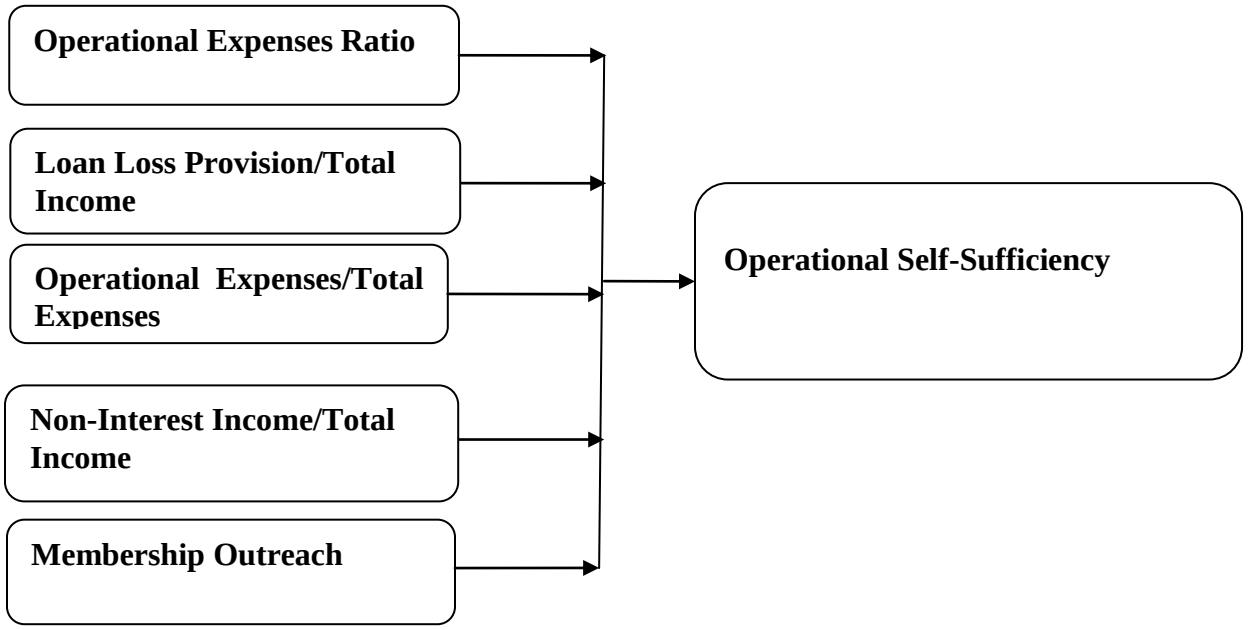

Figure 2.1: Conceptual Framework

2.6 Summary of Empirical Review

From the above review of empirical studies, most studies did not focus on the effect of outreach membership on financial performance. It is however noted that only Ngomo (2012) studied the effect of membership outreach on financial performance of MFI's in Kenya. Although he found a positive and significant correlation between the two

variables, his measurement of financial performance was inadequate. Financial performance is a variable that is multi-dimensional and cannot be measured by only profits before tax as used in his study. Had he used operational sufficiency as a measure of financial performance, he would most probably have found a different result. The other study by Lafourcaede et al (2006) focused on a wider scope by looking at MFI's in Africa. The findings of this study therefore cannot be authoritatively said to represent the behaviour of these variables in a Kenyan context.

A study by Odhiambo (2013) elucidated the relationship between outreach and sustainability of MFIs in Nairobi. This broad study reviewed the relationship between various forms of outreach such as breadth, depth and the financial sustainability of MFIs in Nairobi. The study did not totally highlight the specific effect of membership outreach on operational sustainability of Microfinance Banks in Kenya. In light of the reviews of empirical studies done in this field, it is clear that no corresponding studies have been done to determine the effect of membership outreach on the operational efficiency of MFI's in Kenya and this study therefore seeks to bridge the resultant gaps.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter gives an examination of the layout of the exploration strategy that was utilized as a part of the study. It concentrates on the examination outline, populace of study, test and inspecting strategies, information gathering techniques and closes with the information investigation and information presentation techniques that were utilized as a part of this study.

The dataset was drawn from the money related explanations of each of the Microfinance Banks under study all through the time of study 2011 to 2015 and sourced from the administration of the organizations.

3.2 Research Design

This study used a descriptive survey method. This outline alludes to an arrangement of techniques and methods that portray factors. It includes gathering auxiliary information that portray occasions and afterward composes, arranges, delineates, and depicts the information. Enlightening studies depict the factors by noting who, what, and how addresses (Babbie, 2002).

An elucidating examination is more thorough than exploratory research and tries to discover who, what, when and how parts of the examination. Comparable research plan was utilized by Ngomo (2012) in his study on the impact of effort on monetary execution of microfinance establishments in Kenya.

3.3 Population of the Study

The population of the study consisted of 12 Microfinance registered as at end December 2015 at the Central Bank of Kenya (CBK) that supervises activities of Microfinance Banks in Kenya. Considering the small number, the study was, therefore, a census survey of a sample of ten MFBs. Population consists of the entire group of individuals, events or objects having common characteristics (Mugenda & Mugenda, 2003).

3.4 Data Collection

The study used secondary data from various sources. The study involved two key variables namely, membership outreach of MFB's which is measured by the number of clients with deposit accounts in the year and operational self-sufficiency of MFB's which is a function of interest income, interest expense, loss provision and operating expenses. Data on membership outreach was obtained by way of secondary data obtained from the Central bank of Kenyan annual reports and any other relevant publication .Data on operational self-sufficiency was obtained from the financial reports of the sample 12 MFBs under study through the period of study of 2011 to 2015. The secondary data was sourced from the management of the institutions.

3.5 Data Analysis Method

Under the data analysis method, the measurement of variables in the study as well as the regression model that was used to analyze data is discussed as follows:

3.5.1 Operationalization of Variables

The study sought to determine the effect of membership outreach on the operational self-sufficiency of MFB's in Kenya. In this study, Operational Self Sufficiency of MFB's was the dependent variable while membership outreach was the independent variable. Membership outreach was measured by the number of clients served by the number of active accounts as at a specified period. The data was obtained from the questionnaires filled in by the respondents or from the annual reports.

Operational self-sufficiency is a component of various financial indicators that was obtained from financial reports of the population under study. Operational self-sufficiency was thus obtained from the result of the computation shown below.

Operational self-sufficiency (OSS) = Operating revenue / (Financial expense + loan- loss provision expense + operating expense).

3.5.2 Model Specification

Linear regression model was used to determine the effect of membership outreach on the operational self-sufficiency of MFB's. The independent variable was the membership outreach while the dependent variable is the operating self-sufficiency of Microfinance Banks in Kenya. The model specification for this study is summarized below.

$$Y = \beta_{0+} \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where: -

Y = OSS of Micro finance Banks /Net Operating Margin

X_1 = Operational Expenses ratio (OER)

X_2 = Loan Loss Provision as a proportion of Total Income.

X_3 = Operational Expenses as percentage of Total Expenses.

X_4 = Non- interest income as percentage of Total Income.

X_5 = Outreach measured by total number of deposit accounts

ε = Error term

OER= Operational expense /Average Total Assets

$\beta_{0,\ 1,\ 2,3,4,5}$ are parameters of the estimate

The model deployed a linear regression and analysis of variance to analyze the effect of the membership outreach on operational self-sufficiency of Microfinance Banks in Kenya.Regression Coefficient shows the value and sign attached to each of the parameters. The signs are very important, because they allow us to see whether our results confirm to the theory or not. If a positive result is expected between a dependent variable, then the sign of the regression coefficient is expected to be positive, the same goes for a negative effect.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents analysis and findings of the research. Data was collected from 12 microfinance banks between the period of 2011 and 2015 representing 100% of the target sample. The data was collected from the financial reports the Microfinance banks file with CBK and consisted of: operational self-sufficiency, net operating margin, operational expenses ratio, loan loss provision to total income ratio, operational expenses to total expenses ratio, non-interest income to total income ratio and outreach. The study used both descriptive and inferential statistics to analyze the data found.

4.2 Descriptive Statistics

Table 4.1 presents the descriptive statics and the distribution of the data on the average values of: operational self-sufficiency, net operating margin, operational expenses ratio, loan loss provision to total income ratio, operational expenses to total expenses ratio, non-interest income to total income ratio and outreach.

Table 4.1 shows that operational self-sufficiency had a mean of 0.944 and standard deviation (STDEV) of 0.363. The MFB with the highest operational self-sufficiency had a value of 1.372 while the least value was 0.070. With regards to net operating margin, the average value was .473. The maximum value was 49.6 while the minimum value was -13.333.

In terms of outreach, the MFBs had on average, 28,105.1 accounts with a standard deviation value of 11.7. The maximum value of accounts was 1,153,453.3 while the minimum value was 887.2.

Judging by the quartile values, distribution of the data on operational self-sufficiency indicates that OSS value was at least 1.064 in half of the MFBs as indicated by the second quartile while at least 25% of the MFBs had OSS value above 1.213 but below 1.372 as indicate by the third quartile. On outreach, over half of the MFBs had at least 8,719.7 deposit accounts while the upper 25% had 394,457.3 to 1,153,453.3 deposit accounts.

Table 4.1: Descriptive Statistics - MFBs

Statistics	**Operational Self-Sufficiency**	**Net Operating Margin**	**Operational Expenses Ratio**	**Loan Loss Provision/Total Income**	**Operational Expenses/Total Expenses**	**Non-Interest Income/Total Income**	**Outreach**
Mean	.944	.473	.231	.368	.956	.352	28105.1
Std. Deviation	.363	8.113	.104	.280	.086	.189	11.7
Skewness	-1.026	5.539	1.760	.923	.643	1.625	.231
Std. Error of Skewness	.365	.365	.365	.365	.365	.365	.365
Kurtosis	-.011	34.982	3.104	.371	2.423	2.801	-1.588
Std. Error of Kurtosis	.717	.717	.717	.717	.717	.717	.717
Minimum	.070	-13.333	.093	.000	.786	.111	887.2
Maximum	1.372	49.600	.558	1.116	1.249	1.000	1153453.3
1st Quartile	.759	-.323	.164	.163	.901	.216	3097.4

2nd Quartile	1.064	.055	.206	.333	1.000	.308	8719.7
3rd Quartile	1.213	.175	.255	.478	1.000	.403	394457.3

4.3 Correlation of Findings

The study sought to establish the association between individual independent variables and operational self-sufficiency as measured by OSS and net profit margin for the five year period (2011 – 2015). Pearson correlation coefficients were used to achieve this.

Table 4.2: Correlation Matrix

		Operational Expenses Ratio	**Loan Loss Provision/ Total Income.**	**Operational Expenses/Total Expenses**	**Non-Interest Income/Total Income**	**Membership Outreach**	**Operational Self-Sufficiency**
Loan Loss Provision/ Total Income.	Pearson Correlation	.066	1				
	Sig. (2-tailed)	.679					
Operational Expenses/Total Expenses	Pearson Correlation	.233	.245	1			
	Sig. (2-tailed)	.137	.118				
Non-Interest Income/Total Income	Pearson Correlation	.332*	-.298	.229	1		
	Sig. (2-tailed)	.032	.055	.145			
Outreach	Pearson Correlation	-.402**	-.260	-.276	-.443**	1	
	Sig. (2-tailed)	.008	.097	.077	.003		
Operational Self-Sufficiency	Pearson Correlation	-.733**	-.018	-.357*	-.757**	.616**	1
	Sig. (2-tailed)	.000	.908	.020	.000	.000	
Net Operating Margin	Pearson Correlation	-.337*	.050	-.148	-.162	.479*	.288
	Sig. (2-tailed)	.029	.754	.348	.306	.025	.064

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

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

The results presented in Table 4.2 show that there is negative but high correlation between operational self-sufficiency and: operational expenses ratio ($R = -0.733$; $p <$

.001) and non-interest income/total income (R = -0.757; p < .001). There was a moderate but negative relationship between operational self-sufficiency and operational expenses/total expenses (R = -0.357; p = .020). However, there existed a strong and positive relationship between operational self-sufficiency and outreach as measured by the number of deposit accounts (R = -0.616; p < .001). Additionally, there was moderate but negative relationship between operational expenses ratio and operational expenses ratio (R = -.337; p = .029). On the other hand, positive and good correlation existed between outreach and net operating margin (R = .479; p = .025).

4.4 Linear Regression Modelling

The restudy conducted a linear regression analysis to establish the relationship between operational self-sufficiency and outreach. The regression was of the form:

$$Y = \beta_{0} + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Whereby Y signified OSS of micro finance banks; β_0 the regression constant; β_1- $\beta 5$ were regression coefficients; X_1 is the operational expenses ratio; X_2 is loan loss provision as a proportion of total income; X_3 is operational expenses as percentage of total expenses; X_4 is non- interest income as percentage of total income; X_5 is outreach measured by total number of deposit accounts; while, ε is the regression error term or the model's significance from Analysis of Variance (ANOVA).

Table 4.3: Model Summary

R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
.935a	.874	.853	.1393791	2.038

a. Predictors: (Constant), Outreach, Net Operating Margin, Loan Loss Provision/Total Income. Operational Expenses/Total Expenses, Operational Expenses Ratio, Non-Interest Income/Total Income

b. Dependent Variable: Operational Self-Sufficiency

The study sought to establish the regression model significance, the data of which is presented in Table 4.3. From the regression model, a correlation coefficient value of 0.935 was established. This shows a very good linear relationship or dependence of operational self-sufficiency on MFBs outreach. A coefficient of determination (R-square) value of 0.874 was established and adjusted to 0.853 due to measurement errors. This underscores the fact that outreach accounted for 85.3% changes in operational self-sufficiency. A Durbin Watson value of 2.038 shows that the data entered was devoid of autocorrelation among its residuals; a justification for linear regression analysis.

Table 4.4: Analysis of Variance

	Sum of Squares	df	Mean Square	F	Sig.
Regression	4.727	6	.788	40.558	.000b
Residual	.680	35	.019		
Total	5.407	41			

a. Dependent Variable: Operational Self-Sufficiency
b. Predictors: (Constant), Outreach, Net Operating Margin, Loan Loss Provision/Total Income. Operational Expenses/Total Expenses, Operational Expenses Ratio, Non-Interest Income/Total Income

Analysis of Variance was utilized to test the importance of the relapse display in accordance with essentialness in the distinctions in method for the needy and autonomous

factors. The ANOVA test delivered a f-estimation of 40.558 which was critical at 95% essentialness level ($p < .001$). This delineates the relapse model is huge as it has under 0.1% likelihood of deception.

Table 4.5: Regression Coefficients

Variables	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.767	.306		1.783	.095
Membership Outreach	.046	.026	.135	3.732	.032
Net Operating Margin	.301	.203	.013	3.200	.042
Operational Expenses Ratio	-1.640	.244	-.469	-6.715	.000
Loan Loss Provision/Total Income.	-.138	.096	-.106	-4.434	.016
Operational Expenses/Total Expenses	-.231	.280	-.054	-3.824	.031
Non-Interest Income/Total Income	-1.072	.153	-.558	-7.017	.000

The established regression equation was: OSS = 1.767 + 0.046*Outreach + 0.301* Net Operating Margin - 1.640*Operational Expenses Ratio - 0.138*Loan Loss Provision/Total Income - 0.231*Operational Expenses/Total Expenses - 1.072*Non-Interest Income/Total Income $p < .001$

From the finding in the above table the study found that holding net operating margin, operational expenses ratio, loan loss provision to total income ratio, operational expenses to total expenses ratio, non-interest income to total income ratio and outreach constant operational self-sufficiency will be 1.767. The study also found that keeping other factors constant, a unit increase in membership outreach will lead to an increase in OSS by 0.046, a unit increase in net operating margin will lead to an increase in OSS by a factor of 0.301. However, keeping other factors constant, a unit increase in operational expenses

ratio will cause a 1.640 decrease in OSS, unit increase in loan loss provision/total income would lead to a 0.138 decrease in OSS, operational expenses/total expenses would lead to 0.231 decrease in OSS and unit increase in non-interest income/total income would lead to 1.072 decrease in OSS.

The finding of the study shows that membership outreach has a significant effect on Operational self-sufficiency of Microfinance banks. The results contradict the recommendations of Hulme & Mosley (1996) that pointed out that expansion of outreach is not a cure all performance strategy for MFIs. This is because as MFIs expand outreach, the expected economies of scale is negated by the huge cost of monitoring poor clients and even of obtaining data on borrowers credit history .They further note that according to IMF (2005) , sustainable MFIs in the world do not target the poor entirely but have a mixed portfolio of clients that enable them to create larger loans and drive up the efficiency needle.

In the study that focused on outreach and sustainability, the researchers reviewed 13 MFIs in seven countries all with a social mission. The 13 MFIs were studied using different design features over the period 1983-1993. However, in that study, the researcher did not delve into the effect of membership outreach on self-sufficiency of regulated deposit taking funds. The effect of subsidies that was prevalent in that period may also have affected the results had the researcher factored in the isolated factors such as deposit taking features and effect of prevailing subsidies may be the findings and

conclusions would have been different .The other factors for the difference of these two studies could be as a result of different operating business environment.

The results of this study do not equally agree entirely with those of Kipesha & Zhang (2013) who assessed sustainability, profitability and outreach tradeoffs across 47 Mfis for four years. The research results differed when it came to depth of outreach and worth of outreach which has a negative association with profitability and sustainability. The results of sustainability did not indicate the existence of tradeoffs with the breath of outreach and other outreach scores. Moreover the study found that outreach to the poor has a positive correlation with both sustainability and profitability measures. The difference in the findings of these studies could be attributed to the difference in the sector and country of operation. While Kipesha & Zhang (2013) study relates to all assorted MFIs in East Africa, this study focused on Microfinance banks operating in Kenya.

The result of this study differs slightly with those of Cull & Morduch (2007) who studied financial performance and outreach of global micro-banks (124 MFIs across 49 countries). The evidence shows Possibility of earning profits whilst serving the poor. However, the evidence is weaker and a tradeoff emerges when an MFI starts to serve the poorest groups. The study also indicates that the economy of scale diminishes with increasing loan sizes which ordinarily focuses on better off customers. The study found out that village banks which focus on the poorest borrowers face the highest average costs while individual based lenders enjoy the highest average profits. Conversely, both

lenders are rated well on outreach factors towards the poor. The divergence in the two studies could be attributed to the choice of the population and the lending methodology of the surveyed Microfinance Institution.

(Kidzuga , 2013) reviewed the relationship between financial sustainability and outreach of MFIs in Kenya and results that are consistent with this study despite the fact that the sample size of 30 MFIs consisted of both deposit taking MFBs and credit only institutions. The findings portray that increase in branches, number of active clients and women clients all point to higher sustainability. Finally the study concludes that there is a strong relationship between financial sustainability and outreach of MFIs in Kenya. This could evidence the financial strength and concentration of MFBs in the microfinance space in Kenya.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the summary of the finding in chapter four. Conclusion and recommendations drawn from these findings on the relationship between membership outreach and operational self-sufficiency are discussed. The areas for further research are also presented.

5.2 Summary of Findings

The study sought to determine the relationship between membership outreach and operational self-sufficiency. The findings show that operational self-sufficiency had a mean of 0.944 with maximum and minimum values of 1.372 and 0.070, respectively. The MFBs average net profit margins was 0.473 through others made loses in their profit margins of -13.33 and profits as high as 49.6. The MFBs outreach was as high as 1,153,453.3 in some while in others outreach was as low as 887.2.

From the correlation analysis, the findings established that operational self-sufficiency had a high but negative linear relationship with: operational expenses ratio ($R = -0.733$; $p < .001$), non-interest income/total income ($R = -0.757$; $p < .001$), operational expenses/total expenses ($R = -0.357$; $p = .020$). Positive relationship was established with outreach as measured by the number of deposit accounts ($R = -0.616$; $p < .001$).

The multiple linear regression analysis shows that outreach will lead to an increase in operational self-sufficiency by 0.046. Net operating margin would increase operational self-sufficiency by 0.301. Operational expenses ratio would decrease operational self-sufficiency by 1.640. Operational expenses to total expenses ratio would decrease operational self-sufficiency by 0.231. Non-interest income to total income ratio would decrease operational self-sufficiency by 1.072.

5.3 Conclusion

The aim of the study was to determine the effect of membership outreach on operational self-sufficiency of Microfinance banks in Kenya. 12 MFBs regulated by CBK were studied in terms of the extent to which their outreach factors impact on operational self-sufficiency. Using regression analysis, the MFBs financial ratios influenced by membership outreach was regressed against the Operational self-sufficiency. The study concluded that there is a positive association between membership outreach and OSS.

The study concludes that increase in the number of active depositors has a positive effect on the OSS given the close bearing of savings on eventual loans to clients. The increase in the number of depositors was also found to drive up both costs (to some extent) and revenue. The study concludes that membership outreach drives down the cost of funds for MFBs. To have a stronger impact, the study concludes that MFBs should consider savings mobilization using affordable technology to improve OSS.

The study also concludes that the average number of active clients both savers and borrowers influences the operational self-sufficiency. The active savers increase the non-interest income and supports funding of short term loans in an efficient manner. The increase in savings and deposits also impacts positively with liquidity which is crucial for the survival and success of a deposit taking financial institution. The study concludes that membership outreach reinforces other forms of outreach such as depth and worth to users. The synergy comes in terms of improved reputation of the MFIs which supports efficient recruitment of new clients and quality balance sheet growth.

5.4 Recommendations

The study recommends that for MFBs should focus on achieving operational self-sufficiency in order to cut on subsidies, survive and sustain growth. They should further attract new customers through promotions as this would improve MFIs outreach hence improve financial performance and profitability and lowering operating costs. The study also recommends that MFIs should open more branches country wide in order increase the number of active clients. The positive correlation between membership outreach and OSS implies MFBs could reach more clients via technology which could create a bigger impact on sustainability.

To the policy makers, the study recommends that sustainability should not be at the expense of the poor and the vulnerable and that MFBs should charge responsible pricing. The regulators should examine the laws and policies geared towards the Microfinance

sector to ensure that the MFIs and MFBs are able to achieve an acceptable OSS levels and boost the overall quality of the MFIs business.

MFBs therefore should not focus only deposits and credit but should diversify to other products that build non-interest income even as they expand outreach. Regulation contributes to sustainability of MFBs. Thus, management of MFBs should be given adequate education on the relevance of complying with regulation that touches on outreach. The study recommends that MFBs should adopt appropriate technology and credit management practices to reduce the risks associated with credit and deposit handling which has an impact on their sustainability. MFIs should adopt as fintech platforms and mobile telephony to reduce the operational costs and drive up OSS.

5.5 Limitations of the Study

A number of limitations could be pointed out for this study. Firstly, this descriptive and correlational study relied on secondary data submitted to CBK which could have been doctored to meet the regulatory standards. Besides, the researcher had no means of verifying for the validity of the data which were assumed to be accurate for the purpose of this study. The study results are therefore subject to the validity of the data used. The study results are also limited to financial aspects of the MFBs under study.The non-financial aspects of performance were not tested in the research.

Secondly, the study was conducted in Kenya and its results may not be generally applicable to financial institutions in other countries .Similarly, the study is skewed

towards the Microfinance banks and may not be wholly relevant to other financial institutions like banks, Saccos and other unregulated Financial Institutions within Kenya.

The study used the ordinary least square regression method of analysis which may have its own weaknesses compared to other methods which may limit the general applicability of the study results.

5.6 Suggestions for Further Research

Further studies should be done on other aspects of outreach and their resultant effect on operational self-sufficiency of Microfinance banks in Kenya and beyond. Studies could also be done on the other aspects of outreach such as depth, length, and scope and worth to user to ascertain their association with operational self-sufficiency.

The findings of this study are only generalized the results to MFBs and limited it to seven variables. Based on these findings further research can be done to determine similar relationship in banks or insurance firms using comprehensive variables for robust results. This study examined the relationship and the extent of the relationship of the variables under study for a period of five years only owing to young nature of MFB sector in Kenya.

A further study in commercial banks can apply a longer time period for more robust findings. Further studies that border on effect of outreach on the OSS across the whole industry in Kenya would also be essential to bring out the likely impact on both regulated MFBs and unregulated MFIs. Further research can be done to examine the effects of

other ratios that impact on operational self- sufficiency across the Microfinance industry other than the ones that were covered in this study.

REFERENCES

Adongo, C., & Stork, A. (2005). Factors influencing the financial sustainability of selected microfinance institutions in Namibia. *NEPRU Research Report No 38*, 1026.

Albert, D. (2012). The Relationship between Outreach and Financial Sustainability of Microfinance Institutions in Nairobi County, *Unpublished MBA* Project, University of Nairobi.

Ayele, G.T. (2014). Microfinance Institutions in Ethiopia, Kenya, and Uganda: Loan Outreach to the Poor and the Quest for Financial Viability. The Horn Economic and Social Policy Institute (HESPI), Policy Paper no. 02/14,

Armendariz de Aghion, B. & Morduch, J. (2005). *The Economics of Microfinance*. Cambridge, MA: The MIT Press.

Baele, L, De Jonghe, O, & Vennet, R. V. (2007). Does the stock market value bank diversification?. *Journal of Banking & Finance*, 31: 1999-2023.

Babbie, E. (2002). *Survey Research Methods* (2nd ed.). Belmont: Wodsworth.

Berger, A.N., Clarke, G. R., Cull, R., Klapper, L., & Udell, G. F. (2005). Corporate governance and bank performance: A joint analysis of the static, selection, and dynamic effects of domestic, foreign, and state ownership. *Journal of Banking &* Finance, 29(8): 2179-2221.

Bonin, J. P., Hasan, I., & Wachtel, P. (2005). Bank performance, efficiency and ownership in transition countries. *Journal of Banking & Finance*, 29(1): 31-53.

Brissimis, S. N., Delis, M. D., & Papanikolaou, N. I. (2008). Exploring the nexus between banking sector reform and performance: Evidence from newly acceded EU countries. *Journal of Banking & Finance*, 32(12): 2674-2683.

Brown, M. (2005). Overview of the Outreach and Financial Performance of Microfinance

Institutions in Africa. *Microfinance Information Exchange*. Washington DC.: Microfinance Information Exchange Inc.

Central Bank of Kenya (2011). *Annual Supervision Report*. Government Printers, Nairobi, Kenya.

Central Bank of Kenya (2015). *Annual Bank Supervision Report*. Government Printers, Nairobi, Kenya.

CGAP. 2006. *Good Practice Guidelines for Funders of Microfinance. Microfinance Consensus Guidelines*, 2nd edition. Washington, D.C.: CGAP

CGAP. (2000) *Exploring client preference in microfinance*: Some observations from SAFE SAVE. Focus note 18.Washington D.C. http://www.cgap.org/docs/focusnote18.pdf

CGAP), (2004). *Disclosure Guidelines for Financial: Reporting by Micro- financial Institutions.* Washington DC.: CGAP

Cheminingwa, A. (2013). The relationship between Microfinance Outreach and financial Sustainability in Kenya, *Unpublished MBA project*, University Of Nairobi.

Conning, J. (1999). Outreach, sustainability and leverage in monitored and peer monitored lending. *Journal of Development Economics*, (60), 51–77.

Chortareas, G. E., Girardone, C., & Ventouri, A. (2013). Financial freedom and bank efficiency: Evidence from the European Union. *Journal of Banking & Finance, 37: 1223-1231.*

Christen R.P., B. Helms & R. Rosenberg (1997) *CGAP Format for the Appraisal of Microfinance Institution*, Washington DC.: Microfinance Information Exchange Inc

Cull R., Demirguc Kunt, A., & Morduch, J. (2007). Financial Performance and Outreach: A Global Analysis of Leading Micro banks. *The Economic Journal*, (117): 107-133.

Daiju, A., & Hidenobu, O. H (2014). Determinants of Operational Efficiency and Total Factor Productivity Change of Major Cambodian Financial Institutions: A Data Envelopment Analysis during the Period of 2006-2013. *Journal of Emerging Markets Finance and Trade, 52*(6):1455-1471.

Dondo, A. (2003). *The Microfinance Landscape in Kenya* – Paper presented to the Kenya Bankers Association.

Fin Access National Survey (2009). Studying Kenya's changing financial landscape. Financial Sector Deepening Trust Kenya.

Fukasawa, Y., & Schafer, K. (2011). *Factors Determining the Operational Self-Sufficiency among Microfinance Institutions.* Midwestern State University.

Ghatak, M. & Fischer, G. (2011). Spanning the Chasm: Uniting Theory and Empirics in Microfinance Research. *Handbook of microfinance*. London School of Economics.

Ghatak, M. & Fischer, G. (2009). Repayment Frequency in Microfinance Contracts with Present-Biased Borrowers. London School of Economics.

Ghatak, M. & Guinnane T.W (1999). The Economics of Lending With Joint Liability: Theory and Practice. *Journal of Development Economics* 60(1): 195–228.

Gibson, A.B. (2012). Determinants of Operational Sustainability of Micro Finance Institutions in Kenya. *Unpublished MBA Project,* University of Nairobi.

Githinji, B. (2008). Factors influencing sustainability of Microfinance Institutions in Kenya, *Unpublished MBA Projec*t, University of Nairobi.

Grigorian, D. A., & Manole, V. (2002). Determinants of Commercial Bank Performance in Transition: An Application of Data Envelopment Analysis. *IMF Working Paper No. 02/146*, Washington, D.C.: International Monetary Fund.

Hartarska, V., & Nadolnyak, D. (2007). "Do regulated Microfinance Institutions achieve better Sustainability and Outreach? Cross-country evidence", *Applied Economics Journal*, 39(10): 1207-1222.

Havrylchyk, O. (2006). Efficiency of the Polish banking industry: Foreign versus domestic banks. *Journal of Banking & Finance*, 30(7): 1975-1996.

Hulme, D., & Mosley, P. (1996).*Finance Against Poverty* .London: Routledge.

Kidzuga, H. (2013), The Relationship between Financial Sustainability and Outreach of Microfinance Institutions In Kenya, *Unpublished MBA Project*, university of Nairobi.

Kimamo, P. (2013), The Relationship between Financial Outreach and Financial Performance of Microfinance Institutions in Kenya .*Unpublished MBA Project*, University of Nairobi.

Kipesha, E.F., & Zhang, X. (2013). Sustainability, Profitability and Outreach Tradeoffs: Evidences from Microfinance Institutions in East Africa. *European Journal of Business and Management*, 5(8), 136-49.

Kurgat, P. (2009). The role of savings in microfinance institutions*: A case study of the KWFT* .6th University Meets the Markets Workshop, Nairobi.

Lafourcade, A.C., Isern, J., Mwangi, P. & Brown, M. *(*2005*).* Overview of Outreach and Financial Performance of Microfinance Institutions In Africa. Washington DC.: Microfinance Information Exchange Inc.

Matu, W. M. (2008). Sustainability and profitability of microfinance institutions. *Unpublished MBA*, Project, University of Nairobi.

MIX. 2009, The Banking bulletin, No 19. Washington DC.: *Microfinance Information Exchange Inc.*

Morduch, J. (1999). The Microfinance Promise. *Journal of Economic Literature*, 37(4), 1569-1614.

Morduch, J (2001). The Microfinance schism. *World Development Journal*, 28(4): 617-629.

Mugenda, M O. & Mugenda, A.G. (2003) *Research Methods*. Qualitative and Quantitative Approach, Nairobi, ACTS Press.

Mwangi, K. (2012) The Effect of Outreach on Financial Performance of Microfinance Institutions in Kenya, *Unpublished MBA Project*, University of Nairobi.

Ngomo, M. (2012). *The* Effect of Outreach on Financial Performance of Microfinance institutions in Kenya, *Unpublished Doctoral thesis*, University of Nairobi.

Navanjas, S., Schreiner, M., Meyer, R. L., Gonzalez-Vega, C., and Rodriguez-Meza, J.,

(1998). *Microcredit and the Poorest of the Poor*: *Theory and Evidence from*

Bolivia. World Development, 28(2), 333-346.

Odhiambo, J. (2013). The Relationship between Outreach and Financial Sustainability of Microfinance Institutions in Nairobi County, *Unpublished MBA Project*, University of Nairobi.

Rhyne, E. & Otero, M. (1994). The New World of Microenterprise Finance.

West Hartford, CT: Kumarian Press.

Rangarajan Committee (2008), *Report of the Committee of Financial Inclusion*, Government of India.

Robinson, M. (2001). The Microfinance Revolution, Sustainable Finance for the Poor, Lessons from Indonesia: The Emerging Industry. Washington, D.C.: World Bank publications.

Seibel, H. S. (1999a).*Outreach and sustainability of rural microfinance in Asia:* Observations and recommendations. *Germany:* University of Cologne, Research Center.

Sharma, A. (2001). *Developing Sustainable Microfinance Systems* (chap.).Retrieved from http://www.unescap.org/drpad/publication/ in_2206/part5.pdf

Stiglitz, J.E., & Weiss, A. (1981). Credit rationing in markets with imperfect information. *American Economic Review*, 71 (3), 393-410.

The Microfinance Gateway, (2005). *Frequently Asked Questions. CGAP*. Available: http://www.microfinancegateway.com/section/faq. Accessed: 05 October, 2015.

United Nations (2006). *Core Performance Indicators for Microfinance.* Retrieved on 23rd October 2016 from www.uncdf.org/sites/default/files/Documents/**indicators**.pdf

Woller, G. (2002). From Market Failure to Marketing Failure: Market –orientation as the key to Deep Outreach in Microfinance. *Journal of International Development, 14(3), 305-324.*

Woller, G. Dunford, C. and Warner, W. (1999). Where to Microfinance? *International Journal of Economic Development,* 1, 29-64.

Yenesew, A. (2014). Determinants of Financial Performance: A study on selected MFI's in Ethiopia. *Unpublished MSc Project Paper*, Jimma University, Ethiopia.

APPENDICES

Appendix I : Secondary Data Collection Sheet

MFB name: ……..

Name of Assistant Researcher: ……Date: ……

Variables	2011	2012	2013	2014	2015
Operational Self-Sufficiency					
Net Operating Margin Ratio					
Operational Expense ratio					
Loan loss provision /Total Income					
Operating expenses/Total Expenses					
Non-Interest Income/Total Income					
Membership Outreach					

Appendix II : Data from Microfinance Banks 2011-2015

MFB	Year	Operational Self-Sufficiency	Net Operating Margin	Operational Expenses Ratio	Loan Loss Provision/Total Income	Operational Expenses/Total Expenses	Non-Interest Income/Total Income	Membership Outreach
KWFT	2015	1.206	0.171	0.192	0.347	0.897	0.182	6.013
FAULU	2015	1.114	0.103	0.154	0.141	0.937	0.259	5.703
RAFIKI	2015	1.131	0.116	0.159	0.370	0.914	0.371	5.089
SMEP	2015	1.055	0.053	0.226	0.528	0.941	0.227	5.659
REMU	2015	0.784	-0.276	0.244	0.961	1.000	0.329	3.875
SUMAC	2015	1.337	0.252	0.166	0.578	0.828	0.111	3.415
CENTURY	2015	0.426	-1.349	0.513	1.116	1.000	0.395	4.207
UWEZO	2015	1.042	0.040	0.212	0.860	1.000	0.200	3.595
U&I	2015	1.367	0.268	0.163	0.000	0.938	0.244	3.929
CARITAS	2015	0.143	-6.000	0.376	0.000	1.000	1.000	3.410
CHOICE	2015	0.070	-13.333	0.558	0.000	1.000	0.667	3.443
DARAJA	2015	0.186	-4.375	0.518	0.000	1.000	0.750	3.012
KWFT	2014	1.216	0.177	0.196	0.160	0.923	0.208	6.062
FAULU	2014	1.237	0.002	0.154	0.156	0.908	0.290	5.738
RAFIKI	2014	1.131	49.600	0.144	0.316	0.902	0.376	5.002
SMEP	2014	0.897	-0.116	0.307	0.384	0.946	0.190	5.629
REMU	2014	1.062	0.043	0.165	0.667	0.985	0.391	3.720
SUMAC	2014	1.125	0.111	0.246	0.426	0.923	0.222	3.952
CENTURY	2014	0.451	-1.219	0.307	0.625	1.000	0.375	3.212
UWEZO	2014	1.029	0.056	0.219	0.865	1.000	0.306	3.507
U&I	2014	1.130	0.115	0.168	0.259	1.000	0.346	3.894
KWFT	2013	1.291	0.226	0.207	0.187	0.859	0.190	6.018
FAULU	2013	1.234	0.193	0.153	0.198	0.897	0.310	5.668
RAFIKI	2013	1.212	0.175	0.124	0.337	0.848	0.452	4.759
SMEP	2013	1.175	0.149	0.211	0.354	1.141	0.228	5.559
REMU	2013	0.852	-0.174	0.160	0.717	1.000	0.413	3.817
SUMAC	2013	0.988	-0.013	0.264	0.263	0.844	0.300	2.948
CENTURY	2013	0.269	-2.714	0.317	0.429	1.000	0.500	3.640
UWEZO	2013	0.889	-0.125	0.252	0.917	1.000	0.208	3.336
U&I	2013	1.071	0.133	0.175	0.188	1.000	0.400	3.799

KWFT	2012	1.339	0.253	0.183	0.164	0.786	0.186	6.013
FAULU	2012	1.266	0.216	0.174	0.155	0.833	0.325	5.585
RAFIKI	2012	0.927	0.040	0.119	0.403	1.000	0.550	4.445
SMEP	2012	1.372	0.284	0.190	0.452	1.249	0.219	5.485
REMU	2012	0.684	-0.462	0.210	0.462	1.000	0.423	3.598
UWEZO	2012	0.923	-0.083	0.333	0.333	1.000	0.167	3.161
KWFT	2011	1.066	0.063	0.225	0.190	1.000	0.175	5.969
FAULU	2011	1.196	0.172	0.204	0.135	0.830	0.230	5.485
RAFIKI	2011	0.488	-1.100	0.093	0.000	1.000	0.800	3.875
SMEP	2011	1.264	0.227	0.195	0.283	0.832	0.276	5.198
REMU	2011	0.519	-0.929	0.218	0.214	1.000	0.643	3.442
UWEZO	2011	0.474	-1.111	0.322	0.333	1.000	0.333	2.983

Appendix III: Microfinance Banks Licensed by CBK

1. Choice Microfinance Bank Limited
2. Faulu Microfinance Bank Ltd
3. Kenya Women Microfinance Bank Ltd
4. SMEP Microfinance Bank Ltd
5. Remu Microfinance Bank Ltd
6. Rafiki Microfinance Bank Ltd
7. Uwezo Microfinance Bank Ltd
8. Century Microfinance Bank Ltd
9. Sumac Microfinance Bank Ltd
10. U&I Microfinance Bank Ltd
11. Daraja Microfinance Bank Ltd
12. Caritas Microfinance Bank Ltd
13. Maisha Microfinance Bank Limited

Source: Central Bank of Kenya