THE EFFECT OF ORGANISATION SIZE ON EFFICIENCY OF MICROFINANCE BANKS IN KENYA

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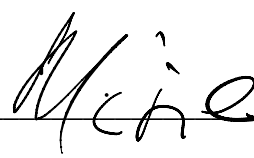
NOVEMBER 2021

DECLARATION

This research project is my original work and has not been submitted for examination in any other university or institution of higher learning for any academic award of credit.

Sign _____ Date _____17-11-2021_____

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D63/78934/2015

This research project has been submitted for examination with my approval as the university supervisors

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ACKNOWLEDGEMENT

I want to acknowledge my supervisor, Prof. Mirie Mwangi. He has offered me objective guidance in my project. I really appreciate. I acknowledge the moral and financial support from my family. I also appreciate my colleagues and lecturers at the University of Nairobi, finance, for their assistance.

DEDICATION

I dedicate this work to my family members and my friends for their honest support, and back-up during the episode of this research project. To the almighty Allah I will be forever indebted for His unending blessings, care and fortification. This is because without Him it's totally unfeasible to achieve anything.

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LIST OF ABBREVIATIONS

AMFI	Association of Microfinance Institutions
AMFI-K	Association of Microfinance Institutions, Kenya
ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
GDP	Gross Domestic Products
GNI	Gross National Income
ICT	Information Communication Technology
LOA	Log of Assets
LR	Liquidity Ratio
MFI	Microfinance Institutions
NPLR	Non-Performing Loans Ratio
OER	Operating expense ratio as a measure of organization efficiency
SPSS	Statistical Package of Social Sciences
UK	United Kingdom

ABSTRACT

Microfinance banks in Kenya have been experiencing organizational efficiency and size problems in the recent years. This study sought to establish the effect of organization size on efficiency of microfinance banks in Kenya. The researcher measured organization efficiency in terms of operating expense ratio. Organization size was measured through natural log of assets. Liquidity and asset quality were used as the control variables. The study was guided by stake holder theory, transaction theory and agency theory. This study adopted a descriptive research design. The population was 13 Microfinance banks in Kenya. The six microfinance banks that existed between 2011 and 2020 were involved. The study gathered secondary data. from financial statements in the individual firms for ten years (2011-2020). Annual data was analyzed using Stata version 14. The study used descriptive and regression statistics to establish the effect of size on efficiency. This study sought to determine the effect of organization size on the efficiency of the microfinance banks in Kenya. The study found that, between 2011 and 2020, microfinance banks showed a mean organization efficiency as measured by operating expense ratio of 93.96%; organization size as measured by log of total assets of 14.716%; asset quality as measured by non-performing loans ratio of 35.145%; and mean liquidity as measured by liquidity ratio of 48.647%. Regression results showed a between R squared value of 0.7179. The findings also showed that organization size had a significant positive effect on organization efficiency of microfinance banks. In addition, asset quality showed a significant negative effect on organization efficiency while liquidity showed a negative insignificant effect on organization efficiency. The study concludes that microfinance banks in Kenya have a high operating expense ratio, high asset quality and low liquidity. It also concludes that organization size has a significant positive effect on organization efficiency of microfinance banks in Kenya with asset quality showing a negative relationship. Liquidity had no effect on organization efficiency of microfinance banks in Kenya. For practice, the study recommends that the management of microfinance banks in Kenya should reduce their level of operating expenses, increase their operational income and reduce the level of non-performing loans.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Microfinance banks are established with an aim of extending financial intervention tailored for the poor who are face discrimination by the large banks who terms of services are unaffordable to them. The objective of microfinance bank is to economically empower the poor individuals comes with a bundle of challenges that may affect the efficiency of microfinance banks (Singh, 2021). The challenges include the poor having valueless collateral demand for several small loans (Conning, 2009). This situation demands additional resources for the bank to effectively appraise, disburse, monitor and recover loans from the poor clients hence compromising on their efficiency (Ali, Hatta, Azman & Islam, 2017). While banks regardless of their size provide credit facilities to small businesses and individual customers, large banks enjoy more capital available to sustain the credit needs of large organisations and also at the same time operating at a scale that allows for more specialized banking services which are offered efficiently.

This paper was based on three theories of organization efficiency. They include stakeholder, transaction cost and agency theories. Stakeholder theory states that the main aim of any organization is to achieve maximum returns for its shareholders through converting their stakes into services and products. On the other hand, transaction cost theory postulates that organizations make a comparison of the cost they incur while conducting exchange of resources with the environment with the bureaucratic cost incurred while conducting activities internally. Agency theory

proposes that the management of any organization, as the agents, should aim at achieving the goals of all stakeholders in that organization.

Microfinance institutions in Kenya have been on the increase in the last five years with microfinance banks experiencing a surge of customers (Central Bank of Kenya [CBK], 2020). In 2020, the microfinance banks registered in Kenya stood at thirteen. Despite this, the banks have not shown improved or high levels of efficiency. Theoretically and empirically, efficiency has been shown to be related to organization size. For example, an investigation exploring the connection around competitiveness and efficiency of microfinance banks around the world was conducted in Netherlands. Microfinance banks display lower outreach when they encounter intense competition from big banks. Is this the case for microfinance banks in Kenya? Is the efficiency as a result of their size?

1.1.1 Organization Size

Goode (2018) defined organization size as the number of employees at any given geographical location. On the other hand, Aguilar-Fernández and Otegi-Olaso (2018) states that organizational size is a basic attribute of an organization that can be expressed in terms of space.

Organization size is an important factor in an organization. Innovation, globalization, uptake of advanced technologies, as well as the ability to handle emerging competitive pressures are all positively connected with a firm's size; via all of above channels, larger organizations show better productivity, certainly levels, and often growth rates (Volberda, Van Den Bosch & Heij, 2018). Large organizations are more specialized, have greater departmentalization, have more vertical levels, and have more rules and regulations than small businesses (Alumasa & Muathe, 2021).

Organization size can be measured in terms of volume, revenue, asset value, clientele, or the number of people employed by the company. Various researchers have measured organization size using different metrics. For example, Van Looy and Van den Bergh (2018) measured organization size in terms of total assets. On the other hand, Volberda et al (2018) measured size in form of total sales and market value of equity. However, Alumasa and Muathe (2021) measured organization size in terms of logarithm of assets and market share. In this study, organization size is taken as the asset value of the microfinance banks. It was determined using logarithm of assets.

1.1.2 Organizational Efficiency

Operational cost is a key determinant of organisation efficiency; this is however determined by total income of the organisation. In a case where total operation cost exceeds total income the organisation automatically becomes inefficient. Efficiency is a degree of performance wherein the least quantity of inputs is used to provide the most outputs (Berger & De Young, 2020). In other words, efficiency is achieved when all inputs available are utilized to yield output put into consideration personal time and energy. The proportion of meaningful return to entire inputs can thus be used to calculate efficiency. Efficiency aims to reduce wastage of resource such as physical materials, time, and energy while achieving the desired result.

Numerous researches have measured efficiency in various ways. Janizaqovich et al (2021) used operating expenses ratio to gauge efficiency. On the other hand, Vo and Nguyen (2018) used costs efficacy, which is computed by segregating total operating costs with net income as a measure of organization efficiency. In this study, efficiency was assessed through operating expense ratio.

1.1.3 Organization Size and Efficiency

Theoretically, organization size improves the efficiency in an organization. Based on the stakeholder theory, considering that size enables the organization to take advantage of the economy of scale, the efficiency of an organization increases with size. The transaction cost supports this assertion. The growth of organization size means that the organization is able to minimize its internal bureaucratic costs through integration to achieve decentralized system which improves the efficiency of the organization (Sun et al, 2020). Agency theory argues that an organization achieves growth in size if its activities are can be done under management with a focus on shareholders' value which ensures efficient in operations.

Large organizations are less likely to be declared bankrupt; this can be attributed to the fact that such organizations have diversified investment segments therefore lowering their operation costs (Brunnermeier & Krishnamurthy, 2020). Low chances of bankruptcy allow larger organizations to gain access to huge number of debts. Large organizations can also minimize the level of information irregularity in through using their resources to grab opportunities in the market therefore enhancing their performances (Alumasa & Muathe, 2021). Large organizations are more stable making them to have capacity of meeting their financial obligations therefore gaining a substantial level of access to information (Lin et al, 2019).

Big banks are capable of meeting financial demands of their customers through their extensive network of branches as relative to smaller bankers which don't serve a massive market (Jacobsen, 2018). The efficiency and growth of the bank were therefore found to have a direct connection with the size of the bank (Samad, 2019). This may have been attributable to economy of scale which differs based on the size of the bank.

According to Benami and Carter (2021), assessment of what determined the profitability of the banks prior and amid Swiss financial meltdown, they discovered that profitability was linked directly to all big and small institutions. They also demonstrated that preceding the crisis, both big and small bankers produced greater earnings than medium-sized banks. These findings were associated to the fact that larger banks large banks made more profits because they were more efficient in their services delivery and they utilized cutting-edge technology. Large banks also expanded its services and goods, reducing exposure by dealing with large goods and services. They also have complicated processes which enabled them to enjoy economies of scale.

Organization size has shown a high level of importance as far as organization efficiency is concerned. Berger and De Young (2020) noted that efficient in management of operation costs is accrued to the size of the organization. Large organizations experience technical efficiency that greatly contributes to their overall efficiency. Pervan and Višić (2012) supported the direct relationship empirically where they established improved efficiency with size.

1.1.4 Microfinance Banks in Kenya

The Microfinance Regulation of 2006 lays out the legal and supervisory framework for Kenyan microfinance institutions. Section 3(2) of the Act authorizes the Minister of Finance to issue regulations defining the credit-only Microfinance company and prescribing measures for its operation. Currently, 13 microfinance banks are licensed to conduct business in Kenya. The Central Bank of Kenya (CBK) regulates and supervises microfinance banks (McIntosh, De Janvry & Sadoulet, 2015).

The number of licensed microfinance banks remained at thirteen (13), as at December 31, 2020 (CBK, 2020). Out of fourteen microfinance banks, two (2) held community microfinance bank licenses, while eleven (11) held nationwide microfinance bank licenses. The sector has employed more than 15000 employees both permanent and temporary basis (AMFI-K, 2020). According to the Banking Sector Annual Report by CBK (2020), the microfinance sector registered a 2 percent decline in total assets in the year 2020. The total assets as at December 31, 2020 stood at Ksh.74.9 billion, in comparison to Ksh.76.4 billion reported in the year ended 2019. Net advances decreased by 5 percent from Ksh.46.7 billion in 2019 to Ksh.44.2 billion in December 2020.

For market share, as at December 31, 2020, there were three (3) large microfinance banks with an aggregate market share of 81.0 percent, five (5) medium microfinance banks with a combined market share of 17.6 percent and six (6) small microfinance banks with an aggregate market share of 1.4 percent (CBK, 2020). The microfinance banks showed low levels of efficiency. For example, it was shown that the overall efficiency of microfinance banks in Kenya was not up to the required standard and it became even worse when the financial and social outreach efficiencies were considered (CBK, 2020). AMFI-K (2020) highlighted that MFIs are judged based on how efficiency is easily achieved in their operations. Evidently, the efficiency among Kenyan MFIs as shown by low operating expense ratios (AMFI-K, 2020).

The industry faced tremendous development over the last decade. The growth has especially been experienced through the growth of microfinance banks. The growth can also be attributed to increased competition, financial innovation and adoption of modern technology. The changing needs of the customers of the customer have also compelled the banks to integrate their systems in a way of adopting a more efficient

and effective strategies to boost efficiency in banking operations and reduced cost (Mwangi, 2014).

1.2 Research Problem

Large organisations enjoy economies of scale from average costs of production which is low while there is efficiency in operating tasks. Big organizations are advantaged since they access credit facilities from financial institutions (Duqi, Tomaselli & Torluccio, 2018)). Using their resources large organisations are in position to attract efficient and competent employees who make invaluable input. Large organisations also benefit from a more efficient production of product and services through high bargaining power over suppliers and therefore experience curve an effect which puts them in position to set prices above a competitive level (Oyoolo & Bett, 2017).

Kenya financial sector is facing increased competition which is brought about by various factors such as the changing customer needs and adoption of information technology. The increased competition has brought a need for microfinance banks to improve efficiency in their service delivery in order acquire more customers and achieve growth in their sales. In this regards, Mwangi (2014) noted that it was still a challenge for Microfinance banks to accomplish efficiency in their service delivery since majority of them could not afford modern technology that is needed to integrate in their system in order to improve their efficiency in service delivery.

Microfinance banks have been experiencing size problems especially in terms of assets. According to CBK (2020) bank supervision report, microfinance sector registered a 2 percent decline in total assets in the year 2020. The total assets as at December 31, 2020 stood at Ksh.74.9 billion, in comparison to Ksh.76.4 billion reported in the year ended 2019. Net advances decreased by 5 percent from Ksh.46.7

billion in 2019 to Ksh.44.2 billion in December 2020. Individually, the microfinance banks have experienced redundant or reduced size.

Studies reveal that international banks particularly American banks enjoy economies of scale (Badunenko & Kumbhakar, 2017; Oyoolo & Bett, 2017). In yet another study Sultana and Rahman (2020) on Bangladesh banks provided empirical evidence of the there being a significance association between bank size and efficiency, where they indicated that size affect both cost efficiency and technical efficiency. Mitchell and Onvural (2014) study on efficiency of banks in America indicated that there existed significance affiliation around efficiency and bank's size. Lotto (2019) evaluated factors influencing bank operating efficiency in Tanzanian banking sector. Size was found to be a key factor influencing operational efficiency of banks.

Locally, Kimani (2014) revealed a direct relation around the profits and size of the organization in Kenyan manufacturing organizations; while Kithuka (2013) conducted analysis on association around size of the organization and asset growth of publicly trading organizations. Findings displayed no significance difference between organisation size and asset growth. In another study by Ntwiga (2020) studied technical efficiency in the Kenyan banking sector and found that banks experienced technical inefficiencies. The local studies have focused on other concepts other than size and efficiency. Ntwiga (2020), on the other hand, only focused on technical efficiency without consideration the effect of organization size. International studies have focused on size and efficiency. There is limited local focus on organization size and efficiency in microfinance banks in Kenya. This study seeks to answer the question: What is the effect of organisation size on the efficiency of microfinance banks in Kenya?

1.3 Research Objective

To establish the effect of organization size on efficiency of microfinance banks in Kenya

1.4 Value of the Study

The results of this study might be used by CBK to formulate policies that will provide a foundation for Microfinance banks to grow and increase in size therefore achieving more efficiency in their service delivery in turn attain competitive edge in the market. Using the finding of the study microfinance banks may gain understanding of how bank size influences efficiency and ways of determining the efficiency of the bank and its efficiency. The banking sector will gain knowledge on the influence of bank size in promoting efficiency and avenues to increasing efficiency of a bank therefore minimizing costs. The finance professional will improve their knowledge regarding bank size and cost efficiency and most appropriate indicators to determine these variables.

Students will enhance their knowledge and understanding on how the size of the bank results to efficiency and theoretical framework that supports this relationship, their relevance and applications. The findings of this study might also be used by other researchers interested in establishing relationship between organization size and efficiency.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviewed various literatures regarding the relationship between organization size and its efficiency. The chapter was guided by the study objectives. It also entailed theories that guided the study, an empirical review and a summary of literature review.

2.2 Theoretical Framework

This discusses the theories that supported the study. The theories that guided this study include stake holder theory, transaction theory and agency theory.

2.2.1 Stakeholder Theory

Stakeholder theory was developed by Freeman in 1984. While expounding on stakeholder theory, Richter and Dow (2017) noted that an organization is a system of stakeholders whose operations are contained in a larger system which is the host society. The society therefore avails the market and legal provisions for the organisation. The main aim of any organisation is to achieve maximum returns for its shareholders through converting their stakes into services and products.

In a similar view, Arras and Braun (2018) argues that organization's management decision should be inclusive of interests of the stakeholders. The theory is derived from policies of special interest, sociology and organisation behaviour. Stakeholder theory puts into consideration range group constituents as opposed to focusing on shareholders only. This implies that the shareholders of the organisation streamline

their interest to the interests of all stakeholders in the organisation including employees, customers, suppliers and government, therefore ensuring the organisations resources are utilized for the benefit of the whole society (Duckworth & Moore, 2010).

The proponents of stakeholder theory, Richter and Dow (2017) posits that, the theory does not give guideline on a single corporate objective, however it gives guidelines to organisation management to make decision that serves the interest of many stakeholders. In addition, they argue that with the theory not giving a clear objective for the organisation shareholders, organisation that embrace the theory are prone to managerial conflict and confusion therefore leading to organisation inefficiency. They therefore advised that organisation management decisions should be representative enough to cater for the interests of all the stakeholders through meeting organisation goals and setting targets in the most effective and efficient way.

This theory is important to the current study which is about establishing the relationship between organization size and efficiency of microfinance banks in Kenya. Considering that size enables the organization to take advantage of the economy of scale therefore being in position to operate with small operating ratios. It can therefore be argued shareholders of the microfinance banks have an obligation of ensuring that their institutions operate in the most efficient way possible. Efficiency will be considered to have been achieved when there is minimal utilisation of resources to yield maximum output in terms of profitability and service delivery.

2.2.2 Transaction Cost Theory

Transaction cost theory was first explained by Coase in 1937. The theory was described when Coase was explaining why companies exist, expand or outsource

from external environment. According to Rindfleisch (2020) when expounding on transaction cost theory, they argued that apart from organizations trying to minimize costs of resources exchanged with external environment, they also attempt to minimize unnecessary bureaucratic internal exchange cost. Organizations therefore make a comparison of the cost they incur while conducting exchange of resources with the environment with the bureaucratic cost incurred while conducting activities internally. The growth of organization size means that the organization is able to minimize its internal bureaucratic costs through integration to achieve decentralized system (Lieberthal & Lampton, 2018). This puts organizations in a platform where they can make efficient investment decisions which will yield high returns on investments.

This theory will be very useful in our study since it postulates that in a situation where organizations external costs exceed internal bureaucratic costs, the organization achieves growth since it is able to perform its activities at a lower cost. However, in a situation where organization bureaucratic cost exceeds the external transaction cost the organization may need to downsize in order to minimize its external transaction costs. It can therefore be argued that an organization achieves growth in size if its activities are can be done internally at a lower price as compared to outsourcing the activities from external providers. This enables the organization to save money that will have otherwise be utilized in operational costs and use them in other investments such as modern technology to improve efficiency. Organizations are coming up with ways to improve their technological advancement with an aim of reducing their internal operational costs. This enables organizations to save huge amount of money while at the same time providing value added services and products that satisfies the needs of their customers (Dutta & John, 2015).

Transaction costs that are associated to exchange of resources with external environment are prone to be manipulated by various factors including risks, uncertainties and opportunities. This factor leads to increased external transaction costs since it can be very costly for organisation to control them. It therefore makes sense economically for an organisation to maintain its activities in-house in order to save resources (Dyer & Chu, 2013).

2.2.3 Agency Theory

Agency theory was formulated by Jensen and Meckling in 1976. The theory proposes that decision made by top management including the shareholders and other stake holders have an overall effect on organization performance. The theory proposes that the management of any organization should aim at achieving the goals of all stakeholders in that organisation. According to the theory the management of the organisation should therefore set achievable targets and goals and make investment decisions that lead to organisation experience improved performance which in turn helps it to be more efficient in its operations. This promotes growth and contributes to increase in size of the organisation. The theory was very useful to this study since it posits that the decision made by top management of an organisation should first take into consideration the priorities of the stake holders. The organisation resources should be utilised in the most productive way to enable the organisation realize its corporate goals (Grover et al, 2018).

Based on the theory the banks should therefore invest in integrating their system in modern technology to enhance efficiency and improve their service delivery at the lowest costs possible. Human capital resource plays a vital role in enabling organizations achieve its set objectives and goals. Efficient employees enable

organization to offer quality services those results to customer satisfaction. This results in attracting new customers which translate to increased sales growth. Increase in sales results to increase profitability which have been found to have a positive impact in terms of growth and efficiency of an organization. This study therefore presumes that growth is an element of the overall growth of the bank which increases in size (Grover et al, 2018).

According to Elston, MacCarthaigh and Verhoest (2018), the bigger the number the administrative layers there are in an organization the greater the agency and transactional cost. One of the proven ways to manage administrative layers is managing the number of employees. Grover et al (2018) further argues that in an organization management can make use of organization's resources effectively to achieve efficiency. The resources include intellectual properties, technology and organization assets. According to Morris and Phalippou (2020), when an organization experiences high capital ratio, its debt increases. This prompts the top management to the agency debt cost and therefore increasing the debt of the organization.

2.3 Determinants of Organizational Efficiency

2.3.1 Organization size

Organization size is a critical factor that determines organization efficiency. Organization size influence efficiency through economies of scales and reduced operation costs. Because of economies of scale, organizations experience efficiency improvements proportional to the size of a financial institution (Hermes & Hudon, 2018). Smaller MFIs, in particular, face challenges in covering the industry's high operating costs and diversifying their services in competing against bigger microfinance companies (Zamore, Beisland & Mersland, 2019).

Organization size has shown mixed findings on efficiency. Dreyfus, Nair and Talluri (2020) found a positive effect of organization size on organization efficiency. Pervan and Višić (2012) also found a positive relationship. On the other hand, Li et al (2020) found that organization size had a negative effect on organization efficiency. Waweru et al (2017) established an insignificant effect.

2.3.2 Asset Quality

Banks give loans to borrowers to enable them to make investments that can promise better returns to be able to pay back the principal amount and interest. Loan is a primary source of income for banks. Therefore, the manner in which these loans are managed highly depends on a bank's efficiency. A bank that has an efficiency business processes and systems can easily process loans and advances to customers.

Ariff and Shawtari (2019) argue that banks should follow credit policies and regulations when giving out loans and credit because the more they provide loans to their customers the more they get exposed to default that might expose them to financial loss. Ramadhani (2020) found a positive relationship between asset quality and organization efficiency. Badunenko et al (2021) displayed no relationship between asset quality and efficiency in organizations. This shows ambiguity in the relationship between asset quality and efficiency.

2.3.3 Liquidity

Liquidity means the ability of a firm to be able to pay its short-term and long-term financial obligation. Bhunia (2010), as cited by Ghasemi and Ab Razak (2016), refers to liquidity as the ability of a firm to meet its short-term obligations. According to Bassey, Tobi, Bassey and Ekwere (2016), the term liquidity refers to the capability of

a firm to meet short term financial obligations by converting the short-term assets into cash without suffering any loss.

A firm should be able to maintain an optimal liquidity in order to retain the confidence of its suppliers and to take advantage of viable investments. This is consistent with a study by Rashid (2018) who found that liquidity (current ratio) and efficiency related directly. In addition, Singh (2018) found a positive link between liquidity and efficiency. However, Chakraborty (2018) found a negative correlation between liquidity and bank's efficiency. This shows mixed relationship between liquidity and organization efficiency.

2.4 Empirical Review

This section of the chapter reviewed both local and international studies which have focused on the relationship between bank size and efficiency. The review consisted of similar and differing school of thoughts regarding this subject.

2.3.1 Global Evidence

In a study on factors affecting the size of 40 organisations in Tunisia, Saliha and Abdessatar (2017) adopted a longitudinal research design to establish key variables that affected organisation's size using panel data for a period of five years. Their study revealed that the variables which affected the size of the organisation include liquidity and efficiency. The study also found out that large organisation employed the use of modern technologies which improved efficiency in their operations.

In another study conducted to establish the association between board size and organisation efficiency, Tanna et al. (2018) sampled out 17 banks in UK. The objective of their study was to provide empirical evidence on the link between

efficiency and board structure in terms of its composition and size. The study revealed that, a positive relationship existed between board size and organisation efficiency.

Archarungroj and Hoshino (2016) assessed the relationship of organisation size and profitability of the organisations operating in Thailand. Their study revealed that, a positive relationship existed between organisation size and profitability. Their study also revealed that large organisation was more efficient as related to smaller organisations.

In a study on determinants of performance of listed organizations operating in Vietnam, Vu et al (2019) adopted an explorative research design using a panel data for a period of ten years. The result indicated that a positive relationship existed between total sales revenue and efficiency of organisation. In addition, the study indicated no significant relationship existed between the number of employees, profitability and efficiency of organisations.

 In study on relationship between bank size and efficiency in developing countries, Karray and Chichti (2019) made use of data envelopment approach under a condition that allowed assessment of effect on outcome of choice to determine operation of banking sector using a value-added approach. The study made use of a sample size of 402 banks operational in 15 developing nations between 2009 and 2018. The results revealed that banks in developing countries experienced technical inefficiency encompassed through frequent waste of resources that exceeded 46% of the real levels. All bank sizes were found to experience inefficiency expect for largest banks which were found to be having high levels of scale.

2.3.2 Local Evidence

In a study done to ascertain the relationship between bank size and their performance financially, Muhindi and Ngaba (2018) sampled 42 commercial banks in Kenya. He sourced the data from bank 10 years' financial records. The obtained data was analysed with the aid of stata software. The findings indicated that, a positive correlation existed between bank sizes, change in net assets and performance of the bank financially.

In another study on the link between size of commercial banks and their performance financially in Kenya, Ngumo, Collins and David (2020) studied the determinants of financial performance of microfinance banks in Kenya. They utilized descriptive study design to establish the association between the two variables. The study utilized secondary data for a period of five years. The results indicated that, a positive relationship exists between bank size and its performance financially. The study findings further revealed that large banks were more efficient and profitable comparatively to small banks. The finding however did not establish any significance relationship between bank branches and their performance financially.

In another study, Masika and Simiyu (2019) studied the effect of firm characteristics on financial performance of Deposit Taking Saccos Licensed by Sasra in Nairobi, Kenya. A period between 2012 and 2015 was used. Causal design was adopted. From the statistics, organization size was found to have a direct effect on performance through reduction in operational costs and increased ROA. In another study on the association between bank size and their profitability in commercial banks operating in Kenya, Gatete (2015) adopted a descriptive research design and sampled out 43 commercial banks. The study utilized secondary data which was obtained from CBK reports. The obtained data was analyzed using a regression model. The findings

indicated that variables such as solvency, capital adequacy and efficiency were statistically significant.

2.4 Conceptual Framework

Variables that are viewed to influence efficiency include size of the organization, customer deposits, asset quality, liquidity and capital adequacy. In the conceptual framework, organization size is the independent variable as measured by log of assets. Efficiency as measured by operating expense ratio. Other determinants of efficiency like customer deposits, asset quality and liquidity were used as the control variables in the relationship between organization size and efficiency.

Independent Variable   Dependent Variable

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┌─────────────────────────────┐
│ Organization Size           │
│   • Log of Assets           │──────────────┐
│                             │              │
└─────────────────────────────┘              ▼
                                    ┌──────────────────────────────┐
Control Variables                   │ Organization Efficiency      │
┌─────────────────────────────┐     │   • operating expense ratio  │
│   • Asset quality           │     │                              │
│   • Liquidity               │     └──────────────────────────────┘
│                             │ - - - - - -▲
│                             │
└─────────────────────────────┘
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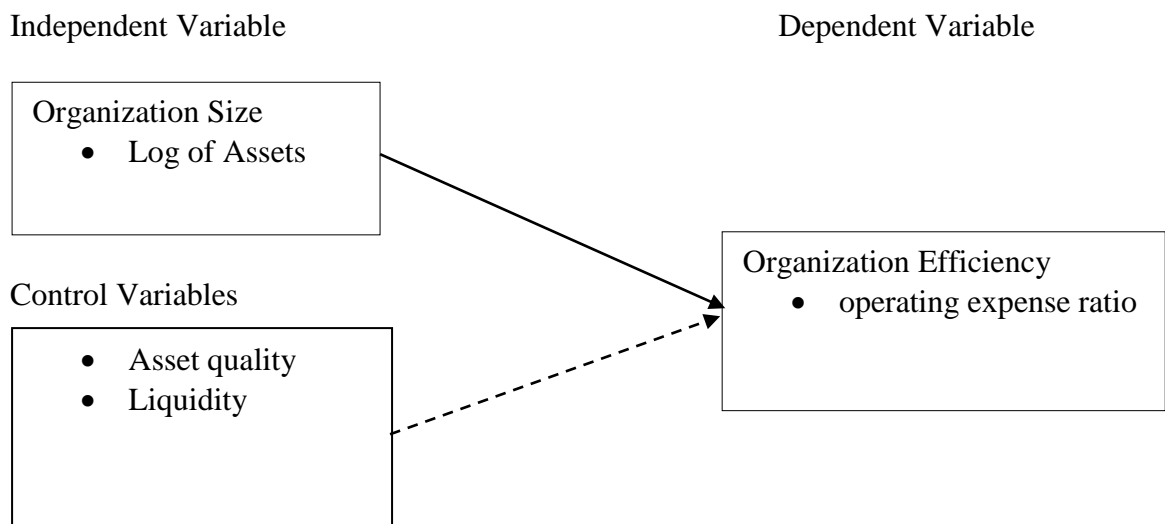
Figure 4.1: Conceptual Model

2.5 Summary of the Literature Review

Many studies have indicated that large organizations achieve more efficiency as related to small organization particularly when efficiency is viewed in terms of operational cost. When viewed in terms of profit however, some studies have indicated smaller organizations are more efficient. The literature review has indicated that increase in organization size enables them to gain control of their operating costs.

However, some scholars have argued that organization size cannot be related to efficiency especially when viewed in terms of generating profit.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The method underlying this investigation is detailed in this part. The research design, research populations, data gathering methodologies, and data interpretation was all be covered in this part.

3.2 Research design

Research design is a tool that is used by the study to guide the researcher on how to tackle the problem of the study in a clear and explicit manner (Hancock & Algozzine, 2017). This study adopted a descriptive research design. As per Kabir (2016), descriptive research is suited for investigations that aim to illustrate a hypothetical connection around research parameters. This research approach is used since the investigation aims to define the connection around organization size and efficiency, having a particular focus on MFI. The researcher chose the microfinance based on their rapid growth and adoption of the modern technology.

3.3 Population

Populace relates to a group of items in a particular population that have similar characteristics (Kothari, 2006). The population of this study was made of Microfinance banks that have been listed and licensed to operate in Kenya by CBK between 2011 to 2020. According to CBK (2020) there were thirteen (13) microfinance banks in Kenya as at 31st December 2020. All the microfinance banks that existed between 2011 and 2020 included in this investigation. According to CBK, there were six microfinance banks that existed between 2011 and 2020.

3.4 Data Collection

The data collecting method entails acquiring and evaluating measuring information on targeted variables in a structured manner that allows the investigator to adequately answer questions, scientifically evaluate the hypothesis, then assess the results (Hancock & Algozzine, 2017). Quantitative data was collected for this study. The study gathered secondary data. The data was got from financial statements in the individual firms. The data was collected for a period of ten years (2011-2020). The researcher worked with this period of time since a good number of microfinance banks in Kenya were licensed within this time frame following the formulation of Microfinance Act 2006 and microfinance (deposit taking institution) regulation 2008 by the Kenya government. This period of time is also considered adequate enough to establish the association between the study variables. The financial statements were accessed from the annual reports published by the MFIs. Annual data was used as collected from microfinance banks between 2011 and 2020.

3.5 Data Analysis

Analyzing data is described as the procedure of evaluating data with aid of logical as well as analytical reasoning to examine data from each study variable (Kothari, 2006). The collected data was cleaned, sorted and coded in STATA, version 14. The study made use of descriptive and inferential statistics to analyze data. Descriptive statistics like standard deviation and mean was utilized to summarize in report form for easy interpretation.

Kabir (2016) noted that inferential statistics allows testing of the research results by using inferences to analyze and interpret the results. Inferential statistics that was used in this study included regression. The investigation employed panel regression

modeling to determine any association around the size of an organization and its efficiency.

3.5.1 Analytical Model

The investigation utilized regression model where by the parameters was a combination of a set of autonomous or controlling variables. Result of this regression analyses were built up a probabilistic statement on influence of organization size on the efficiency of microfinance bank. In addition, it gave highlights on the direction and extent of their correlation with the variables of interest.

The study made use of a regression model that comprised of three variables which include bank size, asset quality and liquidity. This variable was seen to affect microfinance bank efficiency. The dependent variable was efficiency which was measured using operating expenses divided by total income. The formula for regression was:

$$Y = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon$$

Where:

Y = Organization efficiency as measured by operating expense ratio (operating expense/operating income) of firm i at time t

X_{1it} = Organization size as measured by logarithm of total assets of firm i at time t

X_{2it} = Asset quality as measured by non-performing loans ratio (non-performing loans/total loans) of firm i at time t

X_{3it} = Liquidity as measured by liquidity ratio (total current assets/total current liabilities) of firm i at time t

α = Regression constant

ε = Standard error term (distributed about the mean of zero)

$\beta_{1...}\beta_3$ = Model coefficients

3.5.2 Diagnostic Tests

Various diagnostic tests were conducted including normality, heteroskedasticity and multicollinearity. Normality was determined using the Shapiro Wilk test; in a situation where the study got a small value of w the researcher concluded that there was no significant departure from the normality.

Heteroskedasticity was tested using the Breusch Pagan statistics; in a situation where the study got a p value which is less than 0.05, then the researcher concluded that there was heteroskedasticity in the data. If the p value obtained is greater than 0.05, the null hypothesis is not be rejected. Hence it was assumed that there was no heteroskedasticity in the data.

Multicollinearity was determined through variance inflation factors (VIFs) and tolerance level, a value of 1 indicated that there is no connection around variables; VIF of 1-5 suggests a moderate connection and the researcher would not consider it to be bad enough to necessitate remedial action. However, VIFs greater than 5 indicate serious multicollinearity values.

3.5.3 Tests of Significance

The hypothetical test for this study was done at 95% confidence level in determining whether the model was a good tool for analysis using Analysis of Variance (ANOVA). With the use of a F-test, ANOVA is deployed to assess acquired information. In a situation the test yields 0.05 the researcher conclude that the study variables are statistically significant.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter has analyzed data collected and its finding presented below. Discussions on the findings are also included. The paper used data from six microfinance banks that existed between 2011 and 2020. The firms that came to exist after 2011 with those that exited within the period were excluded. This gave a total of 60 data points that were used in the analysis.

This analysis was based on the following key:

- OER as Operating expense ratio as a measure of organization efficiency

- LOA as natural log of assets as a measure of firm size

- NPLR as non-performing loans ratio as a measure of asset quality

- LR as liquidity ratio as a measure of liquidity

4.2 Descriptive Statistics

This section describes the data in form of mean, minimum, maximum and standard deviation. The statistics were summarized to determine the effect of organization size on the efficiency of the microfinance banks in Kenya.

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
OER	60	93.96011	30.42176	12.41172	166.6667
LOA	60	14.71622	1.999691	10.9802	17.28603
NPLR	60	35.14517	37.42352	.0011	202.5554
LR	60	48.65087	48.71429	12.2121	298.0003

Based on the results tabulated in table 4.1, microfinance banks in Kenya showed a mean organization efficiency as measured by operating expense ratio (operating expense/operating income) of 93.96% between 2011 and 2020. The banks, on the other hand, showed a standard deviation of 30.4218 within the same period. This shows, between 2011 and 2020, microfinance banks had a very high operating expense ratio indicating that expenses of the microfinance banks were greater than the firms' capability in generating enough revenue. Hence, the microfinance banks in Kenya would be considered to have low levels of organizational efficiency. Within the period, the banks displayed an operating expense ratio between 12.412 and 166.667. This shows that, between 2011 and 2020, indicating that the microfinance banks showed varying efficiencies.

The table also shows that organization size as measured by log of total assets displayed a mean value of 14.716 and a standard deviation of 1.999. This shows that in the period between 2011 and 2020, the microfinance banks in Kenya showed an average size of 14.716. In the period, the bank's size ranged between 10.9 and 17.28. This shows that microfinance banks in Kenya do not differ so much in terms of their size.

Asset quality as measured by non-performing loans ratio (non-performing loans/total loans) showed a mean of 35.145. This indicates that microfinance banks in Kenya showed an average NPLR of 35.145% between 2011 and 2020. Microfinance banks in Kenya showed high level of non-performing loans between 2011 and 2020 which is not healthy for the banks. The banks showed a standard deviation of 37.4254 indicating the level of non-performing loans between 2011 and 2020 varied greatly across microfinance banks in Kenya.

Liquidity as measured by liquidity ratio (LR) as measured by total current assets/total current liabilities showed a mean of 48.65. This indicates that microfinance banks in Kenya showed an average liquidity ratio of 48.65% between 2011 and 2020. Microfinance banks in Kenya showed low levels of liquidity (less than 1) indicating inability of current assets in financing the current liabilities as they fall due. The banks showed a standard deviation of 48.714 (12.2121<LR<298.0011) indicating that liquidity varied greatly across microfinance banks in Kenya between 2011 and 2020.

4.3 Correlation Analysis

Table 4.2: Correlation Analysis

	OER	LOA	NPLR	LR
OER	1.0000			
LOA	0.3900	1.0000		
	0.0021			
NPLR	-0.3409	-0.1091	1.0000	
	0.0077	0.4066		
LR	-0.1885	-0.4841	-0.0101	1.0000
	0.1492	0.0001	0.9388	

From the correlation analysis, the findings showed that organization size (LOA) had a weak correlation coefficient (0.3900) a significance of 0.0021 which is less than 0.05. This indicates that organization size has a weak and significant relationship with organizational efficiency of microfinance banks in Kenya. On the other hand, asset quality (NPLR) showed a correlation coefficient of -3409 with a significance of 0.0077 which is less than 0.05. This shows that asset quality has a weak, negative and significant relationship with organizational efficiency of microfinance banks in Kenya. Liquidity (LR), on the other hand, showed a correlation coefficient of -0.1884

with a significance of 0.1493 which is greater than 0.05. This indicates that liquidity has a weak negative but insignificant relationship with organizational efficiency of microfinance banks in Kenya.

4.4 Diagnostic Tests

Table 4.3: Normality Testing

```
              Shapiro-Wilk W test for normal data

  Variable  |    Obs        W         V        z      Prob>z
------------+------------------------------------------------
       OER  |     60    0.98158    1.001    0.002    0.49902
       LOA  |     60    0.90524    5.151    3.533    0.00021
      NPLR  |     60    0.76836   12.591    5.460    0.00000
        LR  |     60    0.59300   22.124    6.675    0.00000
```

Shapiro-Wilk test was adopted in checking on whether the data utilized was normally distributed. Based on the data findings, organization efficiency (OER) displayed a significance value of more than 5%. The researcher assumes that organization efficiency data was normally distributed. On the other hand, organization size (LOA), asset quality (NPLR) and liquidity (LR) displayed statistics of less than 0.05. Hence, the researcher assumes that the data on organization size (LOA), asset quality (NPLR) and liquidity (LR) was not normally distributed.

Figure 4.2: Heteroskedasticity Test

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
        Ho: Constant variance
        Variables: fitted values of OER

        chi2(1)      =      0.48
        Prob > chi2  =    0.4906
```

The study sought to test the constant nature of error terms across time. This was done by testing heteroskedasticity based on Breusch–Pagan statistics. From the results, the

findings showed a Breusch–Pagan statistic of 0.48 with a significance value of 0.4906. The significance value is greater than 0.05, hence, the researcher assumes that the error term is constant over time. This shows that there are no heteroskedasticity in the data utilized in this research.

Table 4.4: Multicollinearity Test

Variable	VIF	1/VIF
LOA	1.33	0.752627
LR	1.31	0.761618
NPLR	1.02	0.982910
Mean VIF	1.22	

This research sought to test whether the predictor variables had a linear relationship. This was checked by testing multicollinearity utilizing Variance Inflation Factor. The research findings showed that the variables had VIF values below 2 with tolerance variables less than 1. This is supported by a low mean VIF (1.22). Despite researchers recommending VIF below 10, the data utilized here show very low levels of multicollinearity. This indicates that the variance is inflated to very low levels and the predictor variables do not have a linear relationship.

4.5 Regression Analysis

Regression analysis was done to determine the effect of organization size on the efficiency of the microfinance banks in Kenya. The regression analysis was based on a regression analysis. The analysis was based on microfinance bank data collected between 2011 and 2020.

Table 4.5: Model Summary

```
Random-effects GLS regression              Number of obs     =         60
Group variable: CD                         Number of groups  =          6

R-sq:                                      Obs per group:
    within  = 0.0721                                     min =         10
    between = 0.7179                                     avg =       10.0
    overall = 0.2426                                     max =         10

                                           Wald chi2(3)      =      17.30
corr(u_i, X)    = 0 (assumed)              Prob > chi2       =     0.0006
```

From the results of the regression, the random effects model (which was adopted in

the analysis) fits the data. This is shown by the p value of 0.0006. The between R

squared was used in interpreting the data since the random effect model is a between

regressor model. The results showed a between R squared value of 0.7179. This

indicates that organization size, asset quality and liquidity contribute 71.79% change

in organization efficiency of microfinance banks in Kenya. Other factors contribute

the remaining 28.21% change in organization efficiency of microfinance banks in

Kenya.

Table 4.6: Regression Coefficients

```
        OER  |     Coef.   Std. Err.      z    P>|z|     [95% Conf. Interval]
-------------+----------------------------------------------------------------
        LOA  |   5.29577   2.075173     2.55   0.011     1.228505    9.363036
       NPLR  |  -.2446821   .0954322    -2.56   0.010    -.4317258   -.0576384
         LR  |  -.0132572   .0831715    -0.16   0.873    -.1762704    .149756
      _cons  |  25.27071   33.46061     0.76   0.450    -40.31088    90.8523
-------------+----------------------------------------------------------------
    sigma_u  |  1.9618737
    sigma_e  |  26.726482
        rho  |   .0053595   (fraction of variance due to u_i)
```

$Y = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \varepsilon$

was fitted to

$Y = \alpha - 0.2447 X_{1it} - 0.1326 X_{2it} + \varepsilon$

Where:

Y   =   Organization efficiency as measured by operating expense ratio (operating expense/operating income) of firm i at time t

X_{1it} =   Organization size as measured by logarithm of total assets of firm i at time t

X_{2it} =   Asset quality as measured by non-performing loans ratio (non-performing loans/total loans) of firm i at time t

X_{3it} =   Liquidity as measured by liquidity ratio (total current assets/total current liabilities) of firm i at time t

α   =   Regression constant

From the fitted model, regression coefficients show a constant value of 25.2707. This indicates that if organization size (LOA), asset quality (NPLR) and liquidity (LR) were held constant, the organization efficiency of microfinance banks would stand at 25.2707 between 2011 and 2020. The findings also showed that a unit increase in organization size between 2011 and 2020, would cause an increase in organization efficiency of microfinance banks by 5.2958 with a significance level of $0.011 < sig. < 0.05$. This shows that organization size has a positive and significant effect on organization efficiency of microfinance banks in Kenya. In addition, holding other variables constant, a unit increase in asset quality would reduce organization efficiency of microfinance banks by 0.2447 with a significance level of $0.010 < sig. < 0.05$, between 2011 and 2020. This is an indication that asset quality has a negative and significant effect on efficiency of microfinance banks.

4.6 Discussion of Findings

From the findings, increase in organization size showed an increase in the organization efficiency of microfinance banks in Kenya between 2011 and 2020. The

findings further showed that the increase was significant. This shows that organization size has a positive effect on organization efficiency of microfinance banks in Kenya. The regression analysis results showed that organization size had positive and significant regression coefficient. This is in line with the outcomes of the research by Archarungroj and Hoshino (2016) who noted that a positive link existed between organization size and efficiency. This also supports findings of Karray and Chichti (2019) who found that largest banks have high levels of efficiency. The findings however differed with those of Vietnam, Vu et al (2019) who found that organization size had no significant effect on organization efficiency.

From the correlation analysis, the results showed that organization size had a positive relationship with organization efficiency of microfinance banks in Kenya. This indicates that organization size causes improved efficiency among firms. This was shown by the positive correlation coefficient and a significance value below 5%. Archarungroj and Hoshino (2016) noted that large organization was more efficient as related to smaller organizations, hence supporting the study.

The findings are in concurrence with the findings of Karray and Chichti (2019) who indicated that large banks had high levels of scale. They also concur with those of Tanna et al. (2018) who revealed that a positive relationship existed between size and organization efficiency. The findings, however, differed with those of Vu et al (2019) who found no significant relationship existed between the number of employees, profitability and efficiency of organizations.

The results also found that increase in asset quality as measured by non-performing loans ratio led to decreased the operating expense ratio as measure of organization efficiency. The results showed a significant decrease in organization efficiency. Between 2011 and 2020, microfinance banks had a very high operating expense ratio.

This means that asset quality had a significant negative effect on organization efficiency. The findings concur with those of Ramadhani (2020) who found a positive effect of asset quality on organization efficiency. The results, however, differed with those of Badunenko et al (2021) who displayed no effect of asset quality on efficiency in organizations.

Correlation analysis showed that non-performing loans ratio showed a negative relationship with organizational efficiency. This indicates that non-performing loans ratio as a measure of asset quality has a negative relationship with organization efficiency of microfinance banks in Kenya. This confirms the assertions of Ariff and Shawtari (2019) who argued that the more banks provide loans to their customers without recovering them, the more they get exposed to default that might expose them to financial loss. The findings differed with those of Badunenko et al (2021) who found no relationship between asset quality and efficiency in organizations.

Results showed that increased liquidity as measured by liquidity ratio led to reduction in the organizational efficiency of microfinance banks between 2011 and 2020. However, the increase in organizational efficiency was not significant. This indicates that liquidity has no significant effect on organizational efficiency of microfinance banks. The findings differ with those of Rashid (2018) and Singh (2018) who found a positive effect of liquidity on organization efficiency and Chakraborty (2018) who found a negative effect of liquidity on organizational efficiency.

The findings showed that liquidity had a negative but insignificant relationship with organization efficiency. Theoretically, a firm must maintain an optimal liquidity in order to retain the confidence of its suppliers and to take advantage of viable investments. The empirical findings concur with those from Chakraborty (2018) who found a negative correlation between liquidity and bank's efficiency. This shows

mixed relationship between liquidity and organization efficiency. The findings are different from those of a study by Rashid (2018) who found that liquidity and efficiency related directly. They also differed with those of Singh (2018) who found a positive link between liquidity and efficiency.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study sought to determine the effect of organization size on the efficiency of the microfinance banks in Kenya. This section summarizes the findings and gives the conclusions and recommendations based on the findings. The various factors that limited this research were also discussed.

5.2 Summary of Findings

This study sought to determine the effect of organization size on the efficiency of the microfinance banks in Kenya. The findings were based on the variables and analyzed through descriptive and regression statistics. Based on the results, between 2011 and 2020, microfinance banks showed a mean organization efficiency as measured by operating expense ratio of 93.96%. This indicates that the banks had high level of operating expenses. Organization size as measured by log of total assets displayed a mean value of 14.716% between 2011 and 2020.

Asset quality as measured by non-performing loans ratio showed a mean of 35.145% for microfinance banks between 2011 and 2020. Microfinance banks in Kenya showed high level of non-performing loans between 2011 and 2020. Liquidity as measured by liquidity ratio showed a mean of 48.647% for the microfinance banks between 2011 and 2020. The banks' liquidity varied greatly across microfinance banks in Kenya between 2011 and 2020. From the correlation analysis, organization size had a positive weak correlation coefficient with a significance of 0.0021. On the other hand, asset quality (NPLR) showed a negative correlation coefficient with a

significance of 0.0077. Liquidity (LR), on the other hand, showed a negative and insignificant correlation coefficient.

From the correlation analysis, the findings showed that organization size (LOA) had a weak correlation coefficient (0.3900) a significance of 0.0021 which is less than 0.05. This indicates that organization size has a weak and significant relationship with organizational efficiency of microfinance banks in Kenya. On the other hand, asset quality (NPLR) showed a correlation coefficient of -3409 with a significance of 0.0077 which is less than 0.05. This shows that asset quality has a weak, negative and significant relationship with organizational efficiency of microfinance banks in Kenya. Liquidity (LR), on the other hand, showed a correlation coefficient of -0.1884 with a significance of 0.1493 which is greater than 0.05. This indicates that liquidity has a weak negative but insignificant relationship with organizational efficiency of microfinance banks in Kenya.

Regression results showed a between R squared value of 0.7179. This indicates that organization size, asset quality and liquidity contributed 71.79% change in organization efficiency of microfinance banks in Kenya between 2011 and 2020. The findings also showed that a unit increase in organization size would cause a significant increase in organization efficiency of microfinance banks within the same period. In addition, increase in asset quality would significantly reduce organization efficiency of microfinance banks between 2011 and 2020. On the other hand, an increase in liquidity decreased organization efficiency of microfinance banks between 2011 and 2020.

5.3 Conclusions

The findings showed that, between 2011 and 2020, microfinance banks in Kenya had an average organization efficiency of 93.96%. This leads to the conclusion that microfinance banks have a high operating expense ratio. The study also concludes that microfinance banks in Kenya have low levels of organizational efficiency.

The findings showed that organization size displayed a mean value natural log of 14.716. This leads to the conclusion that microfinance banks in Kenya have low levels of assets. From the regression, organization size caused a significant increase in organization efficiency of microfinance banks. This leads to the conclusion that organization size has a significant effect on organization efficiency of microfinance banks in Kenya.

The study concludes that microfinance banks in Kenya have high level of non-performing loans. The findings showed that increase in asset quality (non-performing loans ratio) led to decrease in operating expense ratio as measure of organization efficiency. This leads to the conclusion that asset quality has a positive effect on organization efficiency of microfinance banks in Kenya.

From the descriptive statistics, liquidity as measured by liquidity ratio showed a mean of 48.647% for the microfinance banks between 2011 and 2020. This study leads concludes that microfinance banks in Kenya have a low level of liquidity. From the regression analysis, increased liquidity as measured by liquidity ratio led to reduction in the organizational efficiency of microfinance banks between 2011 and 2020. However, the effect was not significant. Hence, the study concludes that liquidity has no significant effect on organizational efficiency of microfinance banks in Kenya.

From the results of the regression, organization size, asset quality and liquidity contributed 71.79% change in organization efficiency of microfinance banks in Kenya. This means that organization size, asset quality and liquidity are the major factors influencing organizational efficiency of microfinance banks in Kenya.

5.4 Policy Recommendations

From the findings showed that microfinance banks had low levels of organization efficiencies as indicated by the high operating expenses ratio. This leads the recommendation that microfinance banks in Kenya reduce operational expenses in order to enhance their efficiency. The microfinance banks can also increase the level of operational income which would reduce the operational expenses ratio hence experiencing organizational efficiency. The study found that organization size influenced efficiency of microfinance banks positively. This study recommends that microfinance banks in Kenya should increase the level of assets that they hold. This would increase the efficiency of the firms as the effect of organization size is efficient.

The research also found that asset quality (non-performing loans ratio) had a negative effect on efficiency of microfinance banks. This study recommends that the management of microfinance banks should reduce the level of non-performing loans in their firms. The management should come up with effective loan collection procedures that would ensure that extended loans are paid. The management of the microfinance banks in Kenya should also come up with credit policies that would ensure that there is low level of non-performing loans in the loan portfolio of their banks. The study found that liquidity had no effect on organization efficiency. This

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study recommends that microfinance banks in Kenya consider other factors when creating a strategy in enhancing organization efficiency other than liquidity.

5.5 Limitations of the Study

The study was also limited to the data adopted. The researcher utilized secondary sources of data. The data has a challenge in that its historical in nature. The researcher also adopted the use of annual data. This may increase the error in the data especially where monthly and quarterly data is available. This was overcome by using most recent data and recommending for further research.

This research faced various limitations. The study was based on organization size and efficiency as the key variables. This limited the research. This was mitigated by giving recommendations for further studies. The study was also limited by the sector of focus. The research was based on microfinance banks. This may limit the generalizability of the research conclusions to other sectors in the economy.

The study was limited to secondary data which is historical in nature. This may make the findings obsolete where old sources are utilized. This was mitigated by utilizing most recent info. This research was also limited by the period of research. The paper focused on the period spanning 2011 and 2020. Other periods like 20 or 5 years may give different results. A recommendation was made for further research.

5.6 Recommendations for Future Studies

The study was limited to the data sources which were secondary in nature. The researcher also adopted the use of annual data. The researcher recommends that further research be done using primary sources of data which may give a different

result. The researcher also recommends that other scholars do investigate organization size and efficiency using quarterly or monthly data for comparison of results.

The study was based on organization size and efficiency as the key variables. This research recommends a similar research based on other variables other than the ones considered in this research. The study was based on microfinance banks in Kenya. Other researchers may do similar research in a different sector or country to compare the findings.

The study utilized secondary data. Hence, this research recommends a similar research based on primary data to compare results. The paper focused on the period spanning 2011 and 2020. Other researchers would focus on other periods to compare whether the relationship would be the same.

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APPENDICES

Appendix I: List Of Microfinance Banks In Kenya

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: CBK, 2020

Appendix II: List of Microfinance Banks in Kenya: 2011-2020

1. Faulu Microfinance Bank Ltd

2. Kenya Women Microfinance Bank Ltd

3. SMEP Microfinance Bank Ltd

4. REMU Microfinance Bank Ltd

5. Rafiki Microfinance Bank Ltd

6. Uwezo Microfinance Bank Ltd

Appendix III: Data Collection Form

	Operating Expenses	Operating Income	Total assets	Total Current assets	Total current liabilities	Non-performing loans	Gross Loans and Advances
Year	Kshs. '000	Kshs. '000	Kshs. '000	Kshs. '000	Kshs. '000	Kshs. '000	Kshs. '000
2011							
2012							
2013							
2014							
2015							
2016							
2017							
2018							
2019							
2020							

Appendix IV: Data

Bank	Year	operating ratio	Size	Asset quality	Liquidity ratio
Faulu	2011	113.160	15.453	6.219	32
Faulu	2012	77.579	15.849	1.704	33
Faulu	2013	122.048	16.335	3.670	23.5
Faulu	2014	129.137	16.827	3.084	24
Faulu	2015	116.521	17.111	3.688	31
Faulu	2016	113.297	17.125	63.937	23
Faulu	2017	12.412	17.047	46.039	27
Faulu	2018	99.955	17.100	5.659	27
Faulu	2019	125.151	17.193	58.318	26.1
Faulu	2020	99.387	17.192	202.555	29
KWFT	2011	145.140	16.651	6.923	39
KWFT	2012	133.847	16.830	6.353	39.9
KWFT	2013	129.159	17.111	7.495	27
KWFT	2014	122.432	16.895	5.473	24
KWFT	2015	119.683	17.277	11.579	27.8
KWFT	2016	122.794	17.286	17.405	28.5
KWFT	2017	115.761	17.183	21.024	28.5
KWFT	2018	97.344	17.207	21.507	20.5

KWFT	2019	107.654	17.194	21.072	24.04
KWFT	2020	87.285	17.149	28.577	20
Rafiki	2011	48.780	12.996	0.000	160
Rafiki	2012	103.670	14.424	4.951	117
Rafiki	2013	121.179	15.118	10.021	42
Rafiki	2014	113.054	15.198	45.285	35
Rafiki	2015	37.265	15.860	43.683	53
Rafiki	2016	78.682	15.807	51.493	12
Rafiki	2017	43.544	15.690	59.687	18
Rafiki	2018	74.714	15.594	66.285	21
Rafiki	2019	80.158	15.513	95.155	39
Rafiki	2020	89.333	15.562	92.069	31
Remu	2011	51.852	11.730	7.317	298
Remu	2012	68.421	12.110	6.630	80
Remu	2013	85.185	12.727	13.665	67
Remu	2014	106.154	12.887	25.000	81
Remu	2015	78.351	12.892	28.405	24
Remu	2016	90.909	12.799	34.016	36
Remu	2017	80.233	12.777	35.321	54
Remu	2018	69.524	12.978	43.290	75

Remu	2019	76.190	12.914	65.823	100
Remu	2020	70.370	12.635	87.755	31
SMEP	2011	128.718	14.508	9.827	24
SMEP	2012	138.991	14.644	18.845	28
SMEP	2013	117.714	14.728	12.173	26
SMEP	2014	89.712	14.682	15.352	29
SMEP	2015	105.461	14.768	18.866	40
SMEP	2016	85.822	14.793	20.036	30
SMEP	2017	91.396	14.821	18.843	23
SMEP	2018	106.863	14.895	19.794	30
SMEP	2019	110.993	15.014	23.484	27
SMEP	2020	92.399	15.053	26.405	23
Uwezo	2011	47.368	10.980	9.375	48
Uwezo	2012	92.308	11.272	10.256	52
Uwezo	2013	88.889	11.578	45.205	25
Uwezo	2014	102.857	11.983	25.600	15
Uwezo	2015	166.667	12.328	44.330	217
Uwezo	2016	105.660	12.274	49.007	49
Uwezo	2017	79.310	12.264	72.222	29
Uwezo	2018	58.108	12.324	69.630	106

Uwezo	2019	37.719	12.032	82.353	74
Uwezo	2020	33.333	11.806	158.974	95