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**EVALUATING MICRO-FINANCE INSTITUTION FACTORS INFLUENCING
INDEBTEDNESS STATUS: CASE OF BUSINESSWOMEN BORROWERS-NAIROBI
COUNTY**

ANN KIRAGU

ADMISSION NO: 48870



**A RESEARCH DISSERTATION SUBMITTED IN PARTIAL FULFILMENT OF
THE REQUIREMENTS OF THE MASTER OF SCIENCE IN DEVELOPMENT
FINANCE TO STRATHMORE UNIVERSITY**

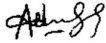
JUNE 2023

DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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ABBREVIATIONS AND ACRONYMS

AMFI-K: The Association of Microfinance Institutions- Kenya

CBK: Central bank of Kenya

CFK: Consumer Federation of Kenya

FSAS: Financial Services Associations

MFI: Microfinance institutions

PAR: Portfolio at risk

ROSCAS: Rotating Savings and credit Associations.



DEFINITIONS OF TERMS

Indebtedness status: The inability to meet all financial obligations by women borrowers without making excessive sacrifice.

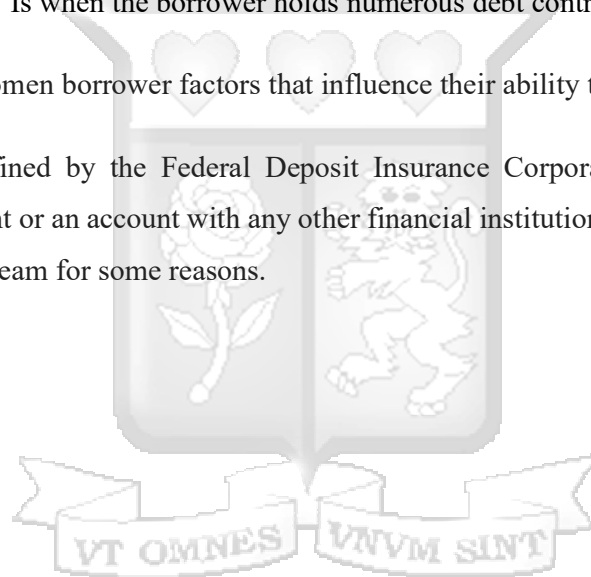
Inflation rates: The change in consumer price index of commodities that influences women borrowers' ability to repay loans.

MFI lending factors: The internal institutional factors that determines lending requirements/conditions.

Multiple borrowing: Is when the borrower holds numerous debt contracts at the same time

Personal factors: Women borrower factors that influence their ability to service loans.

Unbankable: As defined by the Federal Deposit Insurance Corporation are those adults without a bank account or an account with any other financial institution and are considered to be outside the mainstream for some reasons.



DEDICATION

This study is dedicated to my family for their love, patience, understanding and immense support. Your encouragement gave me the will and determination to complete my masters' studies.



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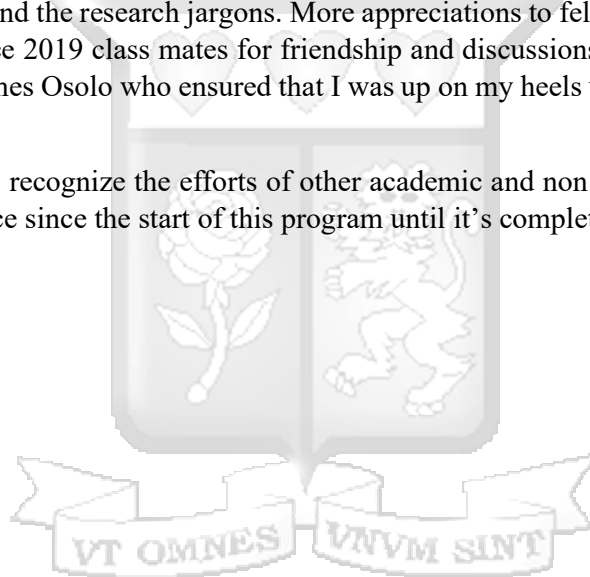
First and foremost, I would like to thank God the Almighty for the opportunity availed to me enabling me to partake this program through provision of resources. Also, for guiding me through life hurdles with His wisdom, knowledge, understanding, protection and granting me good health.

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ABSTRACT

It is without a doubt that Microfinance institutions promote economic growth by providing financial support to the poor in the society including women. It is for this reason that various governments in the developing economies including Kenya have put in place measures that help the MFIs to thrive albeit with mixed results. Notably, MFIs are instrumental advancing financial support to the low-incomers, women not exclusive. However, given that many MFIs have developed various financing strategies that ensure women borrowers access their services, the rate of over-indebtedness among women is noticeable. It is for this reason that this study intended to evaluate. The overall objective of the study was to evaluate the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County. The following specific objectives were used; the study assessed the indebtedness status of women in Nairobi County; investigated the effect of MFI lending factors on the indebtedness status of women in Nairobi County; and examined the moderating effect of inflation rates on the relationship between MFI lending factors and the indebtedness status of women in Nairobi County. Both life cycle theory and the learning theory were used. The study adopted a mixed research design due to the use of both quantitative and qualitative data in the study. The target population of this study was the 407,455 women borrowers and managers of the 19 MFIs in Nairobi with a sample size of 399 and 19 respectively. The study used both structured questionnaire as main data collection tool and unstructured interview guide. By using Statistical Packages for Social Sciences (SPSS) version 24, data was analysed using descriptive statistics and regression model. Results were presented in tables, figures, mean, and standard deviation. The study found that borrowers' personal factors had significant and positive relationship with the indebtedness status among women borrowers ($\beta = 0.055$; p -value = 0.038). This research also found that, that MFI lending factors had significant positive relationship with the indebtedness status among women borrowers ($\beta = 0.017$; p -value = 0.019). The study again found that, inflation rate had a positive significant connection with the indebtedness status among businesswomen borrowers in Nairobi County ($\beta = 0.177$, p -value = 0.002). Therefore, regression results resonate with the interview findings. The study concludes that, an increase in MFI lending factors by any unit could lead to an increased indebtedness status and vice versa. The research concluded that, a unit increase in the personal factors could increase indebtedness. It concludes that, an increase in inflation will lead to an increase in indebtedness status. The study recommends that, regular risk analysis and assessment for credit should be considered, preferably on a monthly or quarterly basis by the MFIs' management because this is an ongoing process rather than a one-time exercise. It recommends that, the Consumer Federation of Kenya should be able to consider conducting awareness campaigns to teach women borrowers on planned investment and spending of borrowed credit. It also recommends that the government through the Treasury and other line ministries such as Trade, preferably policy makers should introduce legislative measures to streamline MFIs' lending to safeguard women borrowers from unjust lending terms and conditions. In addition, it recommends that, every stakeholder in the MFIs sector including regulatory bodies and development agencies can perform an essential role in promoting financial and business literacy among women borrowers in line with their own area of specializations. Therefore, financial literacy training needs should be specifically connected to debt literacy to obtain the desired effect.

CHAPTER ONE: INTRODUCTION

This chapter highlights the study background that focuses on the global, regional, and local aspects. The problem statement is also included together with the research objectives. It also includes the research questions, scope and significance of the study.

1.1: Background of the Study

The concept of microfinance institutions (MFIs) and its development is not a new one. It dates back to the 18th century in Europe, where it was developed as a response to the poverty experienced in Europe at that time (Seibel & Dieter, 2003). Globally by the year 2018, there were about 140 million borrowers (80% women and 65% in rural areas) (Bob et al., 2018), who received micro-credits from MFI, with a total loan portfolio of about 120 Billion USD (Severino, 2019). Of these 6.3 million were borrowers in S. Sahara Africa (64% women) with 60% of the borrowers classified as rural.

The role of MFIs in economic growth is well known all over the world. The MFIs do this by providing financial services to the lowly-income generating populace that are usually excluded from accessing these services from the formal financial sector (Puliyakot, 2020). Those championing for MFIs such as Mushtaq and Bruneau, (2019) argue that accessibility to finance by low-income earners reduces poverty by offering those deemed poor in the society an opportunity to engage in income generating activities thereby diversifying their income sources.

According to Milana and Ashta (2020), from a broader perspective, there is unanimous consensus that MFIs promotes economic growth by providing financial support to the poor in the society including women. Despite that economic growth is beneficial to the majority, the surge in the overall formal financial sector' growth in several developing economies is at the expense of those who are relatively poor (Haini, 2020). Due to this, reaching out for the low-income earners in the society is a critical objective among the developing nations and MFIs is one way of promoting outreach to this segment of the populace (Ksoll, Lilleør, Lønborg, & Rasmussen, 2016).

In rejoinder, Akhter and Khalily (2020) opined that the MFIs sector which offers financial access to the poor populace in developing economies, has also become conscious of the over-indebtedness risks. Given the increasing concerns regarding the negative effects of MFIs on customers, at a time when the trust on the MFIs positive impact is weakening (Nasrin,

Baskaran, & Rasiah, 2017), over-indebtedness is a major pressing challenge that these financial institutions are faced with but at the same must offer financial services to their customers.

In some Asian countries such as Bangladesh (Nkamleu, 2006), the concept of microfinance began to emerge through the encouragement of the World Bank; first in the form of subsidised agricultural loans during the 1960's and 70's and then as a response to the wider needs of the landless poor in the late 1970's (Hermes & Lensink, 2011). The expectation that microfinance would provide poverty alleviation solutions emerges during this time (Brau & Woller, 2004).

In the UK, the MFIs have depicted positive impact on poverty reduction especially in the rural areas where majority of the low-incomers dwell (Hermes & Hudon, 2018). These institutions have been able to offer financial support to a large population thereby promoting the growth of their respective businesses. The growth of new and old businesses has been witnessed in the country, thanks to the role the MFIs play in financially offering support to the 'unbankable'. The government has also ensured that the MFIs business environment is conducive to enable increased provision of financial services to the citizens. However, the younger citizens and women in the country have been noted to possess higher risk of over-indebtedness (Ul-Hameed, Mohammad, & Shaha, 2018).

In Bolivia, Eid Valdiviezo (2018) indicate that MFIs have performed a greater role in uplifting the livelihood of dwellers within several cities and rural areas. To actualize this, various stakeholders in the financial markets have ensured that the regulatory framework for the MFIs supports their development. Through such measures, a massive growth of MFIs has seen increased access to financial services by the citizens in Bolivia. A study by Sierra, Muriel-Patino, and Rodríguez-López (2018), observed that, many small business women borrowers in the country have successfully opened new business branches due to financial support from the MFIs. Nevertheless, incidences of lack of timely repayment and increased rate of defaulting have been witnessed.

In India, Ghosh and Guha (2019) argue that the MFIs in the country have encountered myriad of challenges in their quest to improve financial access among those ignored by the commercial banks. For instance, the policies for borrowing from MFIs in the country are less rigid or have minimal restriction hence many borrowers have thronged MFIs offices just to apply for loans. According to Samineni and Ramesh (2020), before and during the COVID pandemic, several MFIs experienced high rate of defaulting and to some extent, this was attributed to the weak borrowing restrictions. Worse still, hard economic life during the pandemic led to closure of

several small business that had acquired capital from the MFIs. Therefore, several MFIs realized a retarded growth while some of the unlucky MFIs closed down operations. All these negative effects were pegged on clients' inability to repay and received credits due to indebtedness.

In the African perspective with specific attention to South Africa, Phala and Mukonza (2021) argue that MFI's health has been a cause for concern in the last decade. The rigid borrowing system means that only a few customers may access the services while at the same time locking out potential customers. Still, those who manage to access financial services from MFIs, some of them had been faced with various business-related challenges such as poor credit management and inability to service credits due to bad financial decision making. All these factors affected the growth of MFIs thus limiting their ability to offer loan to several potential clients (Ngonyani & Serbes, 2020).

In Tanzania, most MFIs face a microcredit debt payment problem resulting to delinquency (Mpogole et al., 2012). Charles and Mori (2017) noted a relatively high increase in multiple borrowing from young people and women in Tanzania because of misinformation from the borrowing institutions. Due to this, most clients could not service their debts. This is an indication that many MFIs possess unreliable portfolio and financial information and are not well equipped to protect customers' savings or manage their credit portfolio (CGAP, 2013). As a result, many MFIs customers have been plunged into over-indebtedness.

In Kenya, MFIs provide a wide range of financial services: ranging from savings and credit facilities, money transfer and micro insurance to the economically poor, low-income households and owners of small micro scale enterprises in both rural and urban areas, using innovative delivery methodologies and channels. Despite the significant role the MFIs perform in uplifting the economic status of the low-income earners, their performance has been negatively affected by the high level of indebtedness (Omondi & Jagongo, 2018). It is documented that the rate of defaulting among MFIs' industry is relatively high ranging from 10% -20% (Kiraka, Kobia, & Katwalo, 2013). Further, Kiraka et al. (2015) observed that women enterprises in the country recorded 20-30% default rate and the over-borrowing was stated as a contributor to the high defaulting rate.

1.1.1: Indebtedness Status

Indebtedness is known to occur when a household or people, without having to make excessive sacrifice are not able meet all their financial obligations (Guérin et al., 2018). A study by Bylander et al., (2019) on how microcredit deepening increased indebtedness of borrowers in Cambodia, observed that the number of women clients was high comprising 80% of the microfinance borrowers and they disproportionately borne the strain of over indebtedness. By analysing their repayment ability, (Ramanujam & Vidya, 2017; Schicks, 2013) established that loan defaulting was due to inability by the borrower to make timely payments, made stressful sacrifices or when the borrower was completely unable to make any repayment on the amount borrowed leading to pawning or asset selling (Liv, 2013).

Researchers have established indicators of over-indebtedness (Wałęga & Wałęga, 2020; Schicks, 2014). Borrowers' behaviours however, differs from one country to another, and even within the same country (Schicks, 2014; Keese, 2009), thus limiting the generalizability of the findings. Developing measures of over-indebtedness calls for a deep understanding of its drivers. According to Keese (2009), the most common indicators of over indebtedness that are employed in literature are delinquency, multi borrowing and debt to income ratio among others.

The late or delayed repayment of loan is referred as delinquency. But a late loan does not mean non-payment in the future. MFIs are raising concerns due to delinquency and inability to achieve the 3% portfolio at risk (PAR) as per the internationally accepted standards. Korankye (2014), while analysing the causes and control of delinquency in MFIs using a random sampling technique on 25 MFIs and 250 clients established that, lack of monitoring and poor appraisals was among the causes of loan delinquency. It is therefore important to measure delinquency since it indicates an increased risk of loss. Thus, giving early warnings of problems in operations due to poor appraisal and lack of loan monitoring as well as predicting the amount of loss in a given portfolio if a default occurs (Korankye, 2014).

Multiple borrowing has also been used to determine the level of indebtedness. Multiple borrowing occurs when the borrower holds numerous debt contracts at the same time (Mpogole et al., 2012). Multi borrowing occurs due to ease of the borrower's accessibility to the loan facilities since microfinance opened access to microcredit for all (Khavul, 2010). Also from various institutions which offers credits to clients despite their disclosure or lack of it concerning their loan status on outstanding loans that they are servicing (Liv, 2013). A study by Mpogole et al. (2012) which concentrated on loan repayment challenges due to multiple

borrowing among microfinance clients in Iringa region, Tanzania revealed that, taking multiple loans affected repayment of loans for over 70% of respondents. Wałęga and Wałęga (2020) established that, in Poland over-indebtedness was mainly due to commitment by borrowers to multiple loans from diverse lenders. Several other studies identified a significant link between multiple borrowing and over-indebtedness such as (Guerin et al., 2018; Bylander et al., 2019; Ramanujam & Vidya, 2017). Thus, validating the hypothesis that a positive relationship between over-indebtedness and multiple borrowing exists.

However, a study by Bienvenu and Kweyu (2021) in the DRC found that there was no relationship between borrower related factors and the over-indebtedness of SMEs borrowers. Additionally, research by Kasoga and Tegambwage (2021) in Tanzania established that institutional factors had negative relationship with the indebtedness of MFIs borrowers and this had little effect on the performance of the MFIs in the country. Again, Karungu's (2020) study revealed that, both inflation rate, interest rate and over-borrowing had insignificant negative relationship with the increased level of indebtedness in the country. From these studies, it is clear that, there is mixed results on the effect of macroeconomic variables and the relationship between MFIs lending factors and women personal traits hence a research gap that this study intends to bridge.

Additionally, Sougata, Mahapatra, and Shyam (2019) have identified that the borrower-related factors leading to over indebtedness included, household monthly income, monthly expenses, the wealth of the households in the form of asset (asset value) held and planned lump-sum non-discretionary expenses. Further, Chotewattanakul, Sharpe, and Chand (2019) indicate that the institutional-related factors that led to over indebtedness of the borrowers' included the loans from various credit sources, MFIs' interest and fees, consumption lending, and the sources of credit. In support, Bienvenu and Kweyu (2021) argued that lender related factors have had adverse impact on the level of indebtedness. In addition, the macroeconomic factors such as, inflation and extreme economic shocks have also had effect of the level of over-indebtedness. Based on this background, the current study evaluated the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County.

1.2: MFIs in Kenya

According to the Microfinance Act (2006), microfinance institutions have been classified into deposit taking institutions and credit only microfinance. The Microfinance Act (2006) further categorize MFIs into other informal organizations other than government such as ROSCAS,

Accumulated Savings & Credit Associations, club pools and FSAS. This distinct classification enables MFIs to target different markets niches for different groups (Vanroose & D'Espallier, 2013). In Kenya, deposit taking microfinance institutions are regulated by the CBK, AMFI-K and Microfinance Act are the major regulating bodies in this sector. There are 19 MFI that are currently licensed by CBK (Microfinance Act, 2020) among thousands of unregulated ones in the informal sector.

The MFIs are supervised by AMFIK to ensure quality financial service provision to people, especially to the low-income citizen (AMFIK, 2013). The MFIs in the country have demonstrated a gradual growth in the last decades and this has seen increased number of borrowers (AMFIK, 2013). The active clients in the sector stand at 1,732,290 and excluding banks clients' total is 914,859 (ibid). The dominant women MFIs included the KWFT that became a fully-fledged bank in 2014. Others MFIs that are Deposit Taking Microfinance (DTMs) includes; SMEP, Uwezo, REMU and Faulu among others (Lelgo & Obwogi, 2018).

Microfinance institutions worldwide are known to be women empowerment tools (Islam, 2014) since women contribute greatly in socio-economic welfare of the overall household. However, several factors have led to increase in indebtedness levels among women MFIs borrowers. Therefore, this study joins the debate by focusing on evaluating the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County.

1.2.1: Businesswomen Borrowers in Nairobi County

The role of women in running, growing, and creating businesses is recognized as fundamental for growth and poverty reduction within Nairobi city (Muthama & Warui, 2021). However, women entrepreneurs within Nairobi City tend to face disproportionately larger obstacles in accessing credit, training, networks and information in addition to barriers in the legal and policy framework and as a result, they may not achieve the same level of performance as their male counterparts. According to the World Bank Group's Enterprise Surveys (2007-2017), women own more than 34% of registered businesses in developing cities and Nairobi is not exceptional.

Women in Nairobi who engage in businesses play a key role in contributing to the overall economic growth of city. The fact that women form the bulk of Nairobi residents, they are integral in championing for the capital city's economic growth (Karungu's, 2020). Given that Nairobi is the driver of the Kenya's economy, many financial institutions have been registered

some with the sole purpose of offering credit to women who in this case are deemed as vulnerable as compared to men, yet women still face immense challenges in accessing finance.

Additionally, the extent to which financial institutions reach out to women and the conditions under which they do vary noticeably. But women are at a disadvantage when an MFI does not fund the type of activities typically run by women, especially when its requirements are not clear or widely known or when, as it is typically the case. Loans to women are smaller than those granted to men for similar activities (Cozarenco & Szafarz, 2018).

Family responsibilities such as school fees, medical bills, paying house especially among single women borrowers have also been identified as some of the challenges facing women borrowers within Nairobi City (Omondi & Jagongo, 2018). These together with other personal factors such as a lack of strong capital for most women business borrowers has always presented impediments to growth and subsequently repayment of acquired loans thus leading to indebtedness. However, their ability to meet their financial needs differs dramatically from those of their male partners and this limits their intent to independently meet their business needs to minimize over-indebtedness and consequently improve their livelihood (Cozarenco & Szafarz, 2018).

1.2.2: Borrowing Behaviour of Women and Experiences in Running Enterprises

Many times, the contribution of female entrepreneurs and an entrepreneurial culture to social and economic progress is underappreciated. Consequently, the Women Enterprise Fund (WEF) among other MFIs were established to assist women over the age of 18, which means that any woman can apply, regardless she is an individual or part of a group (Kiraka, Kobia, & Katwalo, 2015). In its most basic form, it improves family livelihoods, but on deeper and bigger scales, it increases national wealth. As part of the Vision 2030 initiative, the Kenyan government has been attempting to address the gender wage gap by offering financial assistance to women in order to increase their salaries and close the estimated income disparity between men and women.

In this setting, various credit options, like the Tuinuke loan, are available to women. This a loan at the constituency level referred as Constituency Women Enterprise Scheme (CWES), a credit program offered via registered women's groups with an interest in growing or launching new enterprises (Kiraka et al., 2015). This loan has a grace period of one month and no interest; the only fee is an administrative one of 5%. The local purchase order financing (LPO finance) is the second option. By enhancing women's ability to respond to and properly handle tenders,

this loan product helps to meet demand for supply. Individual women who own businesses are eligible for the loan.

Thirdly and lastly, there is the Tender Security/Bid Bond Financing. This financing program was started by WEF to help Kenyan women meet the requirements of the tendering procedure. Individual women who run businesses or women-owned businesses may purchase the product, which is distributed by the WEF headquarters (Were & Kimaru-Muchai, 2021). The bid bonds are currently available to women in Nairobi County and its surrounding areas, which supports their ability to operate their businesses. With the help of these different lending options, women are borrowing more money. To hone their abilities and increase their understanding of the general management of the company, these women were similarly subjected to business and financial management training (Mwaura, Gathenya, & Kihoro, 2015).

1.3: Statement of the Problem

MFIs' efficiency in poverty reduction has been broadly and meticulously debated. Researchers have showed that, MFIs have optimistic impacts to the poor (Duvendack & Mader, 2018; Gangadhar & Malyadri, 2015) while others have argued otherwise (Vanroose & D'Espallier, 2013; Hulme & Maitrot, 2014). However, the recipients of MFIs credits have decried high interest rates thereby leading to increased indebtedness (Karungu, 2020). Additionally, some women groups have been accused of defaulting while a rise in indebtedness has also been linked to multiple borrowing and delinquencies (Abdifatah, 2019). Also, indebtedness among women in the Nairobi County has also been associated with untimely loan repayment and high default rate among other factors (Muthama & Warui, 2021).

Worldwide, MFIs have been known as empowerment tools (Islam, 2014) since, they greatly contribute to the socio-economic welfare of the overall household. A study in Bangladesh for instance, conducted by Khandker (2005) showed that poverty rates declined by roughly 3 percentage points per year or more than 20 percentage points, among members who had been participants in the program since 1991/92 until 1998/99. Starting with an objective of impacting the poor by reducing poverty, MFIs quickly get into market competition with the other financial institutions to remain self-sustainable (Hermes & Lensink, 2011) and this causes a drift in their poverty eradication mission (Bylander et al., 2019). Using innovative strategies, MFIs have managed to profit from the same venture as predators to the poor (Duvendack & Mader, 2018).

Further, a study by Guerin et al. (2018) and Ramanujam and Vidya (2017) found a positive relationship between borrowers, lender and indebtedness status. Bylander et al. (2019) also revealed that indebtedness had positive relationship with personal factors such as multiple borrowing, and poor financial planning. However, research by Bienvenu and Kweyu (2021) found that there was no relationship between borrower related factors and the over-indebtedness of SMEs borrowers whereas Kasoga and Tegambwage (2021) and Karungu's (2020) found negative relationship between borrower, lender, macroeconomic factors and the level of indebtedness. From these studies, it is clear that, there is mixed results on the effect of macroeconomic variables and the relationship between MFIs lending factors and women personal traits hence a research gap that this study intended to bridge by evaluating the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County.

1.4: Research Objectives

1.4.1: General Objective

The overall objective of the study was to evaluate the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County.

1.4.2: Specific Objectives

To address the general objective, the study attempted to answer the following specific objectives:

- i. To assess the indebtedness status of women in Nairobi County
- ii. To investigate the effect of MFI lending factors on the indebtedness status of women in Nairobi County
- iii. Moderating effect of inflation on the relationship between MFI lending factors and indebtedness status of women in Nairobi County

1.5: Research Questions

- i. What is the indebtedness status of women in Nairobi County in Kenya?
- ii. What is the effect of MFI lending factors on the indebtedness status of women in Nairobi County?
- iii. What is the moderating effect of inflation on the relationship between MFI lending factors and indebtedness status of women in Nairobi County?

1.6: Scope of the Study

Since microfinance institutions target the poor unbanked population who mostly happen to be the women (Gangadhar & Malyadri, 2015), this study examined the influence of MFI factors

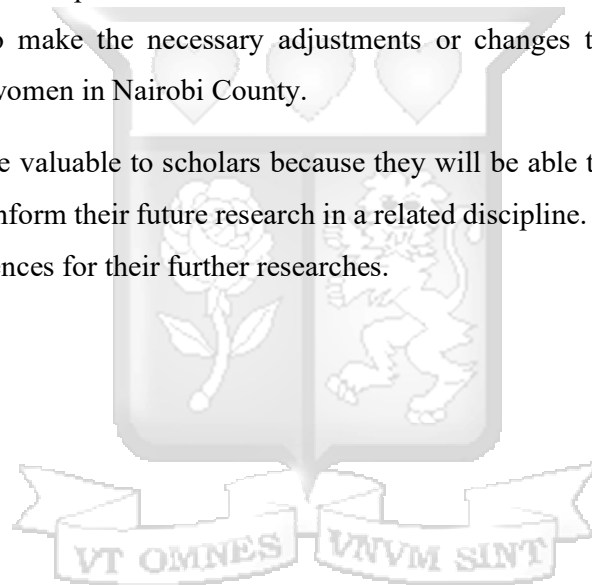
on the indebtedness status: case of businesswomen borrowers in Nairobi County. The study covered the period of November 2022 to March 2023.

1.7: Significance of the Study

The study will contribute significantly to the body of knowledge by bridging the gap of over indebtedness and proposing ways of managing lending services for business profitability. It will also encourage policy makers (government) to reinforce policy framework that will enable borrowers to build resilience against high leverage tackling over-indebtedness and related shocks using a multipronged approach.

It will also be of benefit to the practitioners (MFI managers). The MFI managers especially in the finance and credit departments will be able to borrow a leaf from this study's recommendation(s) to make the necessary adjustments or changes to reduce the level of indebtedness among women in Nairobi County.

This study will also be valuable to scholars because they will be able to use the findings and recommendations to inform their future research in a related discipline. This study will simply act as a point of references for their further researches.



CHAPTER TWO: LITERATURE REVIEW

2.1: Introduction

This chapter discussed the relevant theories related to this study. It also looked at the empirical studies as aligned to the specific objectives give a summary and research gap, diagrammatically illustrate the relationship between the independent and the dependent variables using the conceptual framework as adopted in the study and finally operationalise the study variables.

2.2: Theoretical Framework

Studies on indebtedness have identified two theories that was used to explain the microfinance services consumer behaviour in regards to borrowing habits; the life cycle theory (Andreou, 2011; Lawrence, 2018; Hayta, 2013) and the learning theory (Cressy, 1995; Wamalwa, 2016; Velusamy, 2017).

2.2.1: The Life Cycle Theory

The theory was developed by Franco Modigliani and his student Richard Brumberg in the early 1950s. The life cycle theory presumes that, borrowing at a given point is informed by the prospect of receiving some income in the near future (Andreou, 2011). Accordingly, the level of household borrowing activities in the past two decades has been on the rise especially in the developing countries. According to Hayta (2013), life cycle theory defines all the stages a family or a household goes through as a social unit which affects their livelihood both as individual and as whole unit. The contribution of each member of the family cannot be ignored since, it affects the welfare of family unit socially and most importantly the economic aspect through decisions such as investment, borrowing, saving and spending by each household member (Andreou, 2011).

From the psychologists and sociologist's perspective, life cycle theory is viewed as satisfaction of an individual consumption level and is not dependent on absolute income level but rather on the relative magnitude of the society at large (Tisdell & Ahmad, 2018). Since households make comparisons of their consumption pattern to those of their social group, a status change in income distribution ends up in aggregate consumption pattern changes among households. The competition among social groups can lead to borrowing irresponsibly especially for the poor households while trying to keep up with their social group status (Hayta, 2013; Hermes & Lensink, 2011). Therefore, the poor households tend

to borrow more in order to maintain the consumption level of their social group, this may lead to indebtedness cycle (Bylander et al., 2019) due to their irrational behavior of keeping up with their social group. This is referred to as 'Veblen effect' – which mean 'keeping up with the peer' (Kosicki, 1987).

Considerably in developing countries, life cycle theory attempts to explain how the borrowers get trapped in debts as they easily access micro credits services without collateral limitations from micro financial institutions (Islam, 2014). The microfinance institutions just like any other financial institutions has come up with strategies that enables the consumers to meet their present consumption needs with the prospect of the future income flows (Andreou, 2011).

Through micro credits and other lending packages available, micro financial institutions has enticed the majority unbankable population who constitute the borrower customers (Brau & Woller, 2004) and as they meet their current consumption need, they encourage them to repay little by little over a certain duration. Since they do not take time to figure out the costs related and evaluate the value of their borrowed money, they just start working on repaying the loan as soon as they receive the expected income. In that case the future need that was to be met by the future expected income still remains, and as the consumption need is there, they borrow and the life cycle of borrowing behaviour continues (Hayta, 2013). This can go on and on as long as there is no unforeseen interruption that delay or divert the future income.

The absence of income to spend and save for the future creates a pattern of borrowing behaviour among the poor households while the spending and saving attitude is dictated by their relative income hence a household's consumption depends on their percentile position in the income distribution curve (Cressy, 1995). There are various factors that affect the demand for borrowing such as expected income, age of the borrower, number of the children in the household, income generating activity and the ability to access loans (Bob et al., 2018). The presence of this factors affects the borrower encouraging more borrowing, leading to indebtedness as they show the extent of household participation in various micro credit services as they compare with their peers.

On the happening of the eventuality, the default risks are very high especially depending on the loan size as stated by (Lawrence, 1995), soon the borrower realises they are deeply trapped in a cycle of debts at the expense of current consumption needs yet the financial

institution has been profiting from the borrowers' misperception of their available credit services. The borrowers' consumption behaviour end up being trapped in financial cycle with the lending institutions hence impacting their economic and social growth negatively over time (Hermes & Lensink, 2011).

Despite its use in this study, the theory has certain weaknesses. For example, it assumes that human beings are forward planners and rational. However, behavioural economics indicate that many individuals may possess motivations to avoid initiating plans. This could be because they may be lacking the required self-control to desist from spending now in order to save more for future businesses or activities. Basically, life-cycle theory can be better applied among individuals having high incomes; financially stable as opposed to women borrowers of MFIs.

The theory has been used in this study to cover for the dependent variable; indebtedness among women borrowers. Thus, the need for another theory that specifically deal with borrowers' related factors (debt literacy, lack of financial planning knowledge, and self-control) that leads to over-indebtedness hence the need for Learning theory.

2.2.2: The Learning Theory

The theory was proposed by Jean Piaget, David Ausubel, and Jerome Brunner in 1978. The learning theory is applicable where a knowledgeable borrower makes informed decision and select the best product offering from the lender (Wamalwa, 2016). As the saying 'experience is the best teacher' a borrower who has gone through a positive or negative experience with the lenders will always be careful in the course of action they take in the future concerning borrowing. Cressy (1995), state clearly that lenders past experience can determine their risk handling ability, which enables them to avoid future loans for the fear of defaulting. According to Ahmed (2012), this kind of people limit their economic growth through external financing by trying to meet their consumption needs through savings which might not be sufficient.

Debt literacy is important to the borrower whose behaviour is notably associated with consequences in the learning theory through knowledge obtained from the available debt information (Ramanujam & Vidya, 2017). As informed by the theory, lending decisions of the microfinance services should be done through asymmetrical information between the borrower and the lenders (Tisdell & Ahmad, 2018). Lending decision should not simply be based upon the borrower's ability to access and demand for credit services or the financial institutions desire to meet their profit targets. Learning theory dictates consumption

patterns in relation to the income levels, by elucidating how changes in income distribution creates change in aggregate consumption pattern among the households (Andreou, 2011). Owing to the fact that future is uncertain, households learn and adjust to spending less when they are in position to generate income from various sources in order to secure their life time expenditure more so for precautionary savings especially during retirement (Andreou, 2011).

The worst scenario is that the poor households have nothing to spend or to spare for the future. They lack the capacity to start any income generating activities due to lack of initial financial capital, their access to any formal financial support is limited due to the collateral requirements by the formal institutions (Bylander et al., 2019). There should be available credit repayment analysis as a results of investigations done on potential clients (Ipek & Esener, 2015).

The learning theory is therefore vital in this study of determining the indebtedness status, since the borrower and lender are on a learning curve with each other. The borrowers knowledge of credit terms for the given loan and credit market in the microfinance institutions will enable them to make informed decisions that impact their economic welfare (Hermes & Lensink, 2011).

However, the theory is not void of criticisms. For example, it explains complicated behaviours through acknowledgment of cognitive factors that borrower makes informed decision and select the best product offering from the lender. But it fails to account for how human develop a broad range of behaviours from the feelings and thoughts. Basically, the theory fails to pay adequate attention on cognitive factors.

2.3: Empirical Review

This section reviewed the relevant literature aligned to the borrower and microfinance factors that lead to indebtedness and align those factors to specific objectives. This section specifically looked at the relevant studies relating to the identified research objectives. The empirical reviews are aligned to the global, regional, and local aspects.

2.3.1: Indebtedness Status among Women Borrowers of MFIs

A study done by Puliya Kot (2020) studied the determinants of borrower's over-indebtedness: A case of MFIs in India. The study found that, about 57 per cent of the households were over-indebted. Specifically, the binomial logistic regression indicated that

factors such as, economic shocks, low income in households, and multiple credit borrowing enhanced the likelihood of over-indebtedness by households. There was a positive relationship between low income in households, multiple borrowing, and over-indebtedness. However, the study was done in a developed economy hence the findings cannot be used to determine the current situation in Kenya thus the call for this study. In agreement with the above study's results, Carlsson, Hauff and Nilsson (2020) investigated the determinants of over-indebtedness in young adults in Sweden. The study found that, overconfident increased borrowing thereby leading to over-indebtedness. Further, borrowing policies and low-income levels were also found to positively determine the level of indebtedness among the young people in the rural Sweden. Despite the fact that the study added value to this research, it used qualitative data collection methods that cannot indicate the level of effect of overconfident, borrowing policies and low-income levels on the dependent variable hence a research gap. This study strived to bridge this gap by using descriptive statistics and logistic regression together with various diagnostics that measured the reliability of the model.

In a different study, Bienvenu and Kweyu (2021) investigated the borrowers' over-indebtedness drivers among MFIs in Bukavu, DRC. Questionnaire was used to collect primary data. The study analysed data through multivariate and univariate analysis such as, descriptive statistics, correlations, and logistic regressions. It was established that, all the variables had a positive significant relationship with over-indebtedness. However, activities' diversifications, borrowers' income, financial literacy, and number of assets depicted a negative significant relationship with over-indebtedness. The gap identified in this past study is that it was conducted in the DRC, a country that has a different geographical scope. This means that the findings cannot be used to infer the local situation hence the need for the study of this magnitude with a specific focus on Kenya. Another study by Kasoga and Tegambwage (2021) in Tanzania also agree with the above study (Bienvenu & Kweyu (2021). Kasoga and Tegambwage (2021) assessed over-indebtedness among MFIs' borrowers. The study established that, multiple borrowing, delinquency, and debt-to-income ratio showed a positive significant association with over-indebtedness among borrowers. Additionally, it found that, Tanzanian's over-indebted borrowers spent about 75% of their monthly earnings in servicing debts. Most of them were in state of delinquency and had more than one loan commitment. The study found a negative relationship between delinquency, debt-to-income ratio, and over-indebtedness. However,

the research used semi-structured questionnaire while the current study used a Likert scale structured questionnaire. The current study also used various diagnostic tests to ascertain the reliability of the regression model.

The study by Kasoga and Tegambwage (2021) is similar in methodology to one by Mpogole et al (2012) that analysed multiple borrowing incidences, multiple borrowing reasons, and multiple borrowing effects on loan repayment in Iringa municipality-Tanzania. The study found that, incidences multiple borrowing was very high at Iringa in Tanzania. Over 70% of the 250 MFIs' clients had more than one loans from various MFIs at same time. Further, 16% of the clients had also borrowed loans from individual lenders. The major reasons given for multiple borrowing were inadequacy of loans from MFIs, recycling of loans, and family roles. Over 70% clients had loan repayment problems due to multiple pending loans. Again, education level and number of clients' dependants significantly indicated the number of loan contracts. The study only used descriptive statistics as opposed to the current study that used it together with logistic regression. Those results varied from a study by Karungu (2020) in Kenya that found a positive relationship when she assessed the effect of mobile loans on the indebtedness level among micro-business owners in Nairobi County. The study established that, mobile loan factors such as behavioural factors, borrowing terms and conditions, and demographic factors had a positive relationship with the indebtedness levels. However, the study focussed on mobile loan borrowing but not MFIs' women borrowers thus the need for the present study that evaluated the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County

2.3.2: The Personal Traits Leading to Indebtedness among Women

In this section, relevant past studies were reviewed. For instance, a study by Zainuddin and Yasin (2020) across 70 countries. The study was titled "Are women better borrowers in microfinance? A global analysis". The study specifically targeted 350 MFIs in 70 countries. The study used exploratory research design. The study revealed that, a bigger population of female customers among the studied MFIs were related with fewer write-offs and provisions and lower portfolio risks. Notably, the study found that, women borrowers were greatly associated with increased repayment of their loans than men. They found a positive relationship between lower portfolio risks and increased loan repayment. The study however captured a very wide scope of 70 countries hence drawing inferences based on

this previous study's finding and recommendations may be difficult hence the necessity for the current study. These results are in line with a study by Sahani, Bansal, Sahani, Khatiwada and Bhattarai (2018) that researched on the over-indebtedness level in Nepalese MFIs and revealed that, borrower personal factors such as, over-borrowing, multiple borrowing, family responsibilities, recycling of loans, and simple or relaxed procedures for loan access were major determinants of over-indebtedness. Using correlation analysis, it was found that, over-borrowing, multiple borrowing, family responsibilities, and recycling of loans had positive relationship with indebtedness. The research was limited to MFIs borrowers in Nepalese while this study is limited to MFIs women borrowers in Kenya.

Similar to Sahani et al.'s (2018) study, Lusardi and Tufano (2015) studied the debt literacy, financial experiences, and over-indebtedness in America using correlation analysis. They used quantitative research design and the target population was MFI, banks, and association clients. The study found that experiences with conventional borrowing, alternative borrowing, and investment were referred to as financial experiences. It also found that only around one-third of the populace understands the fundamentals of interest compounding, indicating a low level of debt literacy. The study discovered a correlation among debt literacy and both financial experience and debt loads, even after adjusting for demographics. Lower debt literacy causes people to behave in high-cost ways, paying more fees and employing high-cost borrowing. It was also revealed that, people with less expertise also claim that their debt levels are too high or that they are not able to assess their debt situation. The study only gathered information from financial institutions' clients in America hence the need for a local study to bridge the methodological gap.

However, the results vary with a study by Schicks (2014) who empirically analysed the factors related to the borrowers' over-indebtedness among MFIs in Ghana. The research used an explanatory research design. The exploratory design used both quantitative and qualitative data sets. The target population was 134 MFIs having about 3277 borrowers. Both cross tabulation and descriptive statistics were used during analysis. The study found out that, the male borrowers were highly likely to be over-indebted than female borrowers. It was again revealed that, returns on investment (ROI), adverse economic shocks, and use of loans on non-productive activities had positive relationship with indebtedness. The research nevertheless focused on both women and men borrowers in Ghana while the current research focused on business women borrowers among MFIs in Kenya.

Just like Schicks (2014), Mjuza and Ntsalaze (2019) also found a positive relationship by investigating over-indebtedness of MFIs borrowers in South Africa. The study employed binary logistic regression model. The study used cross-sectional research design. Data was collected using questionnaire from the 2015 FinScope survey and analysed using regression analysis. The study found that, demographic factors such as age of the respondents determined their indebtedness levels while those above 60 years were also found to be over-indebted. Again, the borrowers' education level was found to have significant positive relationship with over-indebtedness among borrowers in South Africa. Lastly, it also revealed that at least 13.05% of MFIs-borrowers were over-indebted in the country. This study therefore used logistic regression model together with diagnostic test to bridge the methodological gap.

In congruence to Mjuza and Ntsalaze (2019), Boateng, Amoah and Anaglo (2015) used regression analysis to investigate how demographic factors influenced indebtedness among MFIs farmers' borrowers from Eastern part of the country. The research indicated that, borrowers' gender, variation in age categories had a strong positive relationship with indebtedness. Further, borrowers with little formal education depicted very high defaulting rates. However, the research used Chi square test while this study used a mixed research design together with logit regression model. Similar to the above study, research by Abdifatah (2019) assessed the factors influencing women participation and subsequent payment of loans from MFIs in Garissa town. The research found that, there are several cultural factors such as, social networking, family size, marriage style, level of education, religious and political affiliations affected the women MFIs participation and subsequent failure to repay debts. Further, debt literacy and monthly expenses were found to have a positive relationship with loan repayment by increasing the indebtedness levels. These have been found to also increase the level of indebtedness among women. However, the study specifically focussed on participation and indebtedness whereas the current study only focussed on the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County.

2.3.3: MFIs Lending Factors and Indebtedness Status of Women

In this subsection, several studies were reviewed and research gaps identified. For example, Fatollahi and Samani (2015) assessed the factors contributing to indebtedness behaviour of customers of MFIs loans at Agricultural Bank of Meshkinshahr, India. The study used logistic regression analysis. The findings indicate that borrowing frequency, credit

supervision, amount of credit received (size of credit), and less supervision by loan officers had statistical significant relationship with indebtedness. However, the study did not specifically dwell on institutional factors hence drawing inferences using the findings could be difficult thus the need for the current research to use measures such as market forces, credit terms, and collateral requirement to determine how they affected indebtedness. The findings are in line with a study by Murthy and Mariadas (2017) that assessed the factors contributing to over-indebtedness among borrowers in MFIs in Malaysia. The design adopted was exploratory research design. The study indicates that there was a positive significant association between the nature of business and this ability to pay back. Further, the schedule for repayment and terms of payment as indicated by the lenders also affected loan repayment thus increasing indebtedness. However, the research was limited to MFIs borrowers from Malaysia, a developed economy whereas the current study specifically focussed on women borrowers among MFIs in Kenya.

Additionally, another study by Liv (2013) also found a positive relationship among over-indebtedness variables. The study investigated the drivers of over-indebtedness of microfinance borrowers in Cambodia. The study found the strongest positive association between having trouble repaying loans and several loans. This indicates that borrowers who have numerous debts are more likely to face repayment difficulties. Multiple loans and facing difficulties repaying them were strongly statistically associated. Borrowers with limited financial knowledge were more likely to struggle with repayment, which is highly correlated with financial literacy. This implies that a borrower's likelihood of struggling decreases as their level of education rises. But it is crucial to note that almost all of the surveyed micro-borrowers had low levels of education, so this conclusion is probably skewed by the small sample of debtors with higher levels of education.

Another research that was done by Asonjo and Idama (2014) in Nigeria that investigated the causes of loan default in Standard MFI Bank Limited, Yola, Nigeria contradicts a study by Liv (2013) since it found no relationship among the variables. The study used descriptive research design. The inferential statistics was also used and found no relationship among the variables. The study showed that, the loan default effects included borrower dropouts, non-supervision by MFIs, failure to non-remind customers on repayment, multiple, absence of penalties, inadequate job experience by some staff and the staff's lack of complete compliance to lending policies. These same factors were identified by Carlsson Hauff, and Nilsson (2020) as some of the key institutional factors leading to increased indebtedness

among borrowers who get serviced by MFIs. The study was nonetheless done in Nigeria hence the need for a local study with specific focus on level of indebtedness among women.

As opposed to the above research by Asonjo and Idama (2014), a study by Muthama and Warui (2021) found a strong positive connection among the variables. They studied the influence of lending terms on loan repayment by borrowers of Kenya women microfinance bank. The study thus used a census study to study all the 14 staff working at Kenya women microfinance bank in the area. Data was analysed using correlation and descriptive statistics. It was found out that there existed a positive direct association between loan standards offered by the bank and loan repayment and subsequent performance of the bank. It was also revealed that there was a positive significant relationship between the period for credit period repayment and loan performance of the bank. Again, lack of regular follow-ups by bank loaning staff was also found to negatively affect loan repayment and subsequently the performance of the bank. This study only relied on information from all the clients of women trust bank within Kisii while the current study got information from all MFIs within Nairobi County.

In another study, Wamalwa (2016) used regression to examine factors determining loan repayment by borrowers from MFIs in Nakuru County while the previous study, Muthama and Warui (2021) only used correlation analysis. The study used mixed research design. The collected data was subsequently analysed by use of linear multiple regressions. The study results indicated that, loan terms including duration for repayments, interest rates, and grace period had negative effect on the ability by the borrowers to repay. The study was however on MFIs-borrowers in Nakuru County while the present research looked at the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County. Similar to this study, Muthoni (2016) also investigated business and borrower's factors leading to microcredit default in Kenya. Both descriptive and inferential statistics were used. The study found out that business characteristics such as age of the business, rules governing borrowing, poor technology to trace borrowers, high interest rate, and high collaterals led to default in loan repayment. Despite that the study was helpful in identifying research gaps it failed to identify real institutional factors that could lead to high indebtedness among women in Kenya. The current study bridged the gap by assessing the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County.

2.3.4: Moderating Effect of Inflation on the Relationship between MFI Lending Factors and Indebtedness Status

A study by Puliyakot and Pradhan (2017) investigated the determinants of over-indebtedness among borrowers of MFIs in Pakistan. Specifically, the study focussed on external related factors that included inflation rate, exchange rates, and adverse economic shocks both nationally and globally. Data was analysed using Structural equation modelling (SEM). Regarding external factors, the study established that, inflation rate and economic shocks had moderated over-indebtedness. This means that the external factors increased the level of indebtedness among borrowers. Nevertheless, the study used SEM that has a weakness in determining the relationship between variables hence this study used logit regression to bridge the knowledge gap. Unlike the previous study, Priyankara and Sumanasiri (2019) studied the factors determining MFIs loan default among indebted borrowers in Sri Lanka and analysed data using factor analysis (FA). The study established that the actions taken by government such as interest rate capping by central bank, increased taxations, and other macro-economic issues such as the rate of inflation and money supply increased defaulting rate thereby moderating the level of indebtedness. This study was done in Sri Lanka, a country with developed and advanced financial system. This means that, the results may not be used to generalize the Kenyan situation thus the significance of the current study.

Differing from the previous study that used FA, Nawai and Shariff (2012) examined the factors that influences the repayment performance in MFIs programs within the context of Malaysia using multinomial logit regression analysis. The findings indicate that distance covered to access lender offices for formal repayment, the formality of the businesses, sales per month, credit monitoring, and credit disbursement had significant relationship with borrower's ability to repay. However, the research was done within Malaysian MFIs whereas the current research looked at the Kenyan MFIs. Further, a study by Pytkowska and Spannuth (2012) departed from the previous study that used multinomial logit regression analysis. Specifically, Pytkowska and Spannuth (2012) studied indebtedness of microcredit borrowers in Kosovo and analysed data using thematic and descriptive statistics. It was revealed that, the level of indebtedness was influenced by exchange rates, adverse economic shocks, recession, and interest rate indicated by the Central bank. Whereas, inflation rate was found to have not moderated the relationship between indebtedness and borrowers repayment. The research focused on MFIs in Kosovo and

respondents included both men and women thus determining the level of women indebtedness was difficult. This calls for a locally generated study that aspired to bridge the contextual gap by assessing the MFI factors influencing indebtedness status: a case of businesswomen borrowers in Nairobi County.

Similar to the previous study, Gutiérrez-Nieto, Serrano-Cinca, and de la Cuesta†González (2017) studied the major cases of over-indebtedness across six countries in Europe but used cross tabulation and content analysis. The study found that structural changes in capitalist economies such as the consumer credit markets liberalization and economic crisis increased the level of indebtedness. Further, increase in the costs of national debts, reduced incomes together with increase in the overall cost of living were also identified to increase over-indebtedness. However, the study was based on the national level indebtedness while the current study focused on evaluating the MFI factors influencing indebtedness status: a case of businesswomen borrowers in Nairobi County. The study also failed to test the moderating role of inflations hence a research gap. However, in Tanzania, Makorere (2014) used inferential and descriptive analysis to evaluate the factors that affects the repayment of loans behaviour in Tanzania. The study found out that, interest rate, profitability of the lending institutions, moral hazards, electricity rationing by the government, and economic instability had a significant relationship with the repayment of loans and this increased the level of indebtedness among the borrowers. The research was, however, limited to borrowers in Morogoro and Dar es Salaam and also did not use inflation rate as a moderating variable hence the need for the current study. Again, the study did not specifically focus on evaluating the MFI factors influencing indebtedness status: a case of businesswomen borrowers in Nairobi County.

Contrary to the previous study, the work of Naliaka (2015) assessed the factors influencing access to Women Enterprise Fund in Eldoret town. The study used descriptive study design. This implies both questionnaire and interview guide were used. The target population was 451 women borrowers from Eldoret town. The sample size obtained was 149 respondents. The study found that high interest rate, inflation rate low money supply, and economic shocks are key contributor to access to credits. Inflation rate was however used as an independent variable while this study used it to moderate the relationship between independent and dependent variable. In support, a study by Kiseu (2017) found that economic shocks, high interest and exchange rates, inflation rate as well as money supply increased the indebtedness levels. Despite that, the study used access of credit as

independent variable the fact that it narrowed its findings to inflation rate, low money supply, and economic shocks that have been found to contribute to over-indebtedness makes it relevant to the current study.

The presented studies have highlighted numerous macro-economic variables. These includes but not limited to high interest rate, low money supply, inflation rate, increased taxations, economic recessions, profitability of the lending institutions, economic shocks among others. The numerous variables have been found to have either positive or negative significant relationship with indebtedness. However, the current study used inflation rate as moderating variable (Pytkowska & Spannuth, 2012; Oke et al., 2007).

2.4: Summary of Literature and Research Gaps

In this section, the above empirical studies were summarized. This summary helped in identifying research gaps thereby informing the current research measures to consider to bridge the gaps. The literature summary and gaps are shown in Table 2.1.

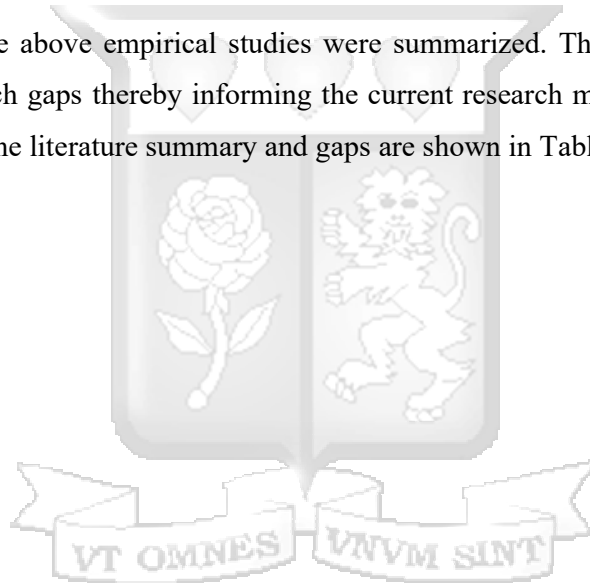


Table 2.1: Research Gaps Study Summary

Author	Study	Country	Methodology	Findings	Gaps	Actions
Carlsson, Hauff and Nilsson (2020)	Determinants of over-indebtedness in young adults	Sweden	The study utilized qualitative research design and the target population was 1204 young adults based in rural areas	It found that borrowing policies and low-income levels were also found to determine the level of indebtedness among the young people in the rural Sweden.	It used qualitative data collection methods that cannot indicate the level of effect of overconfident, borrowing policies and low-income levels on the dependent variable hence a research gap	This study strived to bridge this gap by using descriptive statistics and logit regression together with various diagnostics that measured the reliability of the model.
Kasoga and Tegambwage (2021)	Assessed over-indebtedness among MFIs' borrowers	Tanzania,	The study used a descriptive survey design. The target population was 535 micro-borrowers. Data was gathered using semi-structured questionnaire.	The study established that, multiple borrowing, delinquency, and debt-to-income ratio showed a positive significant association with over-indebtedness among borrowers.	However, the research used semi-structured questionnaire while the current study will use a Likert scale structured questionnaire.	The current study also used various diagnostic tests to ascertain the reliability of the regression model

Table 2.1A: Research Gaps Study Summary (Continuation of Table 2.1)

Sahani, Bansal, Sahani, Khatiwada and Bhattarai (2018)	Over-indebtedness level in Nepalese MFIs	Nepal	The study used descriptive research design. The sample size was 150 consumers using MFIs products. The study used both interview guide and questionnaire.	The study revealed that, over-borrowing, multiple borrowing, family responsibilities, recycling of loans, and simple procedures for loan access were major determinants of over-indebtedness	The research was limited to MFIs borrowers in Nepalese.	This study focused on MFIs women borrowers in Kenya
Mjuza and Ntsalaze (2019)	Over-indebtedness of MFIs borrowers in South Africa	South Africa	The study employed binary logistic regression model. The study used cross-sectional research design. Data was collected using questionnaire	The study found that, demographic factors such as age of the respondents determined their indebtedness levels. Again, the borrowers' education levels were found to have significant relationship with over-indebtedness among borrowers in South Africa.	The study used binary logistic regression model that has a limitation in explaining the relationship between independent and dependent variables.	This study therefore used logistic regression model to bridge the methodological gap.
Fatollahi and Samani (2015),	The factors contributing to indebtedness behaviour of customers of MFIs loans at Agricultural Bank of Meshkinshahr	India	The research used a descriptive research design. Data was gathered from 150 farmers. The study used logistic regression analysis	The findings indicate that borrowing frequency, credit supervision, amount of credit received, and less supervision by loan officers had statistical significant relationship with indebtedness	However, the study did not specifically dwell on institutional factors	This study bridged the gap by using measures such as market forces, inflation rate, credit terms, and collateral requirements

Table 2.1B: Research Gaps Study Summary (Continuation of Table 2.1)

Muthoni (2016)	Investigated business and borrower's factors leading to microcredit default	Kenya The study adopted qualitative and quantitative research design. Then targeted population was 294 from MFIs and 76 also FIs. The research analyzed data using quantitative methods through SPSS version 21. Both descriptive and inferential statistics were used.	The study found out that business characteristics such as age of the business, rules governing borrowing, poor technology to trace borrowers, high interest rate, and high collaterals led to default in loan repayment	Despite that, the study was helpful in identifying research gaps it failed to identified real institutional factors that could lead to high indebtedness among women in Kenya.	Evaluating the MFI factors influencing indebtedness status moderated by inflation rate: case of businesswomen borrowers in Nairobi County. The study also used inflation rate as moderating variable	
Puliyakot and Pradhan (2017)	Investigated the determinants of over-indebtedness among borrowers of MFIs	Pakistan.	The study used quantitative research design. The target population was 543 borrowers. Data was analysed using Structural equation modelling (SEM).	The study found that the level of over-indebtedness among borrowers in MFIs in the country was widespread. Regarding external factors, the study established that, inflation rate and economic shocks exerted extremely stronger effects on over-indebtedness	Nevertheless, the study used SEM that has a weakness in determining the relationship between variables hence this study	The study used logit regression to bridge the knowledge gap

Table 2.1C: Research Gaps Study Summary (Continuation of Table 2.1)

Pytkowska and Spannuth (2012)	The indebtedness of microcredit borrowers in Kosovo	Kosovo	The study was done between 2010 and 2011. The sample size was 1,200 borrowers from four leading MFIs and three commercial banks	It was revealed that, the level of indebtedness was influenced by exchange rates, adverse economic shocks, recession, inflation rate and interest rate indicated by the Central bank.	The research focused on MFIs in Kosovo and respondents included both men and women thus determining the level of women indebtedness is difficult	This called for a locally generated study that aspired to bridge the contextual gap by assessing the MFI factors influencing indebtedness status moderated by inflation rate: case of businesswomen borrowers in Nairobi County
Liv (2013)	Drivers of over-indebtedness of microfinance borrowers in Cambodia: An In-depth investigation of saturated areas	Cambodia	The study used qualitative research design. The primary data was analyzed using factor analysis.	The study found the strongest positive association between having trouble repaying loans and several loans. This indicates that borrowers who have numerous debts are more likely to face repayment difficulties. Multiple loans and facing difficulties repaying them are strongly statistically associated. Borrowers with limited financial knowledge are more likely to struggle with repayment, which is highly correlated with financial literacy. Additionally, statistically, this aspect is quite important.	It is crucial to note that almost all of the surveyed micro-borrowers had low levels of education, so this conclusion is probably skewed by the small sample of debtors with higher levels of education.	This study bridged the gap by targeting all MFIs in Nairobi county totaling to 19. The entire women borrowers among these MFIs were also studied to capture a higher sample size

2.5: Conceptual framework

The conceptual framework shows the interrelationship between the study variables. The variables in this included independent, dependent, control, and moderating variables. The conceptual relationship is shown in Figure 2.1.

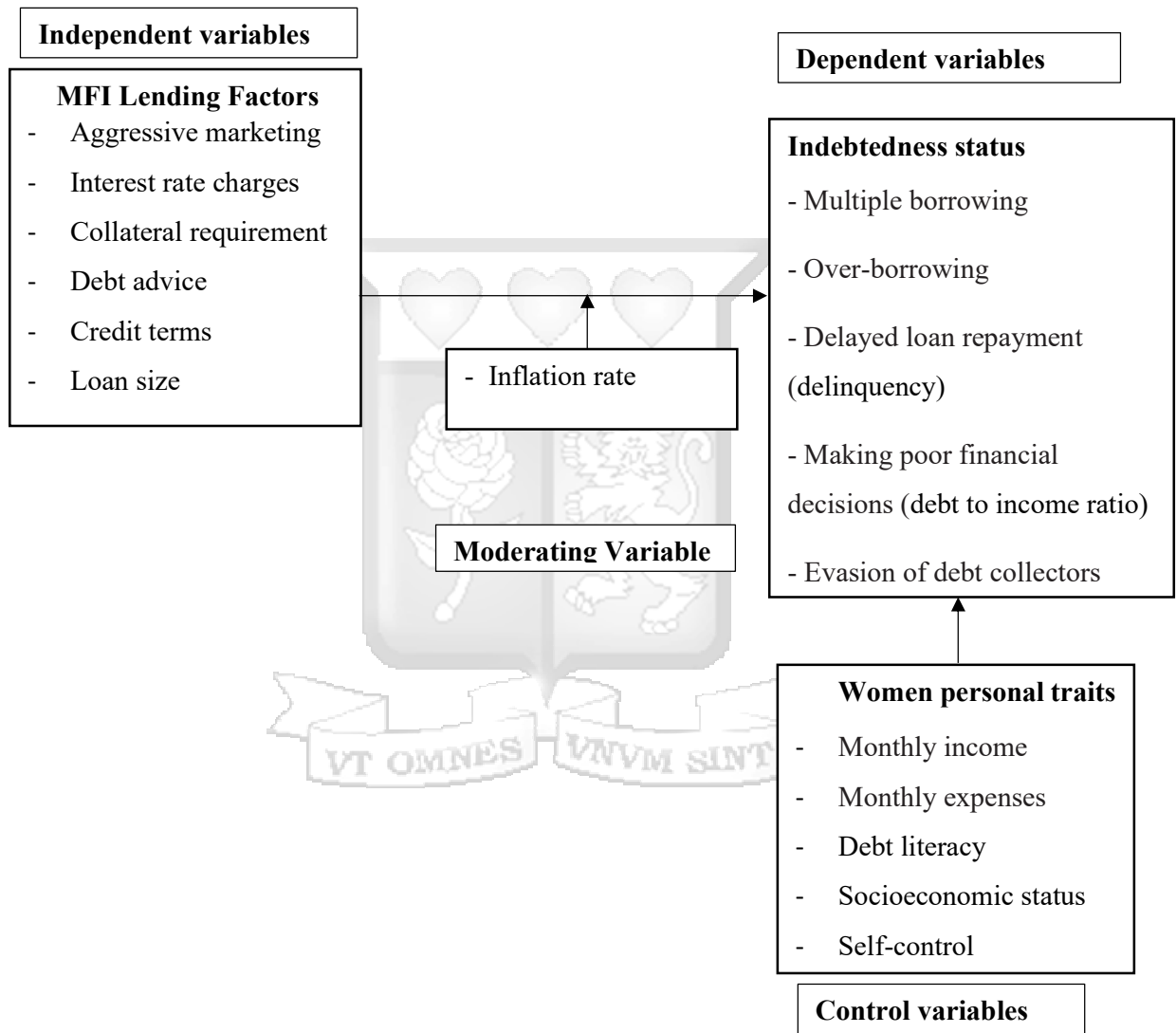


Figure 2.1: Conceptual Framework

2.5.1: Operationalisation of the Study's Variables

In the conceptual framework, the independent variable is lenders or MFIs factors, control variable is women personal factors while the moderating variable was the inflation rate. The dependent variable is over indebtedness.

The women personal factors (control variable) was measured using monthly income, monthly expenses, debt literacy, socioeconomic status, self-control. Studies by Oke et al. (2007) used lack of knowledge and socioeconomic constraints while Schicks (2013) used monthly income, monthly expenses, while Bylander et al., (2019) used debt literacy as borrowers' factors. Additionally, Lusardi and Tufano (2015) used debt literacy to measure borrower factors.

The MFI lending factors (independent variable) was measured using aggressive marketing, interest rate charges, collateral requirement, debt advice, credit size, and credit terms. A study by Banerjee (2015) also applied MFIs charges on interest, credit term and conditions as lender based institutional factors. Meanwhile, a research study by Khalily and Faridi (2011) employed rigid collateral requirement and high interest fee as measures of institutional factors.

Regarding the dependent variable, the study utilized multiple borrowing, over-borrowing, making bad financial decisions, evasion of debt collectors, and delayed loan repayment as measures of over-indebtedness. In support, a study by Khalily and Faridi (2011) used multiple borrowing and household expenses as measures of over-indebtedness. Meanwhile, Oke et al. (2007) made use of economic shocks, business losses, and poor financial knowledge as the factors influencing indebtedness. Further, Mpogole et al.(2012) used aggressive marketing as an institutional factor.

Regarding the moderating variable, the study used inflation rate that was measured using fluctuating cost of goods and services. A research by Pytkowska and Spannuth (2012) used inflation rate as external factors moderating the level of indebtedness.

Table 2.2: Operationalization of Variables for Structured Questionnaire (Quantitative Data)

Variable	Variable definition	Variable indicators	Measurement scale	Supporting literature	Supporting theory
Dependent variable					
Indebtedness status	Multiple borrowing. Over borrowing. Delinquency Debt evasion. Poor financial decisions.	Assessment of scale using multiple borrowing, losses in the financed business, making bad financial decisions, delinquency, evasion of debt collectors, defaulting, and unavoidable household expenses	5 point Likert scale	Khalily and Faridi (2011) and Oke et al. (2007)	Life cycle.
Independent variables					
Personal traits for women					
Monthly income and monthly expenses	Decreased income. Increased monthly expenses.	Low monthly income from business activities has affected my ability to repay loans, I am currently experiencing increased monthly expenses due to high cost of living.	5 point Likert scale	Schicks (2013)	Life cycle, and learning theory
Debt literacy	Adequate knowledge	My business has been performing below par due to inadequate financial management knowledge	5 point Likert scale	Lusardi & Tufano (2015)	Learning and life cycle

Table 2.2A: Operationalization of Variables for Questionnaire (Quantitative Data) (Continuation of Table 2.2)

Social economic status; -Education -Health -Income	Increased spending on basis needs	Increased family size has negatively affected my daily income, Increased education expenses on my children has had negative effect on my business	5 point Likert scale	Gangadhar & Malyadri(2015), Hermes & Lensink (2011)	Life cycle, and learning
Self-control	Financial indiscipline	Lack of self-control in financial usage has negatively affected the growth of my business	5 point Likert scale	Andreou (2011), Bob et al. (2018)	Life cycle
MFIs Lending factors					
Aggressive marketing	Customer portfolio	The number of clients in the portfolio increases indebtedness levels	5 point Likert scale	Mpogole et al. (2012), Andreou (2011), Liv (2013)	Learning theory and life cycle.
Interest rates charges	High interest rates	The interest fee charged by my lender is always high hence negatively affecting business returns	5 point Likert scale	Bob et al. (2018), Khalily and Faridi (2011)	Life cycle.
Collateral value	Stringent collateral terms	Tough collateral requirements exert pressure on clients prompting hurried business decisions making thus leading to failures	5 point Likert scale	Bob et al. (2018), Banerjee (2015)	Life cycle.
Loan size	Amount of loans offered	The level of indebtedness increases with the amount of loan serviced	5 point Likert scale	Bylander et al., (2019)	Life cycle.

Table 2.2B: Operationalization of Variables for Questionnaire (Quantitative Data) (Continuation of Table 2.2)

Debt advice	Sufficient MFI to customer advice	Little knowledge on debt management has had adverse effect on the expansion of my business	5 point Likert scale	Bylander et al., (2019)	Learning and life cycle.
Credit terms	Rigid credit terms	The terms and condition for borrowing MFIs loan is rigid and this slows down business growth hence affecting timely repayment	5 point Likert scale	Bob et al. (2018); Kasoga and Tegambwage (2021)	Life cycle and Learning theory
Moderating variable					
Inflation rate	Fluctuating cost of goods and services	The rise in cost of goods and services leads to indebtedness	5 point Likert scale	Pytkowska and Spannuth (2012); Muthama and Warui (2021)	Life cycle theory.

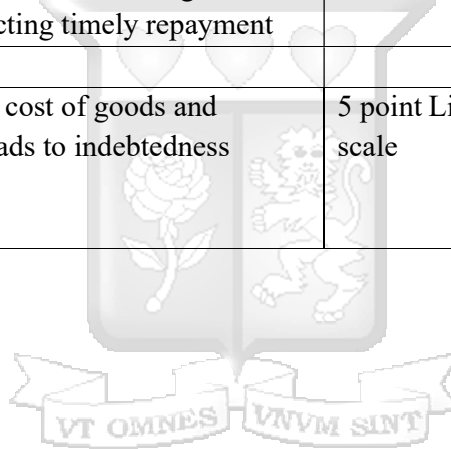


Table 2.3 Operationalization of Interview guide (Qualitative Data)

Variable	Variable definition	Measurement scale	Supporting literature	Supporting theory
Dependent variable				
Indebtedness status	<ul style="list-style-type: none"> • Evading debt collectors • Lacking financial knowledge 	Open ended questions	Carlsson Hauff and Nilsson (2020)	The Learning and Life Cycle Theory
Independent variables				
Personal traits for women				
	<ul style="list-style-type: none"> • Education • Financial knowledge 	Open ended questions	Guérin et al. (2018).	The Learning Theory
MFIs Lending factors				
	<ul style="list-style-type: none"> • Multiple borrowing • Collateral requirements • Trained credit staff • Debt advice 	Open ended questions	Gutiérrez-Nieto et al. (2017).	The Life Cycle Theory
Moderating variable				
Inflation rate	<ul style="list-style-type: none"> • Grace period during rise in inflation rates 	Open ended questions	Karungu (2020).	The Life Cycle Theory

CHAPTER THREE: RESEARCH METHODOLOGY

3.1: Introduction

This chapter detailed the methodology approach that was used in this research. It described the research design, target population, sample size, sampling techniques, data collection instruments, the research ethics, data analysis and presentation and research ethics.

3.2: Research philosophy

Research philosophy is the underlying fundamental belief about the way in which data about a phenomenon should be gathered, analysed and used in taking the research position (Creswell, 2014). Although the idea of knowledge creation may appear to be profound, the study engaged in knowledge creation using objectivism ontology.

Therefore, this study was based on pragmatism philosophy. The study was highly structured and used large samples which was collected using research tools such as questionnaire surveys and was measured quantitatively together with interview guide that was measured qualitatively, therefore, pragmatism is best suited for this study. The researcher applied the statistical techniques to analyse the data and test the hypothesis of the study. The study also used thematic analysis to present qualitative data. Therefore, pragmatism's philosophical application was used to make conclusions of the study. In support of use of this philosophy in this study, the work of Pytkowska and Spannuth (2012) embraced the use of pragmatic philosophical approach to analyse and present his findings

3.3: Research design

The study adopted a mixed research design. Mixed method was best suited for this study since it entailed evaluating the MFI factors influencing indebtedness status: case of businesswomen borrowers in Nairobi County. Using the mixed research design that consisted of both quantitative and qualitative data collection instruments, the researcher obtained data on the current status of indebtedness among women and establish its association with the variables in the study. The main data collection tool was structured questionnaire (quantitative data) and this was backed up by qualitative data that was collected using interview guide. The research is primarily a quantitative study. The study also triangulated results to find out whether there was consistency between questionnaire and interview guide findings. To create a complete picture of the topic under research, the

triangulation helped in integrating qualitative and quantitative methodologies. Muthama and Warui (2021) used mixed research design in their studies to find out the effect of MFI and borrowers' factors on the level of indebtedness. The researcher analysed the relationship between indebtedness status, personal traits, inflation rate, and MFIs lending factors in this study.

3.4: Population and Sampling

The target population of the study was the women borrowers and credit managers, operations managers, and debt collection managers of the MFIs under microfinance services in Nairobi. The microfinance institutions in Kenya serves all type of clients, that is urban, semi - urban, middle, lower income and the very poor known to be living below poverty line. According to Microfinance Institutions Data (2020), there are 622,886 active women borrowers and savers in the 19 registered MFIs. Out of this, only 407,455 are women who have borrowed loans. The study only focussed on women borrowers within Nairobi County. A sample of women borrowers was chosen using the probability sampling technique from the MFIs in Nairobi. All the registered MFIs were purposively selected because of their popularity and presences regarding the number of clients they serve in Nairobi. The researcher relied on probability sampling technique mainly to achieve representativeness, since the target population was widely spread over a great geographical distance (Teddlie & Yu, 2007). This criteria was used to randomly sample women borrowers using the microfinance services in the country. The study used the Yamane scientific formula (1967) to arrive at manageable sample size.

Therefore: $n = N/(1 + Ne^2)$

Where:

n = sample size

N = total population

e = margin of error (0.05)

The sample size therefore was computed as follows:

$$n = 407,455 / (1 + 407,455 \times 0.05^2)$$

Therefore, sample size = 399 women borrowers.

The study therefore distributed questionnaire to 399 women borrowers within Nairobi County. Only women borrowers (399) from the 19 microfinance institutions were selected. This means that in each of the 19 MFIs, 21 women were selected for the study (questionnaire filling exercise). Meanwhile, the qualitative data through interview guide was collected from one manager from each MFI. This gave a total of 19 respondents that were interviewed. The unit of analysis were all women borrowers within Nairobi County.

Table 3.1: Sample Breakdown

	Population	Total number of women clients (savers + borrowers)	Sample size	Sampling technique
Number of licensed MFIs in Kenya	19	622, 886	19	Census
Women borrowers only	407,455		399	Probability sampling technique
MFI managers	19		19	Purposive sampling technique
Total	407,493	622, 886	437	

Source: Microfinance Institutions Data 2020

3.5: Data Collection Methods

The study employed primary data collection method. The study used both questionnaire and unstructured interview guide. However, questionnaire was the main tool for data collection. The structured questionnaire was used to gather data from the women borrowers. The study used questionnaire because it helped in gathering large information from a big population within a short time. Sekaran (2003) argues that, questionnaires are used mostly to obtain measurable data on a population, as they address specific objectives, research questions or hypothesis of the study. The questionnaire was made of contingency questions for instance put a tick in the box next to the right response, matrix questions that uses Likert type scale that were closed ended questions structured to solicit responses. The formulated questionnaire was subdivided into five sections. The first section gathered personal information from the respondents. The second section entailed questions about the first specific objective; to assess the indebtedness status of women in Nairobi County. The third section had various statements on the effect of MFI lending factors on the indebtedness status. Meanwhile, the fourth section solicited information on the moderating effect of

inflation rate on indebtedness among women. The last section contained statements regarding the dependent variable; the indicators of indebtedness status of women borrowers.

Additionally, the study also conducted an interview guide. The interview guide helped in soliciting relevant information from the managers of the MFIs. Personal interviews were carried out with senior officials including credit managers, operations managers and debt collection managers to determine the microfinance services rendered to the poor women. One manager from each MFIs was interviewed because they interact with clients directly. The researcher organize meetings with the management where possible for more information and clarification. Managers were requested to respond to the written interview guide which was mailed to them.

According to Rubin (2004), after the minimum required sample size has been determined, it is vital to make provision for potential non-response rate in the calculated sample size by increasing the target audience by 10%to 40%. However, extra efforts should be made to reduce the relationship between the survey variable and the response propensity thus reducing the non-response biases. The researcher also ensured data collection instruments were precise and in simple English to reduce the chances of non-responses. Further, the data collection instruments were short to ensure that less than 10 minutes was taken in filling the data collection tools. Insignificant questions that may be hard to understand were avoided to ensure higher response rate was ascertained. Data was collected in the period that the MFIs were likely not to have many activities in the banking hall; preferably lunch hours.

The researcher tried to ensure that all questionnaires were distributed to all the sampled size respondents. Through such efforts, a higher response rate was guaranteed. The non-response participants thus presented negligible influence on the results due to the fact that the sample size was huge hence most respondents were responsive.

3.6: Data Analysis

After completing the data collection process, data was inspected for completeness and cleaned, then coded before analysis was done. Primary data collected was classified and sorted after cleaning and coding in consistency with (Liv, 2013). Descriptive statistics was

used to perform basic analysis on indebtedness status using the data obtained for specific variables. Descriptive methods such as frequencies and percentages were used.

The study also analysed qualitative responses using content analysis (Saunders et al., 2012). Through content analysis, the researcher determined the presence of certain themes such as qualitative questions under each objective. For example, qualitative questions/statements under first objective one, “to assess the indebtedness status of women in Nairobi County”, such as presence of instances of multiple borrowing by clients, and measures that could be initiated to reduce over-indebtedness status among women borrowers in Kenya among others were grouped under this this objective. Further, responses were italicized for ease of presentation and clarity purposes.

Quantitative data (main data collection tool) collected from the MFIs was analysed using the multivariate analysis. The researcher employed the multivariate analysis because the research study had one dependent variable which is presumed to be a function of two or more independent variables (Saunders et al., 2012). The researcher proceeded and made predictions about the dependent variables as was the objective of this study basing on its covariance with all the independent variables in the study. The calculated data was analysed using the statistical software SPSS version 24. Specifically, multivariate tests such as model summary, the ANOVA, and coefficients were used to determine over-indebtedness level among MFIs women borrowers. To address the three objectives of the study, the researcher used a regression equation of this form;

Binary logistic regression models:

$$\text{Log (Pdebt / 1 - Pdebt)} = \beta_0 + \beta_1\text{MFI_Factors} + \beta_2\text{Controls} + e \dots \dots \dots (1)$$

$$\text{Log (Pdebt / 1 - Pdebt)} = \beta_0 + \beta_1\text{MFI_Factors} + \beta_2\text{MFI_Factors} * Z + \beta_2\text{Controls} + e \dots \dots \dots (2)$$

Where:

Z = moderating variable of inflation rate

3.6.1: Diagnostic Tests

The regression models were tested to establish how well they fitted the data while significance of the independent variables was also tested using P-values and T-values. The normality, homoscedasticity, linearity, autocorrelation and multicollinearity was tested.

Normality: For linear regression analysis, the regression's residuals must have a homogeneous distribution. If the error components have an uneven distribution, confidence intervals may become overly narrow or broad (Schmidt & Finan, 2018). In order to develop a more precise model, it is necessary to closely examine some unanticipated statistics that are indicated by the presence of a non-normal distribution. The Shapiro Wilk test was used in the research to check for a normal data distribution and to evaluate data consistency.

Homoscedasticity: In order to determine whether or not the regression model is effective and reliable, the research tested for heteroscedasticity. The Breusch-Pagan-Goldfrey Test was thus employed in the research to evaluate the model's dependability. If the p-value for the variable in the Breusch-Pagan-Goldfrey test is less than 0.05, the model is not considered to be reliable (Đalić & Terzić, 2021). This indicates the existence of heteroscedasticity and necessitates another test.

Autocorrelation: For a linear regression study to work, there must be no autocorrelation in the data. The idea that errors are unrelated to one another is debunked by the phenomenon of autocorrelation, also known as serial correlation, which appears whenever errors show a pattern (King, 2018). Wooldridge (2002) provides an easy-to-use measure for serial correlation based on the OLS residuals of the first-differenced model. The sequence of autocorrelation varies. When subsequent errors are correlated, the most fundamental and common form of autocorrelation—first-order autocorrelation—occurs. Second-order autocorrelation occurs when error terms two intervals apart are linked, and so forth. It is believed that there are no first-order correlations.

Multicollinearity: The investigation looked for correlations between one or more independent factors. For instance, it is said that the model is unable to identify the independent variables that affect the dependent variable, when multicollinearity is present. Thus, the research used the Variance Inflation Factor (VIF) values to assess whether multicollinearity was present or not (Đalić & Terzić, 2021). The rule of thumb is that multicollinearity will be present for any variable with a VIF of more than 10.00. However, there is no multicollinearity when the VIFs of the factors are between 1.00 and 10.00, which is a sign that the model is reliable.

Research Quality

To uphold the research quality, a pilot study was done on the research instruments to ensure that the objective of the study was enhanced (Creswell, 2014). A number of participants

were randomly selected to conduct the pilot test. The respondents of the pilot study were excluded from the main research. The researcher and the supervisor went through the questionnaire before administering to remove erroneous questions that did not address the study objective in order to ensure high research quality. The MFIs managers and women borrowers were given a test, similar to one that was used in retest to check for reliability and was repeated to examine the consistency of the instruments.

The Cronbach's alpha was employed in testing the pilot samples and to assess if there were similar and related responses in order to assess the degree of consistency. Saunders et al (2012), state that the general acceptable Cronbach's rule is alpha (α) of 0.6 – 0.7 indicates an acceptable level of reliability, while 0.8 or greater a very good level. However, values higher than 0.95 are not necessarily good as they may be an indication of data redundancy which the researcher looked out for in this study. The researcher obtained an alpha coefficient of 0.85 which was acceptable for data collection.

3.6.2: Validity of Research Instruments

According to Creswell (2014) , validity refers to whether an instrument actually measures what it is supposed to measure, given the context in which it is applied. Following Liv (2013), Schicks (2013) and Nkamleu (2006) on the instruments used in their previous studies on indebtedness, which have been tested and utilized to make valid conclusion, this study opts to adopt the tested instruments. The completeness of the data was discussed with the MFIs staff members and women borrowers during test-retest stages.

Internal validity was established by ensuring that the study accurately demonstrates a causal relationship between variables (Sekaran, 2003). Therefore, the level of indebtedness was largely driven by the borrowers (debt literacy, monthly income, monthly expenses, social economic and self control) and aggressive marketing, inflation rate, collateral requirements and credit terms as the institutional factors while moderating variable included inflation rates.

External validity established the generalizability of the findings of the study. The sampling of this study ensured a representation of a large population in Kenya. Owing to over indebtedness faced by women borrowers across the globe (Hulme & Maitrot, 2014), the study made references to other studies carried out elsewhere and offers opportunity for inferences while addressing the potential risks of over indebtedness.

3.6.3: Reliability and objectivity of the research

Reliability is the measure of consistency in the result obtained from the research study (Sekaran, 2003). When research instrument has stability and consistency in measuring a study concept over a period of time, is said to be reliable. Accordingly, this study employed a questionnaire and interview guide for primary data collection and descriptive statistics for analysis which was a well thought out procedure and enhanced accuracy (Saunders et al., 2012).

The research ensured that the MFIs as the custodian of clients records availed any additional information through which the researcher assessed reliability of the data source (Saunders et al., 2012). The research instrument were subjected to a test and retested two or more times and the results were evaluated in two or more subsequent times and the outcome gave similar scores hence the instrument was reliable (Teddlie & Yu, 2007). The use of moderating variable also enhanced reliability of the study.

3.7: Ethical Considerations

The participants were meant to understand that the research was carried out for study purposes and were requested to give their consent either orally or in writing about their willingness to participate in the process. The researcher took precautions and held in confidence the respondents' identity, name, contacts and any other private information by not having them filled in the questionnaires.

Strathmore University authorized the researcher to carry out the study and facilitated research approval process by issuing the researcher with a letter that enabled the researcher to acquire the research permit from the National commission for Science Technology and Innovation (NACOSTI). Upon the study completion, the results are to be utilized and disseminated in the following ways. Firstly, the study results will be shared with the university librarian (both soft and hard copies) for future references by the university academic researchers including students. Secondly, the fully done thesis will be published to ensure wide access by various researchers not only in Kenya but globally. Thirdly, a copy of research work will be presented to AMFI- K by the researcher for their documentation and reference by their stakeholders (MFIs).

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1: Introduction

This chapter has presented the analysed data's results. It commences with presentation of results of response rate for the questionnaires distributed. This was followed by personal information for the respondents. The study also presented results for the descriptive statistics followed by diagnostic statistics results. The third section entails the presentation of results for the regression model.

4.2: Questionnaire Response Rate

The study distributed 399 questionnaire to women borrowers. Out of this 301 respondents fully filled and returned the questionnaire. This gave a percentage response rate of 75.44% which was satisfactory for data analysis. According to Mugenda and Mugenda (2006), a response rate of 50% is adequate for data analysis.

4.3: Personal Information

In this subsection, the results for participants' personal information including age, educational levels, duration with the MFIs and marital status were analysed. The results were thus presented as shown in the following sections.

4.3.1: Respondents' Distribution by Age

The research sought to find out the distribution of respondents by age category. The results were analysed and presented in Table 4.1.

Table 4.1: Respondents' Distribution by Age

Categories	Frequency	Percentage
18-23 Years	6	2.0
24-29 Years	16	5.3
30-35 Years	34	11.3
36-41 Years	54	17.9
42-47 Years	65	21.6
48-53 Years	78	25.9
Above 54 years	48	15.9
Total	301	100

In Table 4.1, majority of women borrowers fell in the age bracket of 48-53 years as represented by 25.9% (78). The second highest majority of women borrowers fell in the age bracket of 42-47 years as reported by 21.6% (65) of the respondents. Those who were in the age bracket of 36-41 years were represented by 17.9% (54). Further, women borrowers who were above 54 years were 15.9% (48) while those who fell in the age bracket of 30-35 years were represented by 11.3% (34). From the results, it is clear that most women borrowers were adult who were above 35 years. Young women below 35 years seemed to have stayed away from borrowing from MFIs.

4.2.2: Respondents’ Duration with MFI as Customers

Respondents were required to indicate their distribution by length of stay as customers with a specific MFI. The results are presented in Figure 4.1.

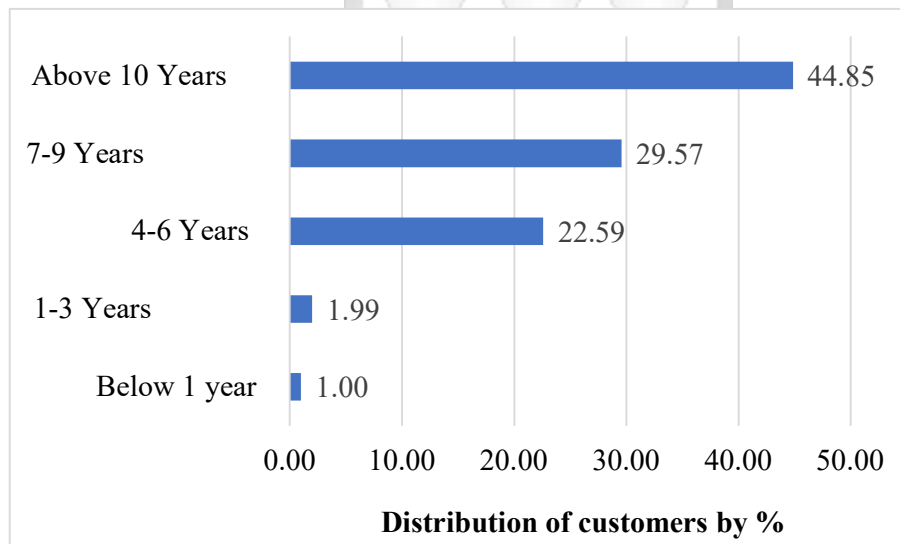


Figure 4.1: Respondents’ Distribution by Duration

The results presented in Figure 4.1 shows that, 44.85% of the women borrowers had been customers with their respective MFIs for over 10 years and this was the majority. This was subsequently followed by those women borrowers who had a duration of 7-9 years as supported by 29.57%. Further, women who had been borrowers for a duration of 4-6 years were 22.59%. Those with a duration of 1-3 and below one year were 1.99% and 1.00% respectively. From the results, it is clear that the MFIs preferred offering loans to women with longer duration and this could be because their repayment history are trusted by the financial providers.

4.3.3: Respondent's Highest Level of Education

The study purposed to find out the distribution of respondents by their highest level of education. The results are presented in Table 4.2.

Table 4.2: Respondent's Highest Level of Education

Categories	Frequency	Percent
No education	2	0.66
Primary	10	3.32
Secondary	31	10.30
College/tertiary	96	31.89
University (undergraduate)	89	29.57
University (Postgraduate)	73	24.25
Total	301	100

The results in Table 4.2 indicate that, most women borrowers had college or tertiary as their highest level of education as reported by 31.89% (96). Women borrowers with university, specifically, undergraduate degree was 29.57% (89) and this was followed by women borrowers with postgraduate degrees as indicated by 24.25% (73). Both women borrowers with secondary and primary level of education were 10.30% (31) and 3.32% (10), respectively. Based on these statistics, it can be said that women borrowers were well educated hence had good knowledge that could help them in running their respective businesses.

4.3.4: Marital Status of Women Borrowers

Regarding marital status, the women borrowers were asked to indicate whether they were married, single, divorced, or separated. The presented results are illustrated in Figure 4.2.

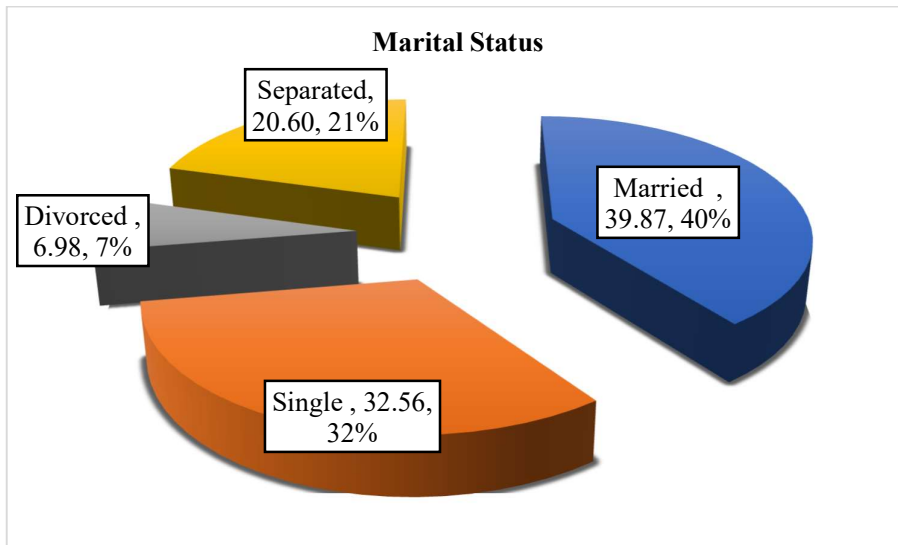


Figure 4.2: Marital Status of Women Borrowers

According to the results in Figure 4.2, 39.87% of the women borrowers were married while 32.56% were single. The results also show that, those women borrowers who were separated were 20.60% whereas those who were divorced were represented by 6.98%. From these results, it can be said that, most women borrowers had lots of responsibility at home because they were either separated, divorced, or single and this could have impact on their level of indebtedness.

4.4: Descriptive Statistics for Research Objectives

In this section, results for all the objectives are presented. Specifically, results for indebtedness status among women, the personal traits leading to indebtedness, the effect of MFI lending factors on the indebtedness status, and the moderating effect of inflation rates are presented.

4.4.1: Indebtedness Status of Women

In this section, results for various statements regarding the factors determining over-indebtedness were analysed and rated on a 5 point Likert scale; whereby 1 = very low indebtedness 2 = low indebtedness 3 = moderate indebtedness, 4 = high indebtedness while 5 = very high indebtedness. The findings are shown in Table 4.3.

Table 4.3: Indebtedness Status of Women

	Numbers	Mean	Standard deviation
Multiple borrowing	301	3.29	1.020
Increased household expenses	301	4.31	1.267
Loan default	301	3.52	0.900
Poor financial decision making	301	4.51	1.091
Delay in loan repayment	301	3.61	0.909
Evasion of debt collectors	301	4.15	1.483

According to the results in Table 4.3, it was revealed that, multiple borrowing led to a moderate indebtedness status as agreed by most respondents. Also, increased household expenses led to a very high indebtedness status among women as agreed by most respondents. Further, loan default was revealed to have led to a very high indebtedness status as reported by most respondents who agreed. Again, poor financial decision making by businesswomen led to a very high indebtedness status as agreed by most women. The study also found that, delay in loan repayment led to a very high indebtedness status among businesswomen borrowers as reported by most businesswomen who agreed. Lastly, it was revealed that, evasion of debt collectors led to a very high indebtedness status among women as was agreed by majority women borrowers.

The respondents were asked to state in their opinion, what other factors have exposed them to over-indebtedness status. The results showed that, added responsibilities such as family size, school fees, and chronic illnesses that increased spending exposed them to over-indebtedness. In addition, some women borrowers said that, lack of financial management skills and expertise as well as unpredictable business environment subjected them to over-indebtedness. It was further noted that, unprofessional business advice from friends and business partners was reported to have caused some of the women borrowers' businesses to perform dismally and this led to increased indebtedness levels. Also, bad economic environment together with low credit supply were also noted as some of the factors that increased the level of indebtedness. Based on the quantitative findings, it is clear that, multiple borrowing, increased household expenses, loan default, poor financial decision making, delay in loan repayment, and evasion of debt collectors.

4.4.1.1: Qualitative data analysis on the indebtedness status

The study used interview guide to solicit information from the MFI managers. For example, the MFI managers were asked to indicate if there were instances of multiple borrowing by clients. From the results, one manager indicated the following;

It is clear that majority of women borrowers had multiple borrowing because the various financial records provided by the women themselves attested to the existence of multiple borrowing. For example, in certain instances, some women borrowers were found to have active loan with other MFIs.

In reaction to existence of multiple borrowing, another manager indicated that,

In some cases, others had two or more multiple loans and this negatively affected their chances of making timely repayment thereby leading to indebtedness.

Further, another manager indicated that,

Some women borrowers were found to have concealed their active loan services with other MFIs only to be exposed during monitoring and supervision by MFIs credit personnel who regularly interact with businesswomen.

Additionally, another MFI manager indicated that,

Some women who had good credit rating history were sometimes permitted to apply for new loans with same MFIs even if they had active loans with them. Such like situations were based on their ability to repay both loans as per the stipulated MFIs terms and conditions.

From the interview results on existence of multiple borrowing, it is evident that several women borrowers resorted to multiple borrowing due to myriad of reasons such as the need to boost their businesses in order to be able to service loans.

Additionally, the MFI managers were also asked to highlight some measures that could be initiated to reduce over-indebtedness status among women borrowers in Kenya. One of the outstanding strategies mentioned by almost all managers was the need to offer robust regular training, education and development to potential women borrowers.

Specifically, one manager argued that...

By having training mechanisms channel for all women borrowers, the clients stand a high chance of getting business success facts right upon being granted loans.

Further, another manager supported the need for regular training by reporting that....

Through training, businesswomen borrowers will be able to promptly use their acquired loans for the intended purposes thereby limiting the chances of being exposed to indebtedness.

Moreover, in support for the need to subject women borrowers to training and education, one of the MFI's managers indicated that....

There is need for all MFIs to have training and development department that can specifically handle customer loan related issues even before loan application. Through such initiatives, women borrowers will be capable of making informed decisions insofar as whether the yet to be applied loan will viably perform the intended objectives.

Another manager reported that....

By introducing training departments, women borrowers' financial and business management challenges will be timely addressed through prompt education and training that will impart adequate business and financial management ideas.

Meanwhile, another manager said that....

By introducing such a department, cases of indebtedness will be reduced thereby leading to improved business growth resulting to improved livelihood among women and their dependents and ultimately, the overall national economic growth.

From the results, it was clear that subjecting women borrowers to education, training, seminars and regular business advice could limit their indebtedness levels thereby promoting the growth of their respective businesses.

On the need for enhanced monitoring and supervision of women businesses, one of the MFIs' managers reported that...

Regular monitoring and supervision of the progress of business of women borrowers should also be up-scaled by MFIs field officers. Through regular visits, the MFIs will be able to have knowledge about the day to day issues affecting their clients' business hence they will be able to find solutions to the business related challenges that may hinder the success of their various income generating activities.

Again, the managers supported the need for thorough assessment of financial and businesses records of the borrowers to lower chances of future indebtedness. For example, one manager reported that....

Thorough scrutiny of the ability of clients to service loans can also be employed because many of them have been found to borrow money with the pretence of using it to boost existing business just to divert it for other usages such as settling certain bills. Such ill-informed purposes could lead to wrongful use of borrowed funds thereby resulting to inability to repay and consequently, indebtedness.

It is evident that regular monitoring and supervision of women businesses within Nairobi County acted as a motivational factor that compelled to timely service their loans for improved repayment status that added advantage to their possible next loans.

4.4.2: The Personal Traits Leading to Indebtedness among Women

In this sub section, the results for statements relating with the personal traits for women leading to indebtedness were analysed and presented. The statements were answered on a 5 point Likert scale (1 = Strongly disagreed, 2 = Disagree, 3 = Indifference, 4 = Agree while 5 = Strongly agree). The results are indicated in Table 4.4.

Table 4.4: Personal Traits Leading to Indebtedness among Women

	Numbers	Mean	Standard deviation
My low monthly income from business activities has affected my ability to repay loans	301	3.99	1.052
I am currently experiencing increased monthly expenses due to high cost of living	301	4.19	.918
My business has been performing below par due to inadequate financial management knowledge	301	3.90	.823
Increased family size affects my income	301	3.80	.720
Increased education expenses on my children have had negative effect on my business	301	4.56	.684
Lack of self-control in financial usage has negatively affected the growth of my business	301	4.06	1.211

The results presented in Table 4.4 indicate that, the low monthly income from business activities affected the ability of businesswomen borrowers to repay loans as agreed majority of the women borrowers (mean of 3.99). The study reported that most businesswomen were

currently experiencing increased monthly expenses due to high cost of living as agreed by most respondents (mean of 4.19). The research revealed that, women businesses have been performing below par due to inadequate financial management knowledge as agreed by most businesswomen (mean of 3.90). Further, it was revealed that, increased family size negatively affected businesswomen' daily income and this was represented by most of the respondents who agreed (mean of 3.80). It emerged that, increased education expenses from children have had negative effect on women' businesses as supported by most respondents who agreed with it (mean of 4.56). Lastly, the results showed that, most respondents agreed that, lack of self-control in financial usage has negatively affected the growth of women businesses and this could lead to indebtedness (mean score of 4.06).

From the results, it is evident that personal status such as income levels, increased expenses and inadequate financial knowledge had adverse effect on the ability of the women borrowers to adequate service their debts. These factors heavily contributed to their increased level of indebtedness.

4.4.2.1: Qualitative Analysis for Personal Traits Leading to Indebtedness among Women

The qualitative data from the interview guide were also presented via the interview guide. It was found that most of the MFIs' managers offered debt advice to their clients before disbursing loans. In support of this, one of the managers indicated that....

Their MFI had selected team from credit section who usually provided debt advice before credit application, disbursement period and after disbursement. He argued that such measures enabled the women borrowers to promptly use their loans for better business returns.

Similarly, another manager noted that....

The exercise of offering debt advice was often done and to some extent, upon request by the women borrowers.

Additionally, one in particular revealed that....

Many MFIs had put in place mechanisms that catered for thorough business advice before loan is disbursed to ensure that their respective clients ably manage their finances for good returns.

Interestingly, in regard to whether subjecting women borrowers to education improved their financial knowledge, one of the managers reported that....

Some of the MFIs assumed that women borrowers had adequate financial and business management knowledge as such they only offered any advice when called upon by their clients and this exposed many women borrowers to financial difficulties.

The managers were further asked whether they had trained credit staff offering training to businesswomen borrowers. It was observed that nearly all MFIs had trained credit staff offering training to business women borrowers. Specifically, one manager indicated that....

Such trainings were offered on areas such as, credit management, business strategy and business risk management.

Meanwhile, another manager indicated that....

They offered training on financial risk management strategies and subsequent solutions to these challenges. Training and education were also offered in several aspects such as workshops, seminars, and inductions.

From the qualitative findings it is clear that, quite a number of MFIs' managers offered debt advice to their clients before disbursing loans. The advice was done alongside training on core aspects such as credit management, business growth strategy, and business and financial risk management.

4.4.3: Effect of MFI Lending Factors on the Indebtedness Status

The results for statements regarding the elements relating with the institutional-related factors leading to indebtedness were analysed on a five-point Likert scale. The results are presented in Table 4.5.

Table 4.5: Effect of MFI Lending Factors on the Indebtedness Status

	Numbers	Mean	Standard deviation
The interest fee charged by my lender is always high hence negatively affecting business returns	301	3.82	1.119
Little knowledge on debt management has had adverse effect on the expansion of my business	301	3.46	1.091
The terms and condition for borrowing MFIs loan is rigid and this slows down business growth hence affecting timely repayment	301	3.91	1.286
The absence of grace period before starting to service loans is an impediment to regular loan repayment	301	4.27	1.072
Tough collateral requirements exert pressure on clients prompting hurried business decisions making thus leading to failures	301	3.96	1.374
The level of indebtedness increases with the amount of loan serviced	301	4.24	1.355
The number of clients in the portfolio increases indebtedness levels	301	4.14	1.136

As per the results in Table 4.5, it was established that, most women borrowers agreed that, the interest fee charged by the MFI lender is still high hence negatively affecting business returns (mean score of 3.82). It was observed that, the little knowledge on debt management by most women borrowers has had adverse effect on the expansion of their respective businesses as agreed by most respondents (mean of 3.46). The research also revealed that, terms and condition for borrowing MFIs loan are rigid and this slows down business growth hence affecting timely repayments as agreed by of the respondents (means of 3.91). The absence of grace period before starting to service loans was also found to be an impediment to regular loan repayment as indicated by most respondents who agreed (mean of 4.27). The tough collateral requirements were found to have exerted pressure on clients prompting hurried business decisions making thus leading to failures in business ideas and this was supported by respondents who agreed (mean score of 3.96). The level of indebtedness among women was found by businesswomen borrowers to increase with the amount of loan serviced and this was attested to by majority of women who agreed with the statement (mean score of 4.24). The study also established that, the number of clients in the portfolio

was found to have increased indebtedness levels among women borrowers as supported by most women borrowers who agreed with the statement (mean score of 4.14).

The quantitative findings that were attributed to questionnaire results revealed that various institutional factors including but not limited to collaterals, interest rates, inadequate client education, terms and conditions for borrowing impeded the women's ability timely repay their debts thus leading to over indebtedness.

4.4.3.1: Qualitative Data Analysis on Effect of MFI Lending Factors on Indebtedness Status

Data collected via unstructured interview guide was also thematically presented. Through the interview guide, the MFIs managers were asked to mention some of the collateral requirements concern that their respective clients have raised.

In particular, most managers attested to the presence of various collateral requirements. For instance, one of the managers indicated that...

Some of the notable collateral issues included specific number of mandatory signatories required for debt application to be serviced.

On the same issue, one of the managers mentioned that...

The requirement that one has to be a registered member of an association or group has been a concern for many women borrowers who have been our long time clients. The women argued that their credit repayment record is known as such they felt such stringent collateral measures are no longer applicable to them.

From the findings, it can thus be said that collateral requirements presented by various MFIs impeded the growth of women borrowers' businesses and very much contributed to their high level of indebtedness. Further, issues such as high number of signatories were a pediment to women's access to finance to boost their businesses.

Further, some managers stated that, there has been a concern raised by some women borrowers regarding the interest rate charges. The managers said that despite that they provide credit with the lowest interest rate in comparison, a number of women borrowers still believed that the interests charged should still be reduced especially among the long serving MFIs clients.

The MFI managers were also asked whether they had measures in place that provided room for grace period after loan disbursement. It was noted that most of the MFIs had provisions for grace periods before clients making repayment. For example, one MFIs manager reported that....

We have a one-month grace period due to our slim financial capacity while some established MFIs had up to a two-month grace period.

Additionally, another MFI manager reported...

My financial institution has a three-month grace period for loyal customers; loyal here refers to clients who have never defaulted and have good credit rating history.

In reaction to the issue of grace period, one concerned manager indicated that....

My MFI did not have grace periods for clients indicating that clients usually start making repayment within a month after loan disbursement as such the firm considered it costly.

Interestingly, it was revealed that, some few MFIs insisted on making first loan repayment two weeks after loan has been disbursed. One the managers in one of the MFIs justified this by saying that....

The fact that the clients borrowing the funds already have an established business imply that the loan they apply for is just for restocking the business; as such they have the capacity to immediately start making the payments.

Some managers justified the failure to provide grace period for customers. Those who were for such as decision presented their backing arguments. For example, one manager argued that....

Based on the fact that, my MFIs is still young hence we need adequate and consistent cash flow for new potential borrowers hence the requirement for borrowers to immediately begin loan servicing after disbursement.

Further, the study revealed that, several MFIs reserved grace period for loyal customers as a reward. In support, one manager indicated that...

The grace period was limited to customers who have never defaulted (with good repayment records) as such first comers were not privileged to this offer because of their unknown repayment ability.

Based on the interview results, it is observed that, certain MFIs offered grace periods for their clients but with certain terms and conditions. Therefore, several business women borrowers felt the need for MFIs to offer reasonable grace period that is free from unrealistic terms and conditions.

Via interview guide, the MFI managers were asked to highlight some of the measures their respective institutions have put in place for over-indebted clients. One of the MFI managers indicated that...

We usually advise women to consider debt consolidation or refinancing of credits.

In this instance, we advise such women borrowers to pay off multiple bills so they can refocus on one direction. Through such measures, the affected borrowers remain only with a single monthly repayment hopefully at lower interest rates.

Additionally, one manager said that...

My MFI had put in place measures that detects in real time the possibility of future default as such they usually consider timely interventions such as instructing the affected clients to drastically reduce unnecessary spending.

In addition, another manager reported as follows....

My MFI has put in place measures that could help our clients to promptly workout their budgets as well as how to deal with priority debts to avoid defaulting and consequently plunging into over-indebtedness.

The study also found that most MFIs attempted to help women control the use of their funds. For example, one the respondents indicated that...

Our MFI has mechanisms that helps women borrowers gain better control over their respective cash flows so that their level of indebtedness is marginally reduced.

Again, it was found that most managers indicated that, their respective MFIs had effective mechanisms that helped women borrowers to boost their revenue. In support of this argument, one manager specifically stated that....

Our effective mechanisms that boost women revenue was particularly done via debt advice as well as through waiver of certain fee charged on interests.

Suffice to say, advice on debt management was also given priority by most of the MFIs and this was confirmed to have assisted many business women to rejuvenate their businesses thereby realizing timely debt servicing. It is also clear that, MFIs try as much as possible to help business women borrowers lower their level of indebtedness by promptly offering necessary advice and solution.

4.4.4: The Moderating Effect of Inflation Rates on MFI Factors

The study also analysed data for statements regarding the elements relating with the effect of moderating variable (inflation rates) MFIs factors and personal traits leading to indebtedness. The results are indicated in Table 4.6.

Table 4.6: Moderating Effect of Inflation Rates on MFI Factors

	Numbers	Mean	Standard deviation
The witnessed high inflation rates affect my ability to timely service my debts	301	4.47	.933
The presence of high inflation in the country increases indebtedness levels among women	301	3.92	.911
The high inflation increases cost of goods and services, consequently leading to indebtedness among women	301	4.44	1.252
There is no relationship between inflation rates and indebtedness among women	301	2.97	1.173

In the results provided in Table 4.6, it was found out that, witnessed high inflation rates affected most businesswomen's ability to timely service their debts as agreed by most women borrowers (mean score of 4.47). The results indicate that, the presence of high inflation in the country has increased the indebtedness levels among most women borrowers as agreed by most respondents (mean score of 3.92). Again, it found out that, the witnessed high inflation has increased cost of goods and services, consequently leading to indebtedness among women and this was agreed by respondents (mean score of 4.44). The study also found that most respondents disagreed that there was no relationship between inflation rates and indebtedness among businesswomen borrowers an indication that that inflation indeed led to increased level of indebtedness among the women (mean score of 3.97).

Based on the quantitative findings, it can be interpreted that indeed inflation rate moderated the relationship between MFI factors and the level of indebtedness among business women borrowers in Nairobi County.

4.4.4.1: Qualitative Analysis on Moderating Effect of Inflation Rates on MFI Factors

Regarding qualitative data, the study made use of interview guide to solicit responses from the MFIs managers. One of the questions raised was whether the MFIs consider grace period for the women borrowers during adverse economic hardships such as rise in inflation rates. It was found that, most MFI did not consider grace period due to high inflation. For example, one manager supported this by arguing that...

A rise in inflation affects all businesses including financing institutions, therefore, if grace period service is offered, it will have both short- and long-term impacts on the operation of their respective MFIs.

However, one manager indicated that, some of the MFIs found to have considered grace period especially during the COVID-19 pandemic did so in the spirit of supporting the survival of such businesses as a result of increased inflation rate. Specifically, a manager said that....

Indeed, we provided grace periods especially during COVID-19 but with a written agreement that indicated the reason for such actions albeit with the sole intention of resuming debt servicing obligations after the elapse of the agreed time frame.

Moreover, one of the managers noted that...

Indeed, we have ever offered grace periods to young businesses only, however, those that had well established business, new flexible terms of repayment were introduced that enabled them to make repayment on more friendly conditions.

In addition, other reasons provided by the MFIs managers to save their clients during rise in inflation were two-fold. For example, a manager affirmed that...

Our institution sometimes waives interest fee charged for all their clients to cushion them. We particularly availed this for all women borrowers who had good credit repayment history with us.

In some instances, one manager said that...

Sometimes my institution went a notch higher during the COVID-19 pandemic to waiver interest fee for some of our loyal women borrowers. However, those that all along had poor credit rating were ignored and compelled to promptly service their loans.

From the results, it is clear that most MFIs only consider introducing grace period or waiver of loans or interest charges on long serving clients with good credit rating history. Such measures are welcome but exposed many borrowers to financial constraints thereby inhibiting their capacity to timely service their loans.

4.5: Diagnostic Statistics

Further, various diagnostic tests were done. The test was conducted with aim of establishing the reliability or the applicability of the regression model. The outcome of the tests is provided in the sub sequent sections.

4.5.1 Normality, Multicollinearity, and Heteroscedasticity Tests

Variables	Normality	Multicollinearity	Heteroscedasticity	
	Sig.	VIF	t	Sig
Indebtedness status	0.443			
Personal factors	0.503	4.441	0.056	0.855
MFIs lending factors	0.386	4.663	0.564	0.618
Inflation rates	0.255	3.077	0.403	0.344

Table 4.7: Tests for Normality, Multicollinearity, and Heteroscedasticity

The results for various diagnostic were presented in Table 4.7. Concerning normality test, the study utilized Shapiro Wilk test to assess the normality of data. The study found that, data was normally distributed because the p-values for variables (indebtedness = 0.443, personal factors = 0.503, MFI factors = 0.386, inflation rates= 0.255) are >0.05; therefore, data is normally distributed thus rejecting the null hypothesis that stated that, the data was not normally distributed (Schmidt & Finan, 2018).

Again, the research employed VIF to test multicollinearity. Results indicate that all variables have VIF below 10 and above 1 thumb rule. Specifically, women personal factors had a VIF of 4.441 and MFI factors had a VIF of 4.663 while inflation rates had a VIF of 3.077. Therefore, multicollinearity is not present thus rejecting the null hypothesis that indicated that, data will have multicollinearity (Đalić & Terzić, 2021).

On heteroscedasticity, the null hypothesis of data is heteroscedastic is to be accepted if the variables' p-values are <0.05 (Đalić & Terzić, 2021). However, if p-values >0.05 , the null hypothesis of heteroscedasticity will be rejected. It found that personal factors, MFI factors, and inflation rates had p-values of 0.855, 0.618, and 0.344, respectively. The fact that all variables had their p-values >0.05 , heteroscedasticity was absent hence an indication that, the constant variance's requirement was not violated.

4.5.2: Autocorrelation Test

The regression model requires autocorrelation's absence in the data. The null hypothesis of the test is that there is absence of first-order autocorrelation (Wooldridge, 2002). Therefore, the researcher did a Wooldridge test for autocorrelation in Table 4.8.

Wooldridge test for autocorrelation

H0: no first-order autocorrelation

F (1, 24) = 8.671

Prob> F = 0.0755

Table 4.8: Autocorrelation

The results indicated in Table 4.8 indicate that the p-value is >0.05 . This implies that there is absence of first order autocorrelation. Thus, the null hypothesis is accepted and therefore, the residuals are not serially correlated (p-value = 0.0755).

4.6: Ordinary regression

4.6.1: Model fitting using -2 log likelihood

Results of ordinal logistic regression versus a simplified model (intercept) with a complementary log-log link function are presented in the section's results from model fitting (Buis, 2017). The statistical significance of the final model determines if there is an association between the dependent variable and any combination of independent variable

Table 4.9: Model fitting using -2 log likelihood

Model	-2 log likelihood	Chi-square	Df.	Pr>chsq (sig)
Intercept Only	1639.566	-	-	
Final	789.764	849.802	23	.001

In Table 4.9, the -2 Log Likelihood of regression model with only intercept is 1639.566 whereas that with intercept and independent variables is 789.764. The difference (Chi-square statistics) is $1639.566 - 789.764 = 849.802$ and it is significant at $\alpha=0.05$ and the p value is less than 0.05 hence there is existence of a relationship between level of indebtedness and the independent variables utilized in this study.

4.6.2: Goodness-of-fit

To gauge the strength of the connection between the linearly connected variables, Pearson is frequently employed in statistics. Large values of the deviation statistics suggest a poor fit of the model to the data since they are a measure of the lack of fit among the data and the model. The observed data are consistent with the fitted model, according to the null hypothesis being investigated in this situation, whereas the observed data are not consistent with the fitted model, according to the alternative hypothesis (Fagerland & Hosmer, 2017)

Table 4.10: Goodness-of-fit

	Chi-Square	Df	Sig.
Pearson	747.651	23	1.00
Deviance	793.764	23	1.00

In Table 4.10, p value is equal to 1.00, a value that is more than 0.05. Thus, the null hypothesis is accepted because the insignificant and this imply that the data observed consistently estimated values in the fitted ordinary logistic model.

4.6.3: Pseudo R-Squared

The study used Cox and Snell, Nagelkerke, and McFadden to test for the usefulness of ordinal logistic regression model in predicting the effect of MFI factors on indebtedness as moderated by inflation rates. The results are shown in Table 4.11.

Table 4.11: Pseudo R-Squared

Cox & Snell	.954
Nagelkerke	.765
McFadden	.567

Table 4.11, shows that all the maximum values of R² for Cox and Snell, Nagelkerke, and McFadden obtained are less than 1.00. The values are an indication that the ordinal logistic regression model usefully predicts the effect of MFI factors, personal factors, and inflation on indebtedness status. The Nagelkerke Pseudo has predicted the outcome of the effect of MFI factors on indebtedness with a likelihood R-squared of 0.765. This means that, Nagelkerke perfectly predicted the outcome of the effect of MFI factors on indebtedness (Lumley, 2017).

4.6.4: Parameter Estimates

Table 4.12 has several important elements concerning various variables. The Walds statistics and the linked probabilities utilizing the logit (β) offered the index of the significance of parameters under each predictor variables in the Ordinal logistic equation.

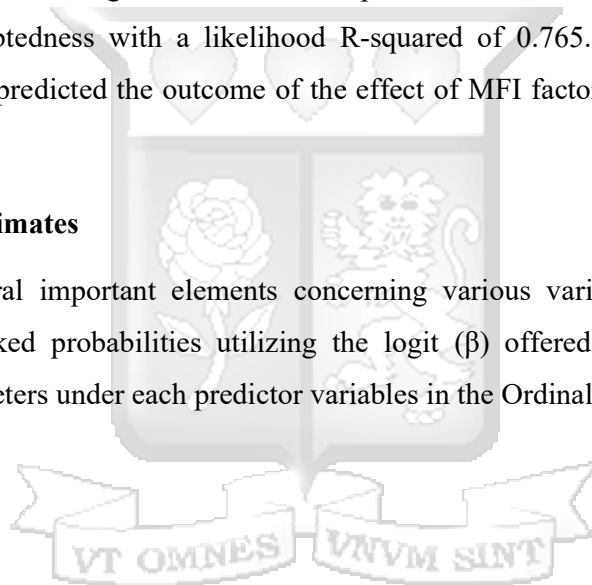


Table 4.12: Parameter Estimates

Parameters	Estimate	Std. Error	Wald	Df	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Indebtedness	0.304				0.027		
Multiple borrowing	.255	.045	1.344	01	.006	1.951	2.211
Increased household expenses	.536	.111	2.011	01	.023	.881	.997
Loan default	.336	.127	0.455	01	.011	.065	.877
Poor financial decision making	-.211	.121	.087	01	.043	-.345	.211
Delay in loan repayment	.677	.211	1.234	01	.022	-.203	-.156
Evasion of debt collectors	.231	.116	5.333	01	0.05	.455	.078
Personal Traits	0.020				0.045		
Monthly income from business	-.106	.126	2.055	01	.018	1.455	1.99
Increased monthly expenses	.065	.145	4.667	01	.041	1.001	2.344
Inadequate financial management knowledge	.123	.171	6.561	01	.150	1.023	3.222
Increased family size	-.113	.254	2.114	01	.006	.026	.056
Increased education expenses	.029	.210	.065	01	.033	-.345	-.023
Lack of self-control	.121	.106	1.233	01	.021	.781	1.033
MFI Lending Factors	0.022				0.042		
Interest fee charged	.127	.231	9.033	01	.165	0.122	1.432
Little knowledge on debt management	.278	.120	7.223	01	.005	1.321	2.341
Terms and condition for borrowing	-.267	.117	.076	01	.026	1.981	3.562
Absence of grace period	-.675	.105	1.234	01	.031	.012	.921
Tough collateral requirements	.453	.129	3.551	01	.009	1.211	2.176
Number of clients in the portfolio	.216	.275	1.976	01	.017	2.33	2.111
Inflation Rates	0.052				0.033		
High inflation affects timely debt service	-.452	.311	.971	01	.076	.090	1.451
Presence of country's high inflation	.076	.231	4.655	01	.007	2.144	3.551
Increase in cost of goods and services	.063	.297	1.244	01	.048	-1.671	.0223
No relationship between inflation rates and indebtedness	.521	.420	.923	01	0.001	-2.033	.122

In Table 4.12, personal factors had a positive significant relationship with indebtedness ($p = 0.045 < 0.05$; Coefficient = 0.020). The results are an indication that, an increase in personal factors could lead to increased status of indebtedness among women borrowers.

Further, the study found that MFI factors was found to have a positive significant with the level of indebtedness among women borrowers ($p = 0.042 < 0.05$; Coefficient = 0.022). This could be interpreted to mean that, an increase in the MFI factors by any unit could result into an increase in the indebtedness status among women borrowers in Nairobi County.

Concerning inflation, the study found that variable was positively and significantly related to the level of indebtedness ($p = 0.033 < 0.05$; Coefficient = 0.052). The findings can be interpreted to imply that, an increase in inflation by any unit could lead to an increase in the indebtedness status among business women borrowers in Nairobi County.

Since all predictors' $p \leq 0.05$, the null hypothesis is rejected. The study thus conclude that all the predictors significantly influenced the indebtedness status among women borrowers. The study also established that the regression coefficients (estimates) for the control, moderating and independent variables were statistically significant in estimating the level of indebtedness among business women borrowers.

4.7: Regression Analysis after Multiplying all Variables with Inflation Rates

The study analysed the moderating effect of inflation (interaction terms) on the relationship between MFI lending factors and indebtedness status of women in Nairobi County. The results are shown in Table 4.13.

Table 4.13: Regression analysis

Dependent variable (Indebtedness status)				
Variables	Standardized Coefficient (Beta)	Standard errors	t-value	p-value
Constant	1.216	4.642	.262	.906
MFI factors*Inflations	.017	.034	.082	.019
Personal factor *Inflations	.055	.368	.269	.038
Model summary:				
R	.591 ^a			
R square	.364			
ANOVA:				
F-statistic (p-value)	52.403 (0.049 ^b)			

^a = Constant; ^b = Coefficients of each variable.

Significance level = 0.05 * = Multiplication sign

The results in Table 4.13 shows that, the model is good fit as indicated by R of 0.591%. This means that, the MFI lending factors and personal factors multiplied by the inflation predicts the level of indebtedness among women borrowers in Nairobi County. Further, the ANOVA results show that the model is significantly reliable since it is significant with its p-value being 0.000^b.

Further, the MFI factors had a positive significant connection with the indebtedness status among businesswomen borrowers in Nairobi County ($\beta= 0.017$, p-value = 0.019) at the 5% level. This could be interpreted to mean that an increase in MFI factors by any unit could increase indebtedness levels among businesswomen borrowers in Nairobi County. Personal factors also had a positive significant relationship with indebtedness status among women borrowers ($\beta = 0.055$, p-value = 0.038). This could mean that an increase in personal factors will result to an increase in the level of indebtedness among women borrowers. From the results, it is clear that inflation rate moderated (interaction terms) the relationship between the level of indebtedness, personal factors, and MFI factors.

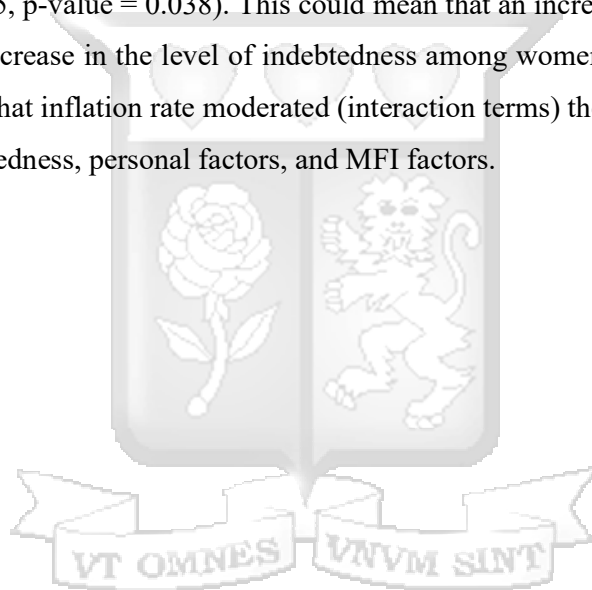


Table 4.14: Triangulation of Results (quantitative and qualitative)

Questionnaire data findings (quantitative)	Interview guide findings (qualitative data)	Consistency between questionnaire and interview guide findings
The study investigated the effect of MFI lending factors on the indebtedness status of women in Nairobi County. MFI lending factors had a positive relationship with the indebtedness status of women in Nairobi County.	Qualitative data specifically found that, tough collateral requirements, interest fees, and grace periods were raised by their clients on several occasions as factors leading to indebtedness.	The quantitative results are consistent with the qualitative findings
In relation to the moderating effect of inflation on the relationship between MFI lending factors and indebtedness status of women in Nairobi County, the regression results revealed that, inflation rate had positively moderated the relationship between MFI lending factors and indebtedness.	In lieu of this, the qualitative results showed that some managers of various MFIs had various mechanism to cushion clients especially when there is high inflation rates and disasters like COVID-19. However, some MFIs were hesitant to cushion them decrying that they equally faced effect of inflations as revealed by the qualitative results.	
The control variable was on borrower personal factors. The regression results also revealed a positive relationship between personal factors (control variable) and level of indebtedness	The insufficient women borrower’s knowledge had adverse effect on borrowers’ financial management competence that consequently affected the growth of their businesses hence leading to indebtedness. The qualitative results showed that debt advice, education and training was needed to enhance women’s financial and business knowledge	The qualitative (interview guide) results were also acknowledged by quantitative results (questionnaire).

CHAPTER FIVE: DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

5.1: Introduction

In this chapter, the research presented the discussion of the results. The discussion is based on the findings presented in the previous chapter. Conclusion and recommendations and limitations of the study are also included.

5.2: Discussions

The discussion takes into consideration all the results for the objectives. The results are subsequently linked to previous studies that are related to this study.

5.2.1: Indebtedness Status of Women

It was revealed that, multiple borrowing led to indebtedness status as reported by most respondents who agreed. The results are in support of a study by Bienvenu and Kweyu (2021) found that the number of loans led to indebtedness among borrowers in Bukavu, DRC. The findings also conform to the Life cycle theory that argues that poor households tend to borrow more in order to maintain the consumption level of their social group thus leading to indebtedness cycle. It found that, most respondents agreed that increased household expenses led to a very high indebtedness status among women. The results resonate with the life cycle theory that argues that, borrowing at a given point is informed by the prospect of receiving some income in the near future (Andreou, 2011). The results concur with yet another study by Carlsson et al. (2020) that found that low-income levels coupled with increased expenses determined the level of indebtedness among the young people in the rural Sweden. Further, loan default was revealed to have led to a very high indebtedness status as agreed by most businesswomen. Further, a study by Kasoga and Tegambwage (2021) in Tanzania found that loan default among borrowers had negative effect on the level of indebtedness. The pragmatism research philosophy also argues for the need to utilize quantitative data to find out whether there exists a relationship between the propensity to borrow and indebtedness levels.

Again, poor financial decision making by businesswomen led to a very high indebtedness status as shown by most respondent who agreed with statement. In support, a study by Karungu (2020) in Kenya found that personal factors such as poor financial decision making results to increased level of indebtedness. The study also found that, most women

borrowers agreed that, delay in loan repayment led to a high indebtedness status among businesswomen borrowers. According to Life cycle theory, the absence of income to spend and save for the future creates a pattern of borrowing behaviour among the poor households. These results also resonate with a research study by Kasoga and Tegambwage (2021) that found that untimely loan repayment led to indebtedness. Also, the delay in loan repayment leads to over-indebtedness. Lastly, it was revealed that, majority of respondents agreed that evasion of debt collectors led to a very high indebtedness status among women. The results agree with a study by Puliyakot (2020) that also found that debt evasion enhanced the likelihood of over-indebtedness by households. The inferential statistics found that all the variables (MFI factors, personal factors and inflation rate) except women borrowers' personal factors had a positive relationship with the indebtedness status among businesswomen borrowers in Nairobi County. The results are in line with a study by Wamalwa (2016) that established that, interest rates, grace period, amount of loan offered, and tough collateral requirements were positively connected to indebtedness among borrowers. Via regression analysis, all the variables had a positive relationship with indebtedness status among women borrowers. The interview guide is consistent with the regression results since it was established that, MFI lending and personal factors have effect on the level of indebtedness. The results are in line with the study done by Mjuza and Ntsalaze (2019) that found that both personal and institutional factors do affect the ability of credit consumers to timely service their loans. The results concur with the Life Cycle Theory that states that, a family or a household goes through as a social unit which affects their livelihood both as individual and as whole unit. The results are also in line with the pragmatism philosophy that suits the use of both quantitative and qualitative data for better results. Due to the pragmatism philosophy, both quantitative and qualitative data had consistent results.

5.2.2: Personal Traits Leading to Indebtedness among Women

The results indicate that, the low monthly income from business activities affected the ability of businesswomen borrowers to repay loans as was agreed by most respondents. The results are in line with the Life cycle theory that highlights several social-economic factors that could contribute to increased borrowing. In agreement, a study by Sahani et al. (2018) indicate that family responsibilities and low-income levels heavily determined the level of indebtedness. According to the Life cycle theory, a borrower's satisfaction consumption level is not dependent on absolute income level but rather on the relative magnitude of the

society at large (social status sometimes compels people to borrow). The study reported that most businesswomen agreed that they were experiencing increased monthly expenses due to high cost of living and this is supported by Life cycle theory. The findings are in line with another study by Lusardi and Tufano (2015) revealed that, increased monthly spending increased financial indebtedness among borrowers. The research revealed that, women businesses have been performing below par due to inadequate financial management knowledge as reported by majority of businesswomen who agreed with the statement. The results are supported by the Learning theory that places knowledge at the core of successful businesses. Another study by Lusardi and Tufano (2015) revealed that, lower debt literacy makes people to behave in high-cost ways by employing high-cost borrowing that ultimately affects their ability to service their debts. The results are also supported by the Learning theory that states that a knowledgeable borrower will always make informed decisions and select the best product offering from the lender as opposed to uninformed borrower. From the results, it is clear that, the pragmatism philosophy that used quantitative data clearly showed the influence of personal factors on the level of indebtedness.

Further, it was revealed that, most respondents agreed that, increased family size negatively affects businesswomen' daily income. The results are in tandem with the Life Cycle theory that indicate the circumstances in which an individual borrows money. In congruence, a study by Schicks (2014) in Ghana found out that, the expanded family size had adverse effect on over-indebtedness. This study also found out that, increased education expenses from children had negative effect on women' businesses as was agreed by majority of women. In another study, Abdifatah (2019) found that, monthly expenses on education increased the level of indebtedness among borrowers in Garissa town hence these results are in line with the current study. According to the Life cycle theory an individuals' income may fail to meet a borrower's expenses (education) hence the decision to borrow that ultimately leads to indebtedness. The results show that, most businesswomen agreed that, lack of self-control in financial usage has negatively affected the growth of women businesses which leads to indebtedness. The results are in uninform with another study by Boateng et al. (2015) that indicated that, lack of self-control increased the level of indebtedness. These results mean that an increase in the personal factors affecting borrowers increases level of indebtedness among the women borrowers. The interview results were also consistent with the regression findings thus agreeing with the pragmatism philosophy. The findings are in agreement with yet another study by Sahani et al. (2018)

that established a positive connection between personal factors (financial knowledge) and consumer's indebtedness levels. The results resonate with the Life cycle theory and the pragmatism philosophy that was applied in this study to enhance quantitative data analysis. The pragmatism philosophy enabled the integration of both quantitative and qualitative results that ensured that the results for both methods of data collection were consistent; no contradicting results were obtained from questionnaire and interview guide.

5.2.3: Effect of MFI Lending Factors on the Indebtedness Status

It was established that, most women borrowers agreed that, the interest fee charged by the MFI lender is still high hence negatively affecting business returns. In support, another work by Wamalwa (2016) in Nakuru County found that interest rates had negative effect on the ability by the borrowers to repay. It was observed that, the little knowledge on debt management by most women borrowers has had adverse effect on the expansion of their respective businesses as was agreed by most respondents. According to the Learning theory, a knowledgeable borrower will have the ability to make use of acquired funds and vice versa. The findings are in line with a study by Liv (2013) which established that, borrowers with limited financial knowledge are more likely to struggle with repayment, which is highly correlated with financial literacy. The research also revealed that, respondents agreed that terms and condition for borrowing MFIs loan was rigid and this slowed down business growth hence affecting timely repayments and this resonates with the pragmatism philosophy approach that the study used to present the quantitative results. In support, a study by Murthy and Mariadas (2017) in Malaysia found that terms such as the schedule for repayment and terms of payment as indicated by the lenders also affected loan repayment thus increasing indebtedness.

The absence of grace period before starting to service loans was also found to be an impediment to regular loan repayment as agreed by most respondents. The results are in tandem with a research study by Muthama and Warui (2021) who found that, the period for credit repayment had a direct link with the ability of borrowers to make repayments. The tough collateral requirements were found to have exerted pressure on clients prompting hurried business decisions making thus leading to failures in business ideas and this was supported by most respondents who agreed. Such hurried unthoughtful decisions could be attributed to lack of knowledge as argued by the Learning theory. In agreement, a study by Muthoni (2016) in Kenya observed that, high collaterals led to default in loan repayment

among borrowers in the country. The level of indebtedness among women borrowers was found to increase with the amount of loan serviced and this was attested to by majority of respondents who agreed with the statement. The results are in line with the Life cycle theory that explain how borrowers get trapped in debts as they easily access micro credits services without collateral limitations from micro financial institutions (Islam, 2014). These results are in agreement with Liv's (2013) study that revealed that, that borrowers who have numerous huge debts are more likely to face repayment difficulties. The study also established that, the number of clients in the portfolio was found to have increased indebtedness levels among women borrowers as supported by majority of respondents who agreed with the statement. The results are connected to another study by Asongo and Idama (2014) in Yola, Nigeria that found out that, the loan default was high with the increased number of clients in the portfolio. Through inferential statistics, this research found that MFI lending factors had significant positive relations with the indebtedness status among women borrowers ($\beta = 0.017$; p-value = 0.019). The interview results also found that, MFI factors such as collateral requirement has effect on the level of indebtedness. The findings conform to the results obtained by Wamalwa (2016) who found that, institutional factors had positive influence of the ability to service loans on time and this could increase the level of indebtedness. This could be said to imply that an increase in the MFIs lending factors leads to an increase in the level of indebtedness among women borrowers. The findings are also consistent with the interview guide's results that established that, MFI lending factors have effect on the indebtedness status among women borrowers. The results are also in line with the pragmatism philosophy approach that argue for consistency in both qualitative and quantitative data. The results are supported by the Life cycle theory that states that personal factors such as adequate knowledge and self-control promotes good financial knowledge thus reducing level of indebtedness.

5.2.4: The Moderating Effect of Inflation Rates on MFI Factors

The results show that, majority of the respondents agreed that, the witnessed high inflation rates affected most businesswomen's ability to timely service their debts. In agreement, a study by Puliyakot and Pradhan (2017) in Pakistan established that, inflation rates and economic shocks exerted extremely stronger effects on over-indebtedness. According to Life cycle theory, an individual's income can be affected by a rise in inflation rates and this could lead to over-indebtedness. The findings indicate that, the presence of high inflation in the country has increased the indebtedness levels among most women borrowers as

agreed by most women. In congruence, a study by Priyankara and Sumanasiri (2019) established that the actions taken by government on macro-economic issues such as the rate of inflation and money supply increased defaulting rate thereby leading to high indebtedness. Again, it found out that, the witnessed high inflation has increased cost of goods and services, consequently leading to indebtedness among women and this was reported by most respondents who agreed with the statement. The results are in support of the work of Pytkowska and Spannuth (2012) that revealed that, the level of indebtedness was influenced by inflation rates that subsequently have effect on cost of commodities.

The study also found that most women borrowers disagreed that there was no relationship between inflation rates and indebtedness among businesswomen borrowers an indication that that inflation indeed led to increased level of indebtedness among the women. In agreement, a study by Naliaka (2015) found that high inflation rates and economic shocks are key contributor to failure of debts payment thereby leading to borrowers' indebtedness. Concerning inferential statistics, prior to multiplying the variable (MFI factors) by inflation rates, the results for the relationship between MFI factors and indebtedness was ($\beta = 0.022$; p-value = 0.042). After multiplying MFI with inflation rate, the study found that inflation rates moderated the relationship between MFI factors and indebtedness status among businesswomen borrowers by values of $\beta = 0.017$ and p-value = 0.019. This could be interpreted to mean inflation rates moderated the relationship between MFI factors and the indebtedness levels among businesswomen borrowers in Nairobi County. The results are in agreement with the interview results that also found that, inflation rates has effect on the level of indebtedness. The results are also in tandem with the life cycle theory that mostly deal with personal social economic factors that informs our economic decisions in life. Therefore, both quantitative and qualitative results are not contradicting hence consistent with pragmatism philosophy.

5.3: Conclusions

In connection with the indebtedness status among businesswomen, the study concludes that, delay in loan repayment had the greatest effect on increased level of indebtedness among businesswomen borrowers in Nairobi. This was followed by household expenses, poor financial decision-making, loan default, evasion of debt collectors in that order. The element of multiple borrowing had the least effect on increased level of indebtedness status among women. The advanced analysis in the form of inferential statistics concluded that, MFI factors, women borrowers' personal factors, and inflation rate had a positive

relationship with the indebtedness status among businesswomen borrowers in Nairobi County.

Regarding personal traits, the study concludes that, the low monthly income from business activities, increased monthly expenses due to high cost of living, inadequate financial management knowledge, and increased family size increased level of indebtedness among women. Further, increased education expenses from children and a lack of self-control in financial usage negatively affected the growth of women businesses thereby leading to indebtedness. The inferential statistics concluded that, the borrowers' personal factors were significant and positively related to the indebtedness status among women, an indication that a decrease in the personal factors affecting borrowers decreases level of indebtedness among the women borrowers.

Concerning MFI lending factors, the study conclude that, the little knowledge on debt management, rigid terms and condition for borrowing MFIs loans, absence of grace period before starting to service loans, number of clients in the portfolio, and the tough collateral requirements increased the level of indebtedness among women borrowers. Through inferential statistics, this research conclude that MFI lending factors had significant positive relations with the indebtedness status among women borrowers, implying that an increase in the MFIs lending factors could lead to high level of indebtedness among women borrowers.

In connection to the moderating effect of inflation rates, the study concludes that, the witnessed high inflation rates affected most businesswomen's ability to timely service their debts thereby leading to high indebtedness levels among most women borrowers. This was so, because high inflation increased cost of goods and services that consequently increased the cost of doing business thereby affecting the ability of the women borrowers to service their debts. Via inferential statistics, the study conclude that the inflation rate (moderating variable) had a positive significant connection with the indebtedness status, personal and MFI factors among businesswomen borrowers. This means that an increase in inflation rate by any unit increases indebtedness levels among businesswomen borrowers in Nairobi County.

5.4: Recommendations

In line with the findings, recommendations are made thereof for policy adoption:

The study recommends that, the credit officials for the MFIs should individually pay a visit to their clients in their respective businesses upon loan disbursement to authenticate whether the amount has been utilized as specified. Funds' diversion on other activities rather than what it was actually intended had a major effect on loan default and subsequent indebtedness. Therefore, the MFIs must insist on this because more often the credit officer may be reluctant to act particularly if he or she has an interest in the credit disbursed.

To reduce the level of indebtedness, it is recommended that, if instalment is unpaid at the close of the agreed period, the client must be reminded immediately. This can be done via phone messages to the potential defaulter. Phone calls can also be used in cases of longer delays and finally the credit officer should be able to raise the issue in the next immediate group meeting, if any, to provide a formal reminder to the group of that client. Such procedures will create consciousness among the affected clients that they are being monitored by the lenders.

Further, the CFK should be able to consider conducting awareness campaigns to teach women borrowers on planned investment and spending of borrowed credit and the benefits of avoiding impulse purchases that may lead to indebtedness among them. Such a recommendation is geared towards the improvement of clients' habits via behavioural change so that they can spend from informed point of view.

Moreover, it also recommends that the government through the Treasury and other line ministries such as trade, preferably policy makers in these ministries should introduce legislative measures to streamline MFIs' lending to safeguard women borrowers from unjust lending terms and conditions.

Additionally, it recommends that the Central Bank of Kenya (CBK) and MFI regulators should be able to plan in advance and influence macro-economic variables such as inflation rates in the right direction. For example, economy should possess adequate money supply so that there is sufficient money to carry out trade in the country.

Low borrowers' financial and business literacy levels can increase their risk of over-indebtedness. Consequently, given the complexity of financial literacy, this burden cannot just be left for MFIs. Every stakeholder in the MFIs community including regulatory bodies

and development agencies can perform an essential role in promoting financial and business literacy among women borrowers in line with their own area of specializations. Therefore, financial literacy training needs should be specifically connected to debt literacy to obtain the desired effect.

As part of public policy considerations, maintaining a low and consistent inflation rate is good for business growth. Therefore, the goal of monetary policy by CBK is to keep the economy's prices stable. To achieve this, the government via CBK can raise taxes (such income tax and VAT) and reduce spending to lower inflations. This serves to lower demand in the market and improves the government's budget condition. Both of these measures slow the increase of aggregate demand, which lowers inflation as such consumers of credit products including women will be able to continue operating their businesses with manageable macro-economic challenges.

5.5: Areas for Further Research

The overall objective of the study was to evaluate the MFI factors influencing indebtedness status moderated by inflation rates: case of businesswomen borrowers in Nairobi County. The study recommends that, further research could be conducted with aim of establishing the macro-economic variables influencing the level of indebtedness status among MFBS' business borrowers in Kenya. By conducting such a study, the government policy makers will be able to come up with informed policies that can bring drastic changes to ensure that the borrowers do not fall prey to variables such as inflation rates, exchange rates, and interest rates among others that can hurt the survival of their businesses thereby leading to over-indebtedness.

5.6: Limitations

The research was done on a limited geographic area, only respondents within Nairobi County were studied and this could pose academic paucity when it comes to the generalization of the findings and making of inferences.

Further, despite that, indebtedness status is researched here in the context of MFIs and their businesswomen borrowers, those clients who are not MFIs' beneficiaries can also be negatively affected by issues relating to over-indebtedness. Therefore, there is a gap that further studies in over-indebtedness across other financial providers such as commercial banks and MFBS among others may need to address.

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APPENDICES

APPENDIX I: QUESTIONNAIRE FOR WOMEN BORROWERS

SECTION I: PERSONAL INFORMATION

1. Which age bracket best suit you?

18-23 Years ()

24-29 Years ()

30-35 Years ()

36-41 Years ()

42-47 Years ()

48-53 Years ()

Above 54 years

2. How long have you been a client with your credit service provider?

Less than one year ()

1-3 Years ()

4-6 Years ()

7-9 Years ()

Above 10 Years ()

3. What is your highest level of education?

No education ()

Primary ()

Secondary ()

College/tertiary ()

University (undergraduate) ()

University (Postgraduate) ()

Any other ()

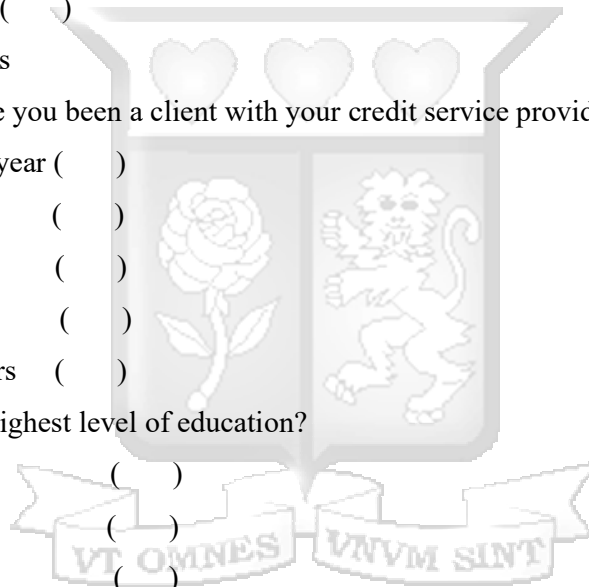
4. What is your marital status?

Married ()

Single ()

Divorced ()

Separated ()



PERSONAL TRAITS LEADING TO INDEBTEDNESS AMONG WOMEN

5. The following statements regards the elements that relates with the personal traits for women leading to indebtedness. The statements are to be answered on a 5 point Likert scale; Whereby 1 = Strongly disagreed, 2 = Disagree, 3 = Indifference, 4 = Agree while 5 = Strongly agree.

Statements	1	2	3	4	5
My low monthly income from business activities has affected my ability to repay loans					
I am currently experiencing increased monthly expenses due to high cost of living					
My business has been performing below par due to inadequate financial management knowledge					
Increased family size has negatively affected my daily income					
Increased education expenses on my children has had negative effect on my business					
Lack of self-control in financial usage has negatively affected the growth of my business					

SECTION III: MFIs LENDING FACTORS THAT CONTRIBUTE TO INCREASED BORROWING DECISIONS.

6. The following statements regards the elements that relates with the institutional-related factors leading to indebtedness. The statements are to be answered on a 5 point Likert scale; Whereby 1 = Strongly disagreed, 2 = Disagree, 3 = Indifference, 4 = Agree while 5 = Strongly agree.

Statements	1	2	3	4	5
The interest fee charged by my lender is always high hence negatively affecting business returns					
Little knowledge on debt management has had adverse effect on the expansion of my business					
The terms and condition for borrowing MFIs loan is rigid and this slows down business growth hence affecting timely repayment					

The absence of grace period before starting to service loans is an impediment to regular loan repayment					
Tough collateral requirements exert pressure on clients prompting hurried business decisions making thus leading to failures					
The level of indebtedness increases with the amount of loan serviced					
The number of clients in the portfolio increases indebtedness levels					

SECTION IV: INFLUENCE OF INFLATION RATE OVER INDEBTEDNESS AMONG WOMEN.

7. The following statements regards the elements that relates with inflation rates leading to indebtedness. The statements are to be answered on a 5 point Likert scale; Whereby 1 = Strongly disagreed, 2 = Disagree, 3 = Indifference, 4 = Agree while 5 = Strongly agree.

Statements	1	2	3	4	5
The witnessed high inflation rates affects my ability to timely service my debts					
The presence of high inflation in the country increases indebtedness levels among women					
The high inflation increases cost of goods and services, consequently leading to indebtedness among women					
There is no relationship between inflation rates and indebtedness among women					

SECTION V: THE INDEBTEDNESS STATUS OF WOMEN

8. The following statements regards the factors determining over-indebtedness. The statements are to be rated on a 5 point Likert scale; whereby 1 = very low indebtedness 2 = low indebtedness 3 = moderate indebtedness, 4 = high indebtedness while 5 = very high indebtedness.

Statements	1	2	3	4	5
Multiple borrowing					
Increased household expenses					

Loan default						
Poor financial decision making						
Delay in loan repayment						
Evasion of debt collectors						

9. In your opinion, what other factors have exposed you to over-indebtedness status?



APPENDIX II: INTERVIEW GUIDE FOR MFIs OFFICIALS

1. As a manager, do you offer some debt advice to your clients before disbursing loans?

2. If so, how often is this done?

3. Do you have trained credit staff offering training and education/knowledge to women borrowers? _____

4. If yes, in question 3, in which area(s) is the training focusing on?

5. As an institution, kindly mention some of the collateral requirements concern that have been raised by your clients?

6. Do you have measures in place that provide room for grace period after loan disbursement? _____

7. If your answer is yes in question 6, how many weeks/months?

8. If your answer is NO in question 7 above, please justify.

9. As a MFI manager, are there instance of multiple borrowing and debt evasion by your clients? _____

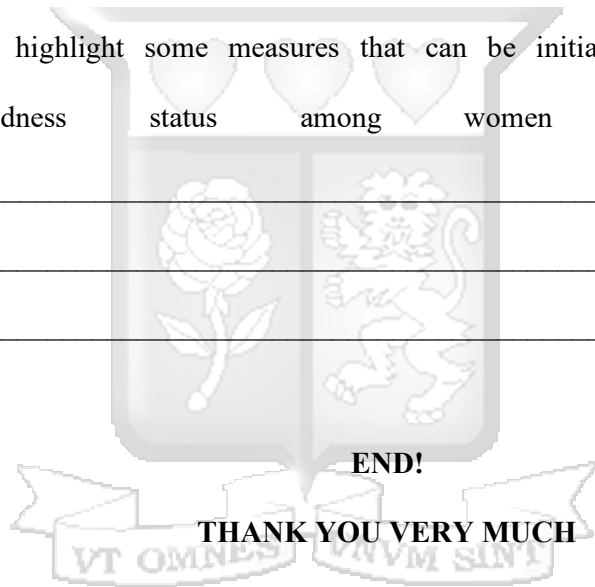
10. Kindly provide reason(s) for your answer in question 9 above.

11. As a manager, what measures do you take for clients that have been over-indebted?

12. During adverse economic hardships such as rise in inflation rates, does your institution consider grace period for the women borrowers? _____

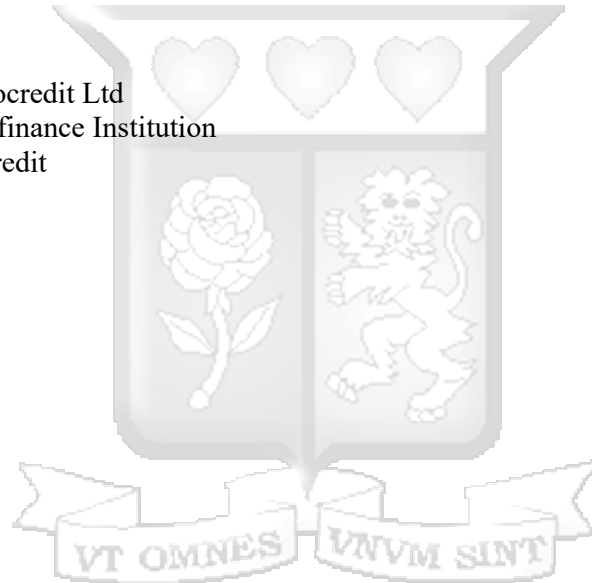
13. Please provide some reason(s) for your answer in question 12 above.

14. Kindly highlight some measures that can be initiated to reduce over-indebtedness status among women borrowers in Kenya _____



APPENDIX III: LIST OF LICENSED MFIs IN KENYA

1. Micro Enterprise Supporting Program Trust (MESPT)
2. Soluti Finance East Africa Ltd
3. Oikocredit
4. VisionFund Kenya Ltd
5. BIMAS
6. YEHU Microfinance Trust
7. Fincredit Services Ltd
8. Juhudi Kilimo Co.Ltd
9. Real People Ltd
10. Neema Helth Education & Empowerment Program (NEEMA-HEEP Ltd)
11. Hand in Hand Eastern Africa
12. Premier Credit Ltd
13. Moneyworth Investment Ltd
14. Longitude Finance
15. Jiweze Ltd
16. ASA Ltd
17. Kipepeo Microcredit Ltd
18. Musoni Microfinance Institution
19. Momentum Credit



APPENDIX IV: UNIVERSITY AUTHORIZATION LETTER



15th February 2023

Mrs Kiragu Ann Wangoi,
ann.kiragu@strathmore.edu

Dear Mrs Kiragu,

RE: Evaluating Mfi Factors Influencing Indebtedness Status Moderated by Inflation Rate: Case of Businesswomen Borrowers-Nairobi County


This is to inform you that SU-ISERC has reviewed and **approved** your above **SU- master's** research proposal. Your application reference number is **SU-ISERC1548/23**. The approval period is from **15th February 2023 to 14th February 2024**.

This approval is subject to compliance with the following requirements:

- i. Only approved documents including (informed consents, study instruments, and MTA) will be used
- ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
- iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 48 hours of notification
- iv. Any changes, anticipated or otherwise, that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 48 hours
- v. Clearance for the export of biological specimens must be obtained from relevant institutions.
- vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
- vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) <https://research-portal.nacosti.go.ke/> and obtain other clearances needed.

Yours sincerely,


for: **Dr Ben Ngoye,**
Secretary; SU-ISERC

Cc: Mr Ambrose Rachier,
Chairperson; SU-ISERC



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APPENDIX V: RESEARCH PERMIT



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION.

Date of Issue: **02/March/2023**

RESEARCH LICENSE



This is to Certify that Ms. Ann Wangi Kiragu of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: EVALUATING MFI FACTORS INFLUENCING INDEBTEDNESS STATUS MODERATED BY INFLATION RATE: CASE OF BUSINESSWOMEN BORROWERS-NAIROBI COUNTY for the period ending : 02/March/2024.

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Director General

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