

**AN ASSESSMENT OF THE FACTORS THAT INFLUENCE THE LEVEL OF
INDEBTEDNESS OF MOBILE BORROWING MICROENTREPRENEURS IN
NAIROBI COUNTY, KENYA**

KARUNGU MARY WANGUI

MBA/46062/17

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DECLARATION

I declare that this dissertation 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 dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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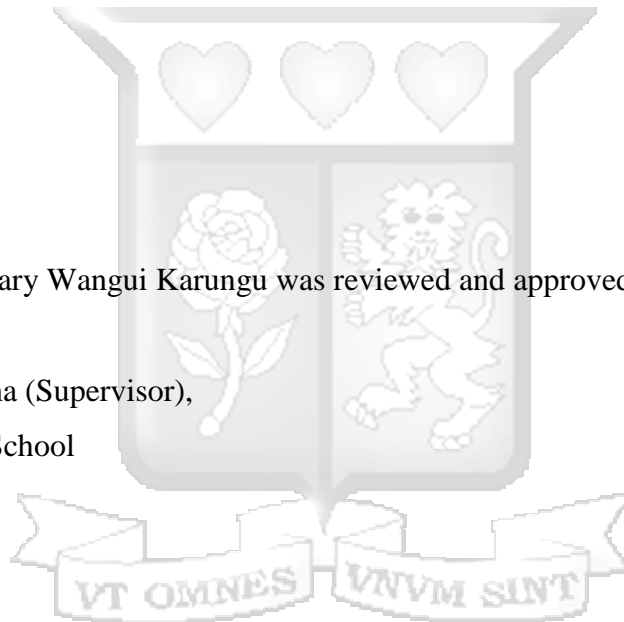
Approval

This dissertation of Mary Wangui Karungu was reviewed and approved by:

Dr. Elizabeth Muthuma (Supervisor),
Strathmore Business School

Dr. George Njenga,
Dean, Strathmore Business School

Dr. Bernard Shibwabo,
Director, Strathmore School of Graduate Studies
Strathmore University



ABSTRACT

The proliferation of mobile lending applications has greatly impacted on the ease of access to credit amongst borrowers in Kenya. The advent of M-PESA in 2007 brought immense transformation in respect to mobile money transfer and paved the way for the development of the mobile lending platforms. One of the major problems that MSMEs face is the lack of financing. This has been worsened by the interest rate capping which has made banks more reluctant to lend to them. Left with very few borrowing options, access to mobile lending platforms seems to be an ideal solution to the problem. There has, however, been an increase in the number of people negatively listed on the Credit Reference Bureau for default on mobile loans. There is therefore need to understand whether and how mobile lending has impacted on the level of indebtedness of micro-entrepreneurs in Nairobi City County. Thus, the researcher proposed to assess the effect of mobile loan borrowing on the level of indebtedness among micro-entrepreneurs in Nairobi City County. The specific objectives of study involved; evaluating the influence of demographic factors on the level of indebtedness of the borrowers; establishing the relationship between behavioural factors and the level of indebtedness of the borrowers' and evaluating the relationship between financial literacy and the level of indebtedness. The study embraced a descriptive and correlational study design through a quantitative survey to evaluate the study questions. The target population involved 224,668 micro-entrepreneurs operating in Nairobi City County and through Yamane Formula; a total of 400 respondents were sampled. Data analysis sought to establish if any relationship existed between the variables via Statistical Package for Social Sciences. The quantitative analysis was conducted by use of descriptive and inferential analysis techniques. Data representation utilised graphs in form of pie charts and tables for means, standard deviation, variances, and correlation coefficients. The study was able to obtain a 71% response rate with the majority of the respondents being over 26 years. The findings of the research indicate that the mobile loan borrowing factors have a positive relationship with the level of indebtedness as indicated by Adjusted $R^2 = .716$. The study concludes that behavioral factors, terms and conditions as well as demographic factors have a positive effect on the level of indebtedness. The research recommends that there is need for more regulation to be introduced in the mobile lending industry as well as introduce requirements that can integrate mobile lending into the financial sector. The study further recommends that the management of the mobile lending firms should enhance their screening process and promote better financial literacy.

Keywords: *Behavioral factors, Terms and Conditions, Demographic factors, Indebtedness*

LIST OF ABBREVIATIONS AND ACRONYMS

CBA:	Commercial Bank of Africa
CBK:	Central Bank of Kenya
CFK:	Consumer Federation of Kenya
CRB:	Credit Reference Bureau
FinTech:	Financial Technology
FSD:	Financial Sector Deepening
GSMA:	Global System Mobile Association
KCB:	Kenya Commercial Bank
MSMEs:	Micro Small and Medium sized Enterprises
NPLs:	Non-performing Loans
SMEs:	Small and Medium sized Enterprises



OPERATIONAL DEFINITION OF TERMS

- Behavioral factors** This refers to the sociological risk factors associated with borrowers of mobile loans
- Demographic factors** This refers to the socioeconomic characteristics of the borrowers
- Indebtedness** This is the struggle to meet payment deadlines whilst making unduly high sacrifices to meet your obligations
- Terms and Conditions** This refers to the lending requirements, rules and the guidelines that guide access to a service



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DEDICATION

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

According to the World Bank (2018) financial inclusion is a key enabler to poverty reduction and boosting prosperity. Financial inclusion is defined as the access of businesses and individuals to affordable financial products and services such as transactions, payments, credit and insurance that are delivered in a responsible and sustainable way (World Bank, 2018). One of the ways in which Sub-saharan African countries have promoted financial inclusion is by creating a conducive environment for the provision of mobile financial services (World Bank, 2018).

Kenya in particular has experienced a significant improvement in the financial inclusion landscape with 82.9% of the population having access to formal financial services in 2019 as compared to 2006 where only 26.7% had access. The increase is mostly attributable to the growth of the mobile money sector (Financial Sector Deepening Kenya, 2019).

Despite the benefits that financial inclusion yields, concerns have emerged about the cases of overindebtedness amongst micro-finance borrowers (Schicks, 2013). Kenya faces similar concerns in its emerging mobile lending industry. In 2017, around 2.7 million Kenyans were negatively listed on the Credit Reference Bureau of Kenya for defaulting on mobile loans 400,000 of whom were listed for amounts of less than Kshs. 200. Negative listing on CRB has adverse effects on future borrowing as the borrower's credit rating goes down and may eventually lead to financial exclusion (Wright, 2017).

1.1.1 Level of Indebtedness

There is no consensus in literature on how to define indebtedness (D'Alessi & Iezzi, 2013; Schicks, 2010). Schicks (2010) defines indebtedness as the struggle to meet payment deadlines whilst making unduly high sacrifices to meet your obligations. Similarly, Martinez and Gaul (2011) define indebtedness as state in which the borrower's debts exceed his repayment capacity. According to D'Alessi and Iezzi (2013), various European countries define indebtedness differently. Germany describes indebtedness as inability to meet

financial obligations despite reduction in living expenses whereas UK describes it as being constantly in arrears when paying regular bills. In their study of indebtedness from a customer protection perspective, Schicks (2013), defined over -indebtedness as the continuous struggle to meet payment deadlines and having to make unduly high sacrifices to meet loan obligations.

Despite the differences in the definition, common features of indebtedness are: being constantly in arrears, making high debt payments relative to income, making heavy use of credit, making unduly high sacrifices to meet loan obligations and finding debt a burden. For the purpose of this study, the definition of indebtedness as per Schicks (2013) shall be adopted. Over-indebtedness shall be defined as struggling to meet payment deadlines whilst making unduly high sacrifices to meet loan obligations. It is not only important to measure the level of indebtedness but also to be able to predict it and put in place preventive measures.

Scholars have identified three major categories of factors that lead to over indebtedness of borrowers. The first category is supply side factors such as how the lenders compute the loan amounts to be issued and their marketing techniques. Second is the demand side factors, these are the factors that are unique to the borrower such as demographic factors, behavioural factors and financial literacy. Lastly are the external factors which are beyond the control of both the lender and the borrower such as income loss, taxes and government regulations. (Anderloni & Vandone, 2011; Sinha, 2011 ; Deaton, 2005; Bridges & Disney, 2004).

According to Schicks (2012) liberalization of financial markets through reduction of interest rates leads to increased competition amongst finance providers hence leading to harmful lending practices such as over-lending. This is where the lenders issue loans that borrowers do not have the capacity to repay. Sinha (2011) on the other hand argues that the supply-driven problem is caused by irresponsible lenders who target easy to reach clients who are desperate for loans but have limited access to lenders and charge them interest rates way above the market rates. Schicks (2010) asserts that supply side factors include: focus on portfolio growth hence engaging in market campaigns to push borrowers to borrow more, offering inappropriate products that have very short repayment periods such that borrowers do not have enough time to generate returns from borrowed funds invested and lastly inappropriate lending procedures for example through the credit rating methods used to determine the amount of loans that the borrowers qualify for.

This study sought to address the indebtedness problem from the demand side perspective. Demand-side factors identified by different authors as causes of indebtedness include: demographic factors, behavioural factors and level of understanding of terms and conditions. (Kaffenberger, 2018; Mpogole et al, 2012; Schicks, 2010). According to Anderloni & Vandone (2011), behavioural factors are a key cause of indebtedness amongst borrowers. Behavioural factors in this case relate to impulsivity, overconfidence and myopia. Due to the time lapse between consumption and repayment of borrowed funds, borrowers tend to misuse the funds without regard of the consequences. This is evidenced by the studies carried out by Hirschman (1979) and Feinberg (1986) that showed that consumers tended to purchase more when using credit due to the delayed pain in paying back the money.

Borrowers also tend to be overconfident about their ability to repay debts and understate the occurrence of income shocks such as loss of jobs and poor business performance. Due to this, borrowers end up borrowing more than they can service (Anderloni & Vandone, 2011). The Jumpstart Coalition for Personal Financial Literacy defines financial literacy as the ability to use knowledge and skills to manage one's financial resources effectively for lifetime financial security (Hastings, Madrian, & Skimmyhorn, 2013)

A major aspect of financial literacy is knowledge of financial concepts in order to make sound decisions (Hastings, Madrian, & Skimmyhorn, 2013). Due to the instantaneous access to mobile loans, borrowers may not have ample time to read through the terms and conditions (Chen & Mazer, 2016). This supports the theory of bounded rationality that stipulates that decision makers make less optimal decisions due to the lack of sufficient resources such as time and information.

Wright (2017) also highlights lack of understanding of loan terms and conditions as a factor that contributes to the indebtedness of mobile borrowers. Schicks (2014) carried out a study in Ghana to determine the level of indebtedness of micro-entrepreneurs who had access to microfinance. A similar study was also conducted in Kosovo by Pytkowska and Spannuth (2011) and found that poor business performance, multiple borrowing and non-productive use of loans were some of the major causes of indebtedness amongst micro-entrepreneurs. Herdjiono and Marlina (2016) indicates that financial literacy and demographic factors were key to enhancing financial behavior among borrowers. Makorere (2014) in a regional study indicates that grace period, profitability, moral hazard, electricity rationing, and economic

stability were predictors of loan repayment. Wamalwa (2016) notes that education level, age and income level were predictors of loan repayment.

1.1.2 The Mobile Borrowing Landscape in Kenya

The Global System Mobile Association (2012) defines mobile money as a platform which uses a mobile phone to access financial services. The first mobile money platform in Kenya, M-PESA, was launched in March 2007 by Safaricom a leading telecommunications company in Kenya. The aim of the platform was to provide money transfer services to all Kenyans some of whom had been previously locked out of the formal financial services system. Nine (9) months after its launch, M-PESA had slightly over 1 million users (Safaricom, n.d.).

Based on the mobile money transfer technology, mobile lending and saving platforms were developed. In 2012, the first mobile saving and lending platform in Kenya, M-Shwari, a collaboration between Safaricom and Commercial Bank of Africa was launched (Safaricom, n.d.). More banks followed suit with Kenya Commercial Bank (KCB) partnering with Safaricom to introduce KCB-M-PESA in 2015, Eazzy banking by Equity group's Finserve in 2016, Co-operative Bank's MCo-op Cash in 2016 and most recently Timiza by Barclays Bank in 2018. (Reuters, 2018).

The other dynamic in mobile lending is based on mobile applications by financial technology firms that form the bulk of the mobile lending service platforms (Murunga, 2018). The applications are accessed via Google Playstore and Apple Store and installed in the user's phone and use predetermined algorithms to determine the borrower's credit limit. Examples of these applications are: Tala by Inventure Capital Corporation, Branch by Branch International, Zidisha and Okash among others. According to Totolo (2018), an estimated 6 million Kenyans actively use mobile loans. The 2019 FinAccess Household Survey further found that mobile loans were the highest source of formal credit whilst the digital loan applications were the third highest source of informal credit after credit from shopkeepers and funds from family and friends.

The key attributes that differentiate mobile loans from traditional credit sources and make them more attractive are: the instantaneous, automated and remote nature of the loans. This means that borrowers can access loans in a very short span of time, at times even a matter of minutes hence reliability and convenience for emergencies. Since they are automated, they don't use the traditional means of credit rating but use preset parameters mostly based on

history of mobile device use to determine a borrower's credit limit. This allows for access to credit for borrowers who would have otherwise been locked out of the more traditional credit sources. Mobile loans access is also remote, hence the borrowers can register accounts, apply for loans and pay for them without face to face interaction, hence the ability to reach borrower's in less developed areas without having to incur the capital expenses of brick and mortar structure (Chen & Mazer, 2016).

Mobile loans are also popular because they do not require collateral for the loans to be offered (Kinyanzui, Achoki, & Kiriri, 2018). Abayo and Oloko (2015) also assert that many small-scale business owners have benefited from mobile loans after the interest capping in 2016 locked them out from borrowing from mainstream banks. Despite their popularity, Business Daily (2016) reported that in 2016 approximately 400,000 mobile loan borrowers were negatively listed on CRB for amounts less than Kshs. 200. This may be partly attributable to lack of ability to pay, lack of understanding of the terms and conditions of the loans and also misuse of the debt borrowed due to ease in accessibility (Wright, 2017). It is therefore imperative to examine the relationship between mobile loan borrowing and level of indebtedness in order to put in place preventive measures.

1.1.3 Micro-Entrepreneurs

Micro-entrepreneurs are defined as business owners running entities which employ less than ten people, started with a specific amount of capital and specialise in provision of goods and services in a given area (KNBS, 2016). The MSMEs Act (2012) cites micro-enterprises as any firm, service industry or business activity having an annual turnover Ksh 500,000 and below and whose total assets and financial investment are as established by the Ministry of Industrialisation periodically. Further, according to Dasgupta (2018) micro-enterprises are the most vibrant socio-economic sector in developing nations in fostering economic growth and development. Muriithi (2017) also cites that small and micro enterprises offer 90% of employment opportunities in developing countries hence greatly contributing to the Gross domestic Product (GDP).

However, micro-enterprises face great challenges in accessing credit due to lack of securities. A study by (Karanja, Nyakirimi, & Mwangi, 2014) found that women entrepreneurs in Kenya encountered rigid lending procedures that do not accommodate their needs. Nevertheless, the proliferation of mobile lenders has offered the opportunity of micro-entrepreneurs to access

credit without the need for security to start business or for expansion purposes. Accessibility to credit also allows the poor to invest in their micro-enterprises which also boosts their income earning opportunities, this is unlike the past where credit facilities were generally inaccessible to a majority of the population (Ozili, 2018). This study adopted the definition of a micro-entrepreneur by KNBS (2016) that is a business owner running an entity that employs less than ten (10) people. These employees may include working owners, apprentices, fully paid employees and unpaid family members.

1.2 Statement of the Problem

Micro-entrepreneurs play an important role in the economic growth of developing countries. This is through provision of employment and income generating activities that enable people to access education and health facilities hence ending the vicious poverty cycle. (Dasgupta 2018; Muriithi 2017; Hassan & Ahmad, 2016). They are however faced with financing problems mostly due to the lack of collateral and irregular cashflows that increase their business risk hence high interest rates charged by financial institutions (Gichuki, Njeru, & Tirimba, 2014; Karanja, Nyakirimi, & Mwangi, 2014). In addition to collateral requirements and high cost of borrowing, a study by Uddin (2014) on the problems faced by MSMEs in India when raising debt capital, found that excessive paper work and long loan processing time were also significant challenges faced by entrepreneurs when accessing debt from financial institutions. However, the increasing proliferation of digital borrowing platforms has also led to increased access to unsecured loans. With this unchecked borrowing most small businesses and individual borrowers have been faced with an increasing burden of indebtedness (Boateng, Amoah, & Anaglo, 2015; Wamalwa, 2016). In 2016, it was reported that approximately 400,000 mobile loan borrowers were negatively listed on CRB for amounts less than Kshs. 200. This may be partly attributable to lack of ability to pay, lack of understanding of the terms and conditions of the loans and also misuse of the debt borrowed due to ease in accessibility

Studies carried out have shown that mobile loan borrowers are struggling to pay off their debts (Wright 2017; Kaffenberger & Chege, 2016). A study carried out by Totolo (2018) to assess the market demand for mobile loans in Kenya found that atleast 50% of the mobile borrowers had delayed on the payments for one reason or another and a further 13% had defaulted on payments. Major reasons of default given were failed business performance and loss of income. A similar study was carried out in Tanzania by Kaffenberger (2018) and

found that atleast 50% of the mobile borrowers had delayed on their payments and a further 30% defaulted on them. Whilst these studies addressed the level of indebtedness of the overall mobile loan borrowers' population, none of them was specific to the category of micro-entrepreneurs. This study therefore sought to fill the research gaps identified, that is, to assess the relationship between demand-side factors of mobile loan borrowing and level of indebtedness of micro-entrepreneurs.

1.3 Research objectives

1.3.1 General Objective

The general objective of the study is to establish the effect of mobile loan borrowing on the level of indebtedness of micro-entrepreneurs in Nairobi County, Kenya.

1.3.2 Specific Objectives

The specific objectives of the study are as follows:

- i. To examine the influence of micro entrepreneurs' demographic factors on their level of indebtedness.
- ii. To examine the influence of micro entrepreneurs' behavioural factors on their level of indebtedness.
- iii. To determine the influence of the micro entrepreneurs level of understanding of loan terms and conditions on their level of indebtedness.

1.4 Research Questions

- i. What is the influence of micro entrepreneurs' demographic factors on their level of indebtedness?
- ii. What is the influence of micro entrepreneurs' behavioural factors on their level of indebtedness?
- iii. What is the effect of micro-entrepreneurs' level of understanding of loan terms and conditions on their level of indebtedness?

1.5 Significance of the Study

The study will be useful to the Central Bank of Kenya as it would give insights on the impact of mobile lending on micro-entrepreneurs hence contribute towards the drafting of regulations to cushion borrowers against harmful lending practices. The study would also be useful to the Consumer Federation of Kenya (CFK) as it would help them draft adequate policies to protect Kenyan borrowers from potentially harmful lending practices. The study will also be important to the various mobile loan providers as it would help them get in depth insight on the impact of the loans on level of indebtedness of their clients hence assess the potential impact of their products on them. This would in turn form a basis of development of products best suited for this class of customers so as to not only protect them financially, but also ensure sustainability of the segment.

The study would also be useful to the borrowers themselves as they would understand the actual impact that the mobile credit has on their finances and well-being hence encouraging them to take precaution when using the facilities or alternatively to use them to their advantage. This study is important as it shall form a basis for future studies on the impact of mobile loans and other non-traditional forms of credit on borrowers with respect to indebtedness in light of ease of access to credit. The study will also suggest areas of further research.

1.6 Scope of the Study

The study was limited to the assessment of the level of indebtedness of micro-entrepreneurs who have access to mobile loans within Nairobi County. The study therefore did not cover the other classes of mobile loan borrowers and was only be carried out in Nairobi as it is the capital city and therefore the hub of financial activities.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review on the phenomenon under study. A theoretical framework has been presented to explain the study phenomenon and extend the existing knowledge of the study objectives. The chapter also covers the empirical review of literature on the various study objectives followed by a conceptual framework showing the study variables and the hypothesized relationships among them.

2.2 Theoretical Foundation

The study was grounded on the theory of bounded rationality as well as the life cycle theory of consumption to examine the relationship between the different factors and the level of indebtedness of micro-entrepreneurs.

2.2.1 The Theory of Bounded Rationality

The theory of bounded rationality was advanced by Herbert Simon (1955) and stipulates that due to limitation of resources available such as time and information, and human cognitive limitations, individuals tend to make satisfactory rather than optimal decisions. This goes against classical economic theories that stipulate that individuals are rational and make decisions based on options that give optimal utility. The theory of bounded rationality is founded on the observation that consumers have very their limited capability to process information, that results to the people seeking to achieve fulfilling and not essentially the optimum satisfaction level (Simon, 1972).

A major criticism of this theory is that it though it highlights the weaknesses of the Rational Theories such as the Expected Utility Theory, it however doesn't give practical solutions or courses of action on how to make decisions. (Genc & Ates, 2015). A Mixed Scanning Approach to decision making was advanced by Amitai Etzioni (1967) to remedy the weaknesses of both the Rational Theories and the Theory of Bounded Rationality.

Due to the instantaneous nature of mobile borrowing, borrowers may not have adequate time to comprehensively review terms and conditions of the loan and also to compare the loans provided by different lenders (Simon, 1972). The borrowers therefore tend to borrow from

platforms which are readily available and satisfy their immediate needs. The results of the study will therefore help the researcher assess the applicability of this theory to the target population. This theory was integral in the study in explaining how the various factors such as level of understanding of loan terms and conditions, the level of education and behavioural factors of the borrowers affect their borrowing decisions and ultimately their level of indebtedness.

2.2.2 Life Cycle Theory of Consumption

The Life Cycle Theory of Consumption was developed by Franco Modigliani and Richard Brumberg in the 1950s. It stipulates that individuals try to maintain a constant consumption flow throughout their lifetime hence they borrow when income levels are low and save when income levels are high. According to this theory, an individual's income is expected to be higher in their later years as compared to their earlier years, therefore, in order to make smooth consumption over their lifetime, they tend to borrow more in the present with the hope that they can pay back in the future. (Deaton, 2005).

The major criticism of this theory is that individuals have all the information needed to plan both their present and future consumption and are rational enough to maintain the same level of consumption over the years.

This study sought to determine the influence of behavioural factors and demographic factors such as age on the level of indebtedness. The results of this study will therefore help the researcher evaluate the applicability of this theory to the target population under study in reference to the influence of age and behavioural factors on borrowing behaviour.

2.3 Empirical Review

The empirical literature looks into various studies that assess the relationship between borrowing and indebtedness. Reviewed literature highlights a number of diverse studies that have been conducted, mode of study and the study outcome to exemplify and support the prospective study process to be utilised in this research study.

2.3.1 Demographic Factors and Level of Indebtedness

According to Anderloni and Vandone (2011) various demographic factors such as age, gender, level of education and income levels affect the level of indebtedness of borrowers. In

their study of household indebtedness in Italy, D'Alessi and Iezzi (2013) found that individuals below the age of 30 years had the highest perceived level of economic distress unlike their older counterparts. According to the study, the level of indebtedness reduces with age. This is in line with the Life Cycle theory of consumption that stipulates that in order for one to maintain the same consumption levels throughout their lives, they have to borrow more when they are younger as they have lower income levels at that time (Deaton, 2015).

In their study of gender gap over-indebtedness in Germany, Meyll and Pauls (2018) found that women were less likely to become over-indebted as compared to men. In their study of credit card indebtedness amongst college students in the U.S.A., Wang and Xiao (2009) found that gender was insignificant in determining the level of indebtedness of the students. The differences in the studies may partly be attributable to the cultural setting that the study was carried in. This study therefore sought to determine the impact of gender on the level of indebtedness in the Kenyan setting.

Herdjiono and Marlena (2016) examined the relationship between financial literacy and demographic factors with financial behaviour. The study focussed on 171 college students and relied on questionnaires that were analysed using correspondence analysis and chi-square test. Findings show that financial literacy is a determinant of enhancing better financial behaviour and helps college students avoid risk of borrowing. The results further indicate that students who have parents with relatively low income show high finance behaviour. The study was however limited to college students whereas the current research sampled micro entrepreneurs in Nairobi City County.

Schicks (2014) conducted an empirical analysis of related factors on the borrower level of over-indebtedness in Microfinance in Ghana. The study adopted an explanatory research design with both qualitative and quantitative data used. The findings of the analysis indicate that male micro-borrowers are more likely to be over-indebted. The study further shows that borrowers with adverse economic shocks, low returns on investment, and non-productive loan usage. The study however focused on microfinance lending whereas the current research will focus on mobile loan lending platforms.

Boateng, Amoah and Anaglo (2015) studied the influence of demographic factors, products and service characteristics of microfinance institutions on repayment performance among farmers in the eastern region. The research adopted the survey research method was used to

collect data from two hundred and forty farmers who have received microfinance support from MFIs. The study relied on chi square analysis and regression testing. The findings of the study showed that loan repayment is dependent of gender of borrowers, different age categories have different repayment performance while findings also showed that respondents with no formal education had higher rates of defaulting on loans. The study utilized a mixed research method whereas current study will utilize a quantitative methodology.

Ogubazghi and Muturi (2014) conducted a study on the effect of age and educational level of managers on access to bank loan in Eritrea. The study adopted a descriptive research design that relied on structured questionnaire in the data collection. The collected data was analysed using correlation and regression analysis. Findings indicate that age and education level were positively related to access to bank loan. The study further indicated that formalization of small businesses was related to better access to finance. The research however focused on loan access whereas current study examines level of indebtedness among micro entrepreneurs.

Kyalo and Kiganane (2014) examined the challenges facing women entrepreneurs in Africa; a case of Kenyan Women Entrepreneurs. The research utilized an exploratory and descriptive research designs with questionnaires used as a tool of data collection. The collected data was analysed using Chi Square tests with logistic regression being utilized in the analysis. The study revealed that demographic factors such as age, education level and income level were the key challenges affecting access to credit among women entrepreneurs. The study however focused on access to women entrepreneurs whereas the current study focussed on the level of indebtedness.

Wamalwa (2016) examined the determinants of loan repayment by borrowers from micro-financial institutions in Nakuru County Kenya. The study sampled 590 loan borrowers with cross sectional data being collected using questionnaires. The data was analysed using linear multiple regression model and the findings of the study indicate that education level, income level and age negative were significant determinants of loan repayment. The study further indicated that gender was found not to be a key determinant of loan repayment. The study focused on micro-borrowers in Nakuru County whereas current study will focus on micro entrepreneurs in Nairobi City County.

2.3.2 Behavioural Factors and Level of Indebtedness

According to Anderloni and Vandone (2011), behavioural factors such as impulsivity, overconfidence and myopia are major cause of indebtedness amongst borrowers. In his theory of bounded rationality, Simon (1972) asserts that reasons why consumers do not make decisions that maximize their utility is not because of being irrational but rather their rationality is bounded by inadequate resources and cognitive biases. In their study about the relationship between impulsivity and household indebtedness, Ottaviani and Vandone (2011) used skin conductance tests while carrying out impulsivity tests on their 445 participants. The study found that there was a significant relationship between impulsivity and indebtedness on unsecured loans.

Patiro and Budiyaniti (2016) conducted an analysis of the situational factors, and self-identity factors that drive Indonesian entrepreneurs to be indebtedness. The study was premised on the theory of planned behaviour and relied on mixed research data collected from 100 questionnaires within entrepreneurs. The findings of the study indicate that attitude, subjective norms, perceived behaviour control, self-identity, situational temptation, and past behaviour are key predictors of indebtedness among entrepreneurs. The study however was limited to Indonesian entrepreneurs while the current study focuses on micro entrepreneurs in Nairobi County.

Fatollahi and Samani (2015) examined the factors contributing to repayment behavior of micro loans in Agricultural Bank of Meshkinshahr. The study adopted a descriptive research design with data being collected from 150 farmers who had accessed microloans. The research further utilized logistic regression in the analysis. The findings showed that frequency of borrowing, supervision of the credit, occupation, credit received, and usage of the credit were found to be significant predictors of repayment. The study however failed to take into consideration how demographic and terms of the credit affected repayment.

Murthy and Mariadas (2017) conducted a study on the factors contributing loan repayment default among the loan borrowers in Micro Finance Institutions. The study adopted an exploratory research design with questionnaires being distributed to 120 loan borrowers of micro finance institution in Selangor. The collected data was analyzed using descriptive and inferential analysis. The results show that there is a positive relationship between nature of business operation and negative relationship between age of borrowers, diversion of funds by

borrowers as well as repayment schedule to loan defaults. The study was limited to borrowers from microfinance institutions whereas current study will consider borrowers from mobile lending platforms.

Mensah, Raphael, Dorcas and Kwadwo (2013) studied the relationship between loan default and repayment schedule in microfinance institutions in Ghana with a case study research design being adopted in the research. The collected research data was analysed by means of Ordinary Least Square (OLS) Regression and ANOVA analysis. The findings show that no significant relationship between loan default and repayment schedule in Microfinance institutions. The results however indicate that interest charged on loans, moral hazard and over-borrowing by customers was significantly associated with loan default. The research adopted a case study research whereas current study employs a descriptive research.

Maina, Kinyariro, Muturi and Muriithi (2016) examined the influence of credit information sharing and level of loan default in deposit taking SACCOs in Meru County, Kenya. The study adopted a descriptive research design with both qualitative and quantitative research being utilized. Findings of the analysis show that there is a strong relationship between credit reports, credit scoring and level of loan default. The study further indicates that credit information sharing on borrowers profile and risk aversiness significantly influenced level of loan default. The study however focused on loan default within DT-Saccos whereas current study examines indebtedness among micro entrepreneurs.

2.3.3 Terms and Conditions and Level of Indebtedness

Financial literacy refers to the comprehension of financial concepts that enables individuals to assess the risks and opportunities of their financial decisions. Understanding the terms and conditions of the loans taken up is an aspect of financial literacy (Sevim, Temizel, & Sayılır, 2012). A study carried out by Sevim, Temizel and Sayılır (2012) sought to find out the effect of financial literacy on the borrowing behaviour of Turkish financial consumers. A sample of 550 consumers participated in the survey. Data collection method used was a combination of questionnaires and interviews. It was established that those consumers with low level of financial literacy tended to borrow excessively and misuse loan money whereas those who had a higher level of financial literacy tended to use loan money more responsibly. Aspects of financial literacy measured were the costs of different loans, reading the terms and conditions

of the loans before borrowing and comparison of cost of loans with different maturity periods.

Sahani, Bansal, Sahani, Khatiwada and Bhattarai (2018) studied the level of over-indebtedness in Nepalese Microfinance Institution. The research adopted a descriptive analytical research design with a sample of 150 clients being considered in the research. The results show that over-indebtedness is significantly associated with multiple borrowing, over borrowing, family obligation, loan recycling, and relaxed or simple loan procedures were the key determinants. The study focused on Nepalese MFIs whereas the current research will be limited to Kenyan micro lenders.

Nawai and Shariff (2012) conducted an examination of the factors affecting repayment performance in microfinance programs in Malaysia. The research utilized a multinomial logit regression model focusing on 309 respondents drawn from clients within the microfinance. The research relied on a quantitative research data that was analysed using mixed analytical techniques. The results indicate that distance to the lender office, business formality, total sales per month, total loan received, loan monitoring and loan disbursement lag have significantly affected borrower's repayment performance. The study was conducted within Malaysian microfinance programs whereas current study focuses on Kenyan micro lenders.

Makorere (2014) examined the factors affecting loan repayment behaviour in Tanzania using an exploratory study of Dar es Salaam and Morogoro regions. The study utilized a convenience sampling in selecting 100 respondents. The research relied on both descriptive and inferential analysis. The findings of the study indicate that interest rate, grace period, profitability, moral hazard, electricity rationing, and economic stability have a significant effect on the loan repayment performance in Tanzania. The research also indicates that collateral and control of delinquency rate affect repayment performance. The study was however not limited to micro entrepreneurs and micro lending platforms which is the focus of the current study.

In his study on the relationship between financial literacy and loan performance, Ombongi (2015) sampled 217 clients of deposit taking micro-finance institutions in Kajiado County. He sought to establish their level of understanding of loan requirements and general financial concepts. The study found that understanding the loan terms and conditions (the repayment

period, the interest rates and penalties for non-compliance) was imperative to good loan performance. He concluded that it was important for lenders to ensure that their clients clearly understand the terms and conditions of their loans for them to pay on time. Mary-Stella and Kithae (2015) examined the effects of lending conditions on accessibility of funds for youth entrepreneurs in Matungu Constituency, Kenya. The study adopted a descriptive study design and considered entrepreneurs who had accessed funding from the government programs. The findings of the analysis indicate that adherence to the lending policies, proper utilization of the funds and financial literacy enhanced the repayment of youth funds. The study however focused on a government program while the current research explores indebtedness on microloans.

2.4 Summary of Literature and Research Gaps

Table 2.1 Research Gaps

Author	Title	Findings	Research Gap
Maina, Kinyariro, Muturi and Muriithi (2016)	Influence of credit information sharing and level of loan default in deposit taking SACCOs in Meru County, Kenya	The study indicates that credit information sharing on borrowers profile and risk aversiness significantly influenced level of loan default.	The study however focused on loan default within DT-Saccos whereas current study examines indebtedness among micro entrepreneurs.
Patiro and Budiayanti (2016)	An analysis of the situational factors and self-identity factors that drive Indonesian entrepreneurs to be indebtedness	The findings indicate that attitude, subjective norms, perceived behavior control, are key predictors of indebtedness among entrepreneurs.	The study however was limited to Indonesian entrepreneurs while the current study focuses on microentrepreneurs in Nairobi County
Sahani, Bansal, Sahani, Khatiwada and Bhattarai (2018)	The level of over-indebtedness in Nepalese Microfinance Institution.	The results show that over-indebtedness is significantly associated with multiple borrowing, overborrowing and family obligations.	The study focused on Nepalese MFIs whereas the current research will be limited to Kenyan microlenders.
Schicks (2014)	An empirical analysis of related	The findings of the analysis indicate that	The study however focused on microfinance lending

factors on the male micro-borrowers whereas the current research borrower level of are more likely to be will focus on mobile loan over-indebtedness over-indebted. lending platforms. in Microfinance in Ghana

Wamalwa (2016) Determinants of loan repayment by borrowers from micro-financial institutions in Nakuru County Kenya Findings of the study indicate that education level, income level and age negative were significant determinants of loan repayment The study focused on micro-borrowers in Nakuru County whereas current study will focus on microentrepreneurs in Nairobi City County.

Source: Researcher, (2019)

2.5 Conceptual Framework

The conceptual framework outlines the variables involved in the study with respect to the level of indebtedness of micro-entrepreneurs. The independent variables in the study are: demographic factors, behavioural factors and level of understanding of the loan terms and conditions whereas the dependent variable is the level of indebtedness.

Independent Variables

Dependent Variable

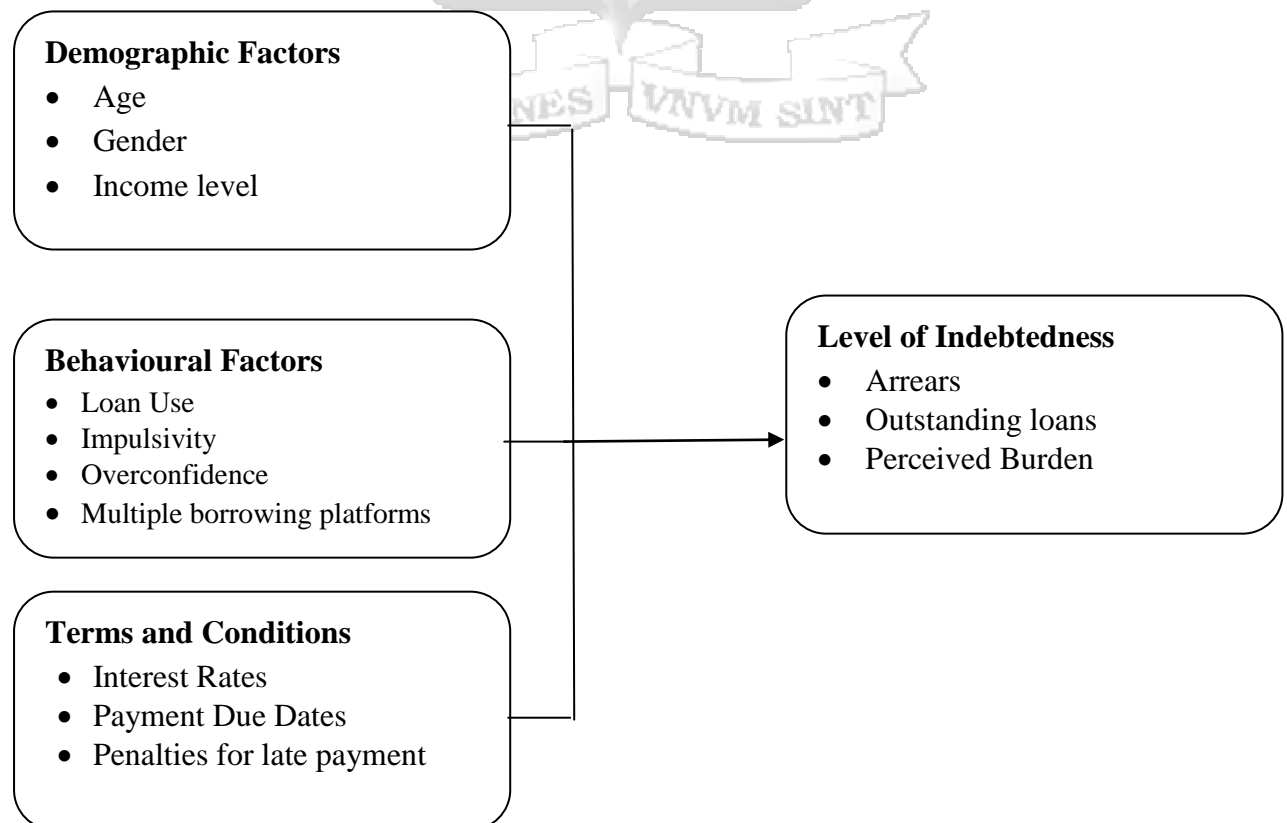


Figure 2.1 Conceptual Framework

Source: Researcher, (2019)

The above conceptual framework presents the hypothesized relationship between mobile loan borrowing and the level of indebtedness. The mobile loan borrowing components were conceptualized by the demographic factors, the behavioral factors and the term and conditions. The level of indebtedness among microentrepreneurs was conceptualized in terms of the arrears, the number of outstanding loans and the level of the perceived burden. The research constructs were further conceptualized as indicated on the table below;

Table 2.2 Operationalization of Study Variables

Variable	Indicators	Measurement	Data collection tool	Data analysis
Demographic Factors	<ul style="list-style-type: none"> • Age • Gender • Income level 	Respondents demographic profile	Structured questionnaire; 5-point Likert scale	Descriptive analysis and inferential analysis
Behavioural Factors	<ul style="list-style-type: none"> • Loan Use • Impulsivity • Overconfidence • Multiple borrowing platforms 	Respondents behavioral factors	Structured questionnaire; 5-point Likert scale	Descriptive analysis and inferential analysis
Terms and Conditions	<ul style="list-style-type: none"> • Interest Rates • Payment Due Dates • Penalties for late payment 	The lending terms and conditions	Structured questionnaire; 5-point Likert scale	Descriptive analysis and inferential analysis
Level of Indebtedness	<ul style="list-style-type: none"> • Arrears • Outstanding loans • Perceived Burden 	The underlying indebtedness levels	Structured questionnaire; 5-point Likert scale	Descriptive analysis and inferential analysis

Source: Researcher, (2019)

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the methodology of acquiring data as per the research objectives and questions. This includes: the research design, target population, sampling design, data collection and analysis, research quality and ethical considerations.

3.2 Research Design

The study utilised a descriptive and correlational design of study to assess the relationship between mobile borrowing and the level of indebtedness of micro-entrepreneurs. Descriptive research responds to questions that relates to when, where, who, what and how they are linked to specific research questions. Therefore, it attempts to assemble irrefutable and quantifiable information that can be statistically analysed (Kombo & Tromp, 2009). The study also sought to determine the correlation between the independent and dependent variables.

3.3 Target Population

According to Mugenda and Mugenda (2003), the population of study involves a collection of items for investigation. The research study targeted micro-entrepreneurs operating small businesses in Nairobi City County in order to establish how mobile loans have affected their level of indebtedness. The study targeted licensed micro-enterprises which forms 83.8% of micro small and medium enterprises in Nairobi which all total to 268,100 (KNBS, 2016). Thus, the target population for the micro-enterprises in Nairobi City County was a total of 224,668.

3.4 Sampling Design

Sampling refers to the process of selecting a study population from the entire group of target population to get a representative sample (Cooper & Schindler, 2000). The research employed quota sampling as a non-probability sampling method that ensures that units chosen are representative of the various categories of units in the target population (Mugenda and Mugenda, 2003). According to KNBS (2016), the five most common business enterprises

among MSMEs are: Wholesale and Retail trade at 57.1%, Manufacturing at 11.12%, Food Service Activities at 8.88%, Financial Services at 4.2 % and Other Service Activities at 18.7%.

Since the target population was known, the researcher will utilise the Yamane formula to estimate the sample size (Yamane, 1967).

$$n = \frac{N}{(1+Ne^2)}$$

Where; N: is the target population, e: is the error margin at 5% and n: is the sample size

Thus;

$$n = \frac{224,668}{(1 + 224,668(0.05)^2)} = \frac{224668}{1+561.67} = 399.29 \approx 400$$

Thus, the study sample will be 400. To ensure that the sample was representative of the target population, the above proportions were utilised. The research utilized random convenience sampling in selecting respondents within the registered MSME businesses in Nairobi City County. The sample units were as follows:

Table 3.1 Sample Respondents

Enterprise Category	% of the Population	No. Of Units to be Sampled
Wholesale and Retail	57.1%	228
Manufacturing	11.12%	45
Food Service	8.88%	35
Financial Services	4.2%	17
Other Service Activities	18.7%	75
Total	100%	400

Source: Researcher, (2019)

3.5 Data Collection Instruments

Data collection involved a survey utilising a close-ended questionnaire employing a Likert scale. The Questionnaire was self-administered or administered by a research assistant depending on the respondent's literacy level. The questionnaire was divided into four

sections: The first section consisted of general information questions on demographics, employee base, type of mobile loans used and frequency of borrowing. The second section was on influence of behavioural factors on the level of indebtedness. The third section was on the effect of terms and conditions on the level of indebtedness. The third section focused on the demographic factors and their influence on indebtedness. The last section comprised of questions geared towards assessing the respondents' level of indebtedness. The terms used in the questionnaire were simplified for ease of understanding. This helped in ensuring that the respondents participated to the best of their knowledge by having a clear perception of the survey questions. Research assistants were deployed to distribute and wait for the questionnaires to be filled by the sampled respondents. Two weeks were allocated for data collection, and a further two weeks for refining and analysis.

3.6 Data Collection Methods

The research quality involved assessing the validity and reliability of the research tools through a pre-test. The pilot testing was crucial in assessing the accuracy and appropriateness of a research design and tool for data collection chosen in a study (Saunders, Lewis & Thornhill, 2009). This helped in establishing points of weakness or incompleteness and making corrections, while helping in estimating the timeframe and outcome of the actual study. The pilot study was conducted at Muthurwa Market targeting 20 respondents which was approximately 5% of the actual study population. The reason for selecting that sample of the pilot study was because it presented similar characteristics to the target population as it was in Nairobi involving small scale traders dealing with different ventures.

3.6.1 Validity of Research Instrument

Mugenda and Mugenda (1999) define validity as the accuracy and meaningfulness of inferences based on the research outcome of a specific study. Generally, it refers to the degree to which study findings acquired from analysis represent the study variables being surveyed. The researcher validated the research instrument in terms of content and face validity. Content validity involved assessing the extent to which the research tool measures all the facets of the study variables. Expert advice was sought from the supervisor on whether the questions laid out answered the research questions /objectives to assess for face validity. Face validity is the degree to which a specific test subjectively appears to cover the concepts expected to be measured. This was ensured in the research instrument through examining the

variables of the research and confirming that all the items in the operationalization of the variables were included in the research instrument.

3.6.2 Reliability of Research Instrument

Reliability refers to the degree to which a research tool will yield consistent results from the actual study outcome. The researcher administered the research tool during pilot testing and established the consistency of study outcomes. Collected data was analysed statistically to assess reliability using the Cronbach alpha coefficient. A value of Cronbach alpha of 0.70 and above indicated internal consistency which showed that the questionnaire was relevant and effective. According to Lance, Butts and Michels (2006), a Cronbach coefficient alpha of 0.7 and above shows internal consistency indicating reliability of a research tool, thus acceptable for actual study. However, Tavakol and Dennick (2011) cite a range of 0.70-0.95 Cronbach Alpha to be acceptable as low values points towards inter-relatedness between items studied or heterogeneous constructs. Subsequently, a higher value above 0.95 may point towards redundancies and indicate the need for shortening the length of research tool. The outcome of the pilot study is shown below.

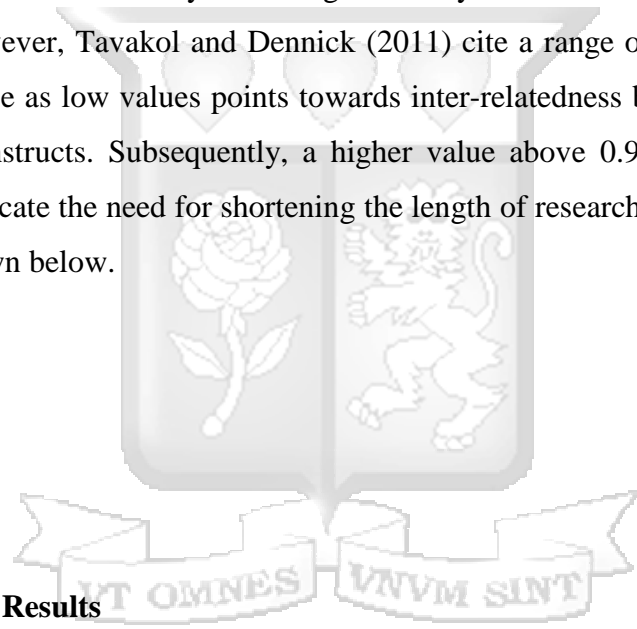


Table 3.2 Reliability Results

Construct	Cronbach's Alpha	N of Items
Level of indebtedness	0.850	5
Demographic factors	0.835	5
Behavioral factors	0.785	6
Terms and Conditions	0.860	6

Source: Researcher (2019)

The results of the analysis indicated that the research constructs had all attained internal consistency as indicated by the Cronbach Alpha scores of above 0.7 as indicated by the results in table 3.2 above hence they were utilized in the main research. Park (2015) indicates

that Alpha scores of above 0.7 are deemed adequate for ensuring internal consistency within the research instrument.

3.7 Data Analysis

Data was analysed using Statistical Package for Social Sciences (SPSS). The researcher first obtained the raw data from the survey, refined it and coded into numerical values for analysis purposes. The coded data was then analysed statistically using SPSS and presented in form of means, variances, standard deviation and frequencies. Representation of the analysed data was done using pie charts and bar graphs. Inferential statistics were used to make inferences and predictions on the study phenomena and the relationships of the variables evaluated. The study adopted the following regression equation;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where;

Y = Dependent variable (level of indebtedness among micro entrepreneurs)

α = the model intercept

β_{1-6} = Coefficient of independent variables

X_1 – demographic factors

X_2 – behavioural factors

X_3 – terms and conditions

ε = Error Term

The study will further undertake statistical tests such as ANOVA to examine the statistical significance of the above regression models. The study further undertook both normality and collinearity tests before undertaking regression analysis.

3.8. Ethical Consideration

The researcher observed utmost ethical standards while collecting data from the respondents. The study followed set standards and in compliance with the Strathmore University Ethics Review Board research guidelines. As part of the government's requirements for primary

research, a NACOSTI license was obtained before embarking on data collection. Ethical guidelines and principles were adhered to; confidentiality of responses given was upheld and data collected was used for the purpose of the study. The identity of respondents remained anonymous and participation was on voluntary basis. Further, the participants were fully informed about the contents of the research, objectives and research process before request to participate. Informed consent was utilised where the participants were requested to sign upon agreement to participate and were free to withdraw in the course of research process. Finally, the research observed originality of content and borrowed concepts in the research report by duly referencing according to APA sixth edition to avoid plagiarism.



CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

This chapter presents the data analysis, presentation and findings on the effects of mobile borrowing on the level of indebtedness of micro-entrepreneurs. The study sought to examine the relationship between the dependent and independent variables. The dependent variable was the level of indebtedness among mobile borrowers and whereas the independent variables were: demographic factors, behavioural factors and level of understanding loan terms and conditions of mobile borrowing among micro-entrepreneurs in Nairobi County.

4.2 Response Rate

The study sampled 400 respondents; obtaining a 71% response rate. According to Cooper and Schindler (2006), any response rate that is above 60% is adequate for statistical analysis. According to Mugenda (2003), a response rate of 70% and above is considered as very good for analysis and reporting. Therefore, the response rate was adequate for data analysis.

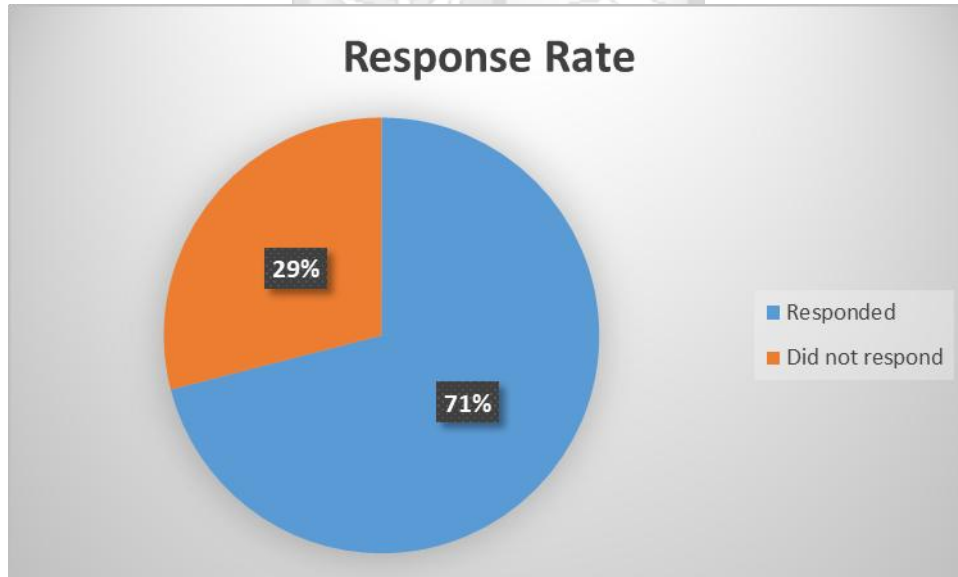


Figure 4.1 Response Rate

Source: Researcher, (2019)

4.3 Background Information

This study objective aimed at examining the relationship between demographic factors and the level of indebtedness of micro-entrepreneurs.

4.3.1 Age of Respondents

The research further sought to examine the age distribution among the study respondents. The findings are represented below;

Table 4.1 Respondents Age

	Frequency	Percent
18-25 years	35	12.3
26-33 years	93	32.6
34-41 years	86	30.2
42-49 years	50	17.5
50 years and above	21	7.4
Total	285	100.0

Source: Researcher, (2019)

The highest percentage of respondents comprised of individuals between the ages of 26-33 years at 32.6% followed by 34-41 years at 30.2%. Other categories had 17.5% for those aged 42-49 years, 12.3% for those aged 18-25 years and 7.4% for those aged 50 years and above.

4.3.2 Gender of Respondents

The gender aspect was assessed to establish the gender distribution of the microentrepreneurs who participated in the study. The male respondents accounted for 50.2% of the sample whereas the female respondents were 49.8%. The almost equal gender distribution helped eliminate gender bias in the response to the study questions.

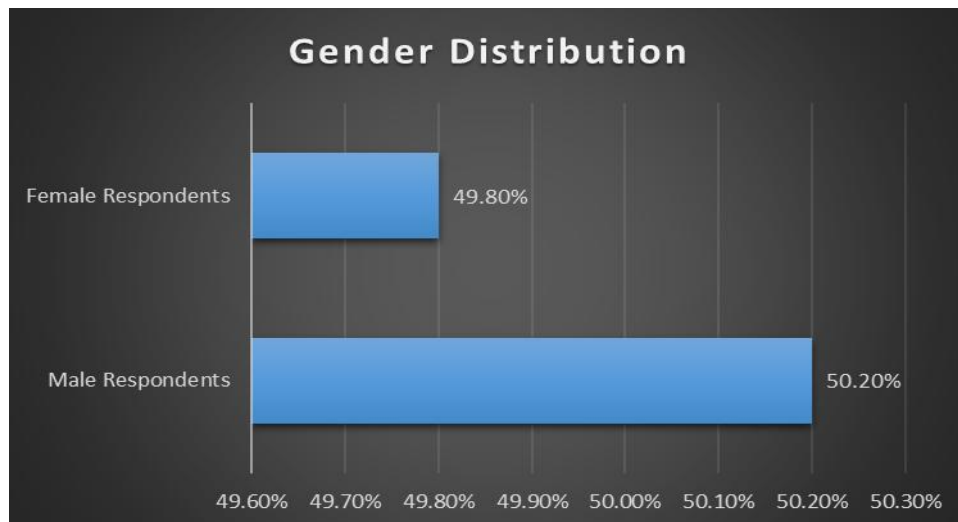


Figure 4.2 Respondents Gender

Source: Researcher, (2019)

4.3.3 Education Level of Respondents

The study further sought to determine the education level of the research respondents. Findings indicate that the highest percentage of respondents possessed college level education at a number of 33%, followed by those who had undergraduate degrees 23.8% and secondary certificates at 23.9%, graduate degrees 46 (16.1%), and lastly primary school certificates 3.2%. The results are shown below;

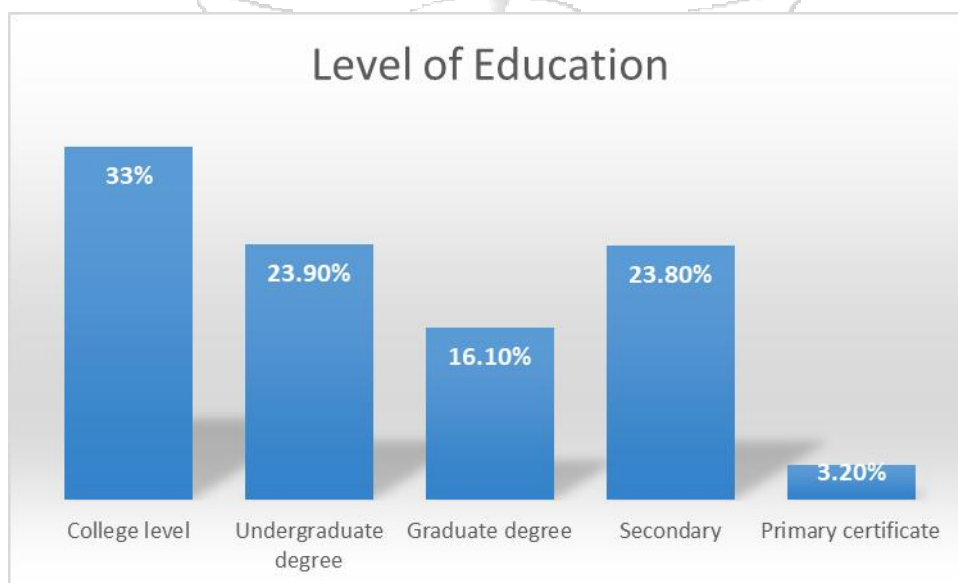


Figure 4.3 Respondents Education Level

Source: Researcher, (2019)

4.3.4 General Factors

The other general factors measured are presented in this section.

4.3.4.1 Business Type

They include: business type, number of employees and frequency of mobile borrowing. The reason why the business type was assessed was to try and replicate the population proportions on the sample picked. The sample distribution as per business type is shown in table 4.2.

Table 4.2 Business Type

	Frequency	Percent
Wholesale/ Retail	90	31.6
Wholesale/ Retail and Financial Services Business	8	2.8
Wholesale/ Retail, Financial Services Business and Manufacturing	1	.4
Wholesale/ Retail and Manufacturing	10	3.5
Financial Services Business	50	17.5
Manufacturing	40	14.0
Food Vending	45	15.8
Others	41	14.4
Total	285	100.0

Source: Researcher, (2019)

4.3.4.2 Number of Employees

The study further sought to examine the number of employee's per business to gauge a business classification as a micro-enterprise. Classification according to number of employees was presented in table 4.4.

Table 4.3 Number of Employees in the Firm

	Frequency	Percent
No Answer	2	.7
1-3	208	73
4-6	58	20.4
7-9	17	6.0

Total	285	100.0
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Source: Researcher, (2019)

Majority of the businesses had between 1-3 employees accounting for 73% followed by 20.4% for businesses with 4-6 employees and 6% for business with 7-9 employees. However, a total of 2 respondents (0.7) percentage failed to indicate the number of employees involved in the business operation.

4.3.4.3 Frequency of Borrowing

The study also assessed the frequency of borrowing within a month to establish the rate of usage among the respondents. The outcome was as presented in table 4.5.

Table 4.4 Frequency of Borrowing

	Frequency	Percent
Rarely	78	27.4
Once	95	33.3
Twice	92	32.3
Thrice	18	6.3
More than thrice (Specify)	2	.7
Total	285	100.0

Source: Researcher, (2019)

Table 4.4 shows that 33.3% of the respondents borrowed mobile loans once per month, 32.3% borrowed twice in a month, 27.4% rarely borrowed, 6.3% borrowed three times and 0.7% borrowed more than three times in a month. This shows the popularity of the loans amongst the borrowers as 72.6% cited that they borrow mobile loans at least once per month.

4.3.4.4 Frequently Used Mobile Lending Platforms

The study further sought to examine the most common applications that borrowers utilize in assessing mobile lending. The findings are shown below;

Table 4.5 Frequently Used Mobile Loans

	Frequency	Percent
M-shwari	240	84.2%
KCB-Mpesa	220	77.2%

Branch	115	40.4%
Tala	200	70.2%
MCo-Op	95	33.3%
Zidisha	73	25.6%

Source: Researcher, (2019)

The findings of the research indicate that the majority of the respondents 84% had accessed M-shwari services, 77% frequently access KCB-Mpesa, 70% had frequent access to Tala and 40% had access to Branch mobile platform. The above findings are in line with the market share statistics which indicate that Safaricom and KCB operate the largest market share within the money mobile services and banking services respectively hence they have the highest usage.

4.4 Descriptive Analysis

In determining the measures of central tendency of the responses obtained within the research, the results were presented using means, standard deviation and tabulation of valid responses obtained.

4.4.1 Behavioral Factors

The first objective of the research sought to examine how the behavioral factors influence the level of indebtedness. The results are shown below;

Table 4.6 Behavioral Factors Descriptive

	N	Sum	Mean	Std. Deviation
Access to mobile loans has increased my monthly spending	285	231.00	4.2778	.85598
There are products I would not purchase if I did not have access to mobile loans	285	247.00	4.5741	.76730

I tend to make unplanned purchases now that I have access to mobile loans	285	241.00	4.4630	.69263
I only purchase the products I need regardless of my access to mobile loans	285	226.00	4.1852	.84840
I am more impulsive in my purchasing decisions due to access to mobile loans	285	218.00	4.0370	1.18103
I have increased my debt burden due to availability of various platforms of mobile loans	285	221.00	4.0926	1.21730

Source: Researcher, (2019)

The findings of the study indicated that there was agreement among respondents that access to mobile loans has increased their monthly spending as shown by a mean of 4.2778 and a variation of .85598 indicating medium variations. Findings also strong agreement that there are products I would not purchase if I did not have access to mobile loans as indicated by a mean of 4.5741. Results of the research indicate agreement among respondents that they tend to make unplanned purchases now that I have access to mobile loans as indicated by a mean of 4.463 and a variation of .69623 showing minimal variations. These findings are in line with Ottaviani and Vandone (2011) who indicated that impulsivity and overconfidence in purchasing was related with increasing indebtedness.

The findings also showed agreement among respondents that they purchase the products they need regardless of my access to mobile loans as indicated by a mean of 4.1852. The research further indicated agreement that respondents are more impulsive in my purchasing decisions due to access to mobile loans as shown by a mean of 4.0370 and a variation of 1.18103 indicating high dispersion in the results. The findings further indicate that respondents have increased their debt burden due to availability of various platforms of mobile loans as shown by a mean of 4.0926 and a dispersion of 1.21730. Patiro and Budiyantri (2016) similarlry

indicates that situational temptations and perceived behavior have contributed to indebtedness.

4.4.2 Terms and Conditions

The second objective of the research sought to examine how the terms and conditions influence the level of indebtedness. The results are shown below;

Table 4.7 Terms and Conditions Descriptive

	N	Sum	Mean	Std. Deviation
Understanding the terms and conditions of mobile lending enhances proper decision-making during loan application.	285	220.00	4.0741	.79745
Poor understanding of terms and conditions results in poor loan servicing and eventual loan default.	285	235.00	4.3519	.64887
Terms and conditions help a customer to determine the amount of loans to request from mobile loan platforms	285	225.00	4.1667	1.09458
Proper awareness on loans terms and conditions enables the borrower to make a better choice of mobile loan app	285	231.00	4.2778	.87775
I compare the costs of different loans before settling on the one to borrow from	285	236.00	4.3704	.62333

The repayment period 285
determines the selection of the 229.00 4.2407 .72516
mobile loan app

Source: Researcher, (2019)

With regard to the understanding the terms and conditions of mobile lending enhances proper decision-making during loan application there was agreement among respondents as indicated by a mean of 4.0741. The results further indicated there was agreement that poor understanding of terms and conditions results in poor loan servicing and eventual loan default as shown by a mean of 4.3519 and a deviation of .64887 showing minimal variations. Findings of the research also indicated agreement that terms and conditions help a customer to determine the amount of loans to request from mobile loan platforms as shown by a mean of 4.1667. Sevim, Temizel and Sayılır (2012) indicates that understanding of the term and conditions was related to an increase in borrowing behavior.

The study further indicated there was agreement among respondents that proper awareness on loans terms and conditions enables the borrower to make a better choice of mobile loan app as indicated by a mean of 4.2778 and a deviation of .87775. The results further indicated that respondents were in agreement that they compare the costs of different loans before settling on the one to borrow from mobile loans as shown by a mean of 4.3704 and a deviation of .6233 showing minimal variation in responses. Findings also indicate that repayment period determines the selection of the mobile loan app as shown by a mean of 4.2407 and a deviation of .72516. Sahani, Bansal, Sahani, Khatiwada and Bhattarai (2018) similarly indicates that simple loan procedures and loan recycling was a key contributor to over-indebtedness.

4.4.2.1 Knowledge of Terms and Conditions

The study further sought to determine the respondent’s knowledge on general aspects of the mobile borrowing terms and conditions. The findings are shown on the table below;

Table 4.8 Knowledge on Terms and Conditions

		Frequency	Percent
Do you read the terms and conditions laid out	Yes	78	27.4%
before borrowing from mobile platforms	No	207	72.6%

Do you know the interest rates charged by the various mobile lenders that you use?	Yes	253	88.7%
	No	32	11.3%
Do you know the repayment period given for those mobile loans?	Yes	279	97.9%
	No	6	2.1%
Do you know the consequences of failing to pay the mobile loans on time?	Yes	262	91.9%
	No	23	8.1%
Total		285	100.0

Source: Researcher, (2019)

The results of the study indicate that of the key factors of knowledge of terms and conditions evaluated, repayment date had the highest level of awareness at 98%, followed by consequences of non-repayment at 92%, interest rates charges at 89% while only 27% of the respondents indicated that they read the terms and conditions.

4.4.2.2 Level of Understanding of Mobile Lender Terms and Conditions

The research further sought to identify the respondent's level of understanding of the terms and conditions of their preferred lenders. The findings are shown below;

Table 4.9 Level of Understanding

	Frequency	Percent
None	15	5%
Basic Understanding	132	46%
Average Understanding	118	41%
Above Average Understanding	20	7%
Total	285	100.0

Source: Researcher, (2019)

The respondents were also asked to gauge their own level of understanding of loan terms and conditions. 46% of respondents felt that their level of understanding of terms and conditions was basic, 41% had average understanding of the terms and conditions, 7% had above average understanding and 5% showed no level of understanding of terms and conditions.

4.4.3 Demographic Factors

The third objective of the research sought to examine how the demographic factors influence the level of indebtedness. The results are shown below;

Table 4.10 Demographic Factors Descriptive

	N	Sum	Mean	Std. Deviation
The accessibility to mobile borrowing is determined by the borrowers' age	285	228.00	4.2222	1.00314
The gender identity of respondents does impact the ability to repay mobile loans	285	236.00	4.3704	1.01491
I believe my income level determines my access to multiple mobile platforms loan offers	285	242.00	4.4815	.79481
The household consumption level determines the demand for mobile loans.	285	230.00	4.2593	.89411
Poor screening of client's demographics by mobile lenders has led to increased level of indebtedness	285	223.00	4.1296	.86975

Source: Researcher, (2019)

The respondents agreed that access to mobile loan platforms is determined by the age of the borrower as indicated by a mean of 4.2222 and variation of 1.00314 indicating high dispersion. Findings further indicated that respondents agreed that the gender identity of respondents does impact the ability to repay mobile loans as shown by a mean of 4.3704 and a dispersion of 1.01491 indicating high variations. These findings are in line with Anderloni and Vandone (2011) who indicates that age, gender and education are predictors of the indebtedness levels. Wang and Xiao (2009) also indicate that gender is a not a significant factor in determining indebtedness levels.

The study respondents were in agreement that the income level of the borrower determines the need to access mobile loans as indicated by a mean of 4.4815 and a variation of .79841 showing moderate variation in the responses. The above results are in line with observations by Deaton (2015) who indicates that the level of income determines the level of indebtedness. Findings of the study further indicated agreement that household consumption level determines the demand for mobile loans as shown by a mean of 4.2593 and a dispersion of .89411. Findings further show that poor screening of client’s demographics by mobile lenders has led to increased level of indebtedness as indicated by a mean of 4.1296 and a dispersion of .86975. Boateng, Amoah and Anaglo (2015) point out that repayment performance is dependent on the lending policies and borrowers profile.

4.4.3.1 Cross-Tabulation of Age and Default Rates

The study further sought to establish how different age sub-sets are able to service their loans. The findings are shown on the table below;

Table 4.11 Age Distribution and Default Rates

Age Group	Defaulted on loans	Did not default
18-25 years of age	82.9%	17.1%
26-33 years of age	68.8%	31.2%
34-41 years of age	73.3%	26.7%
42-49 years of age	60.0%	40.0%
50 years of age and above	33.3%	66.7%

Source: Researcher, (2019)

The findings of the research show that respondents within the age group 18-25 years had the highest default rate at 82.9% while the lowest default rates were 33.3% for the 50 years of age and above group. The analysis indicates that young adults have the highest default rates which can be attributed to the majority being in learning institutions and largely unemployed.

4.4.3.2 Cross-Tabulation of Gender and Default Rates

The study further sought to establish how different gender groups are able to service their loans. The findings are shown below;

Table 4.12 Gender Distribution and Default Rates

Gender Group	Defaulted on loans	Did not default
Male respondents	68.7%	31.3%
Female respondents	48.3%	51.7%

Source: Researcher, (2019)

The results further sought to examine how different genders serviced their mobile borrowing. Findings show that male respondents had the highest default rates at 68.7% while female respondents showed they had minimal default rate at 48.3%. The above results show that women borrowers have better loan repayment capacity. Wamalwa (2016) in his study on loan repayment within microfinance institutions indicated that women entrepreneurs had better repayment record and a better savings culture.

4.4.4 Level of Indebtedness

The dependent variable of the research sought to examine how the respondent's level of indebtedness. The results are shown below;

Table 4.13 Level of Indebtedness Descriptive

	N	Sum	Mean	Std. Deviation
Ease of Access to mobile loans leads to over borrowing	285	230.00	4.2593	.95533
Poor planning of money acquired from mobile lenders leads to increased indebtedness	285	218.00	4.0370	1.18103
Interest rates charged by mobile lenders increases the level of indebtedness of a client	285	221.00	4.0926	1.21730
Lack of strict compliance has led to increasing default rates on mobile loans	285	220.00	4.0741	.79745

Lack of regulation of mobile lending has led to increased level of indebtedness	285	228.00	4.2222	1.00314
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Source: Researcher, (2019)

The findings of the study indicated agreement among respondents that ease of Access to mobile loans leads to over borrowing as indicated by a mean of 4.2593. The results further show agreement that poor planning of money acquired from mobile lenders leads to increased indebtedness as shown by a mean of 4.0370 and a variation of 1.18103. Findings of the study further indicate agreement that interest rates charged by mobile lenders increases the level of indebtedness of a client as shown by a mean of 4.0926 and a variation of 1.21730 indicating high dispersion in the responses. The results further indicate agreement that lack of strict compliance has led to increasing default rates on mobile loans as indicated by a mean of 4.0741. The findings further show that lack of regulation of mobile lending has led to increased level of indebtedness as indicated by a mean of 4.2222 and a dispersion of 1.00314.

4.4.4.1 Level of Default

The study assessed default of mobile loans among the respondents and findings presented as in below;

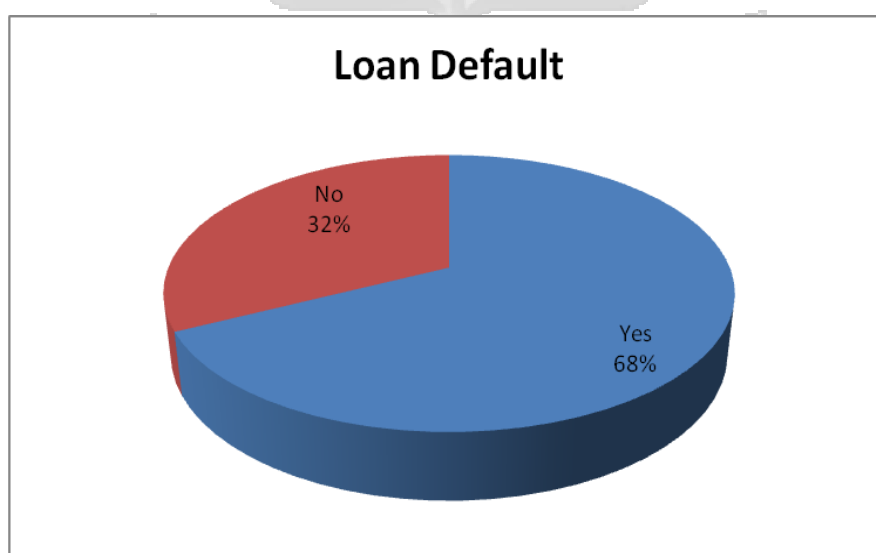


Figure 4.4 Loan Default Rate

Source: Researcher, (2019)

The study established a high rate of default with 68% of the respondents stating that they have ever defaulted on repaying their loans, 32% on the other hand had not defaulted in their payments.

4.4.4.2 Reasons for Default

The study sought to further determine the reason for default on mobile loans among micro-entrepreneurs and presented the outcome in table 4.14.

Table 4.14 Reasons for Loan Default

	Frequency	Percent
Lack of money to pay	141	73.1%
Lack of awareness about the repayment period	31	16.1%
Business Loss/Loss of Income	12	6.2%
Lack of money to pay and Business Loss/Loss of Income	9	4.7%
Total	193	100.0

Source: Researcher, (2019)

Findings of the study indicated that 193 respondents indicated that they had ever defaulted on their loans, the largest proportion of them, 73.1%, cited lack of money as the reason for default, whereas 16.1% stated lack of awareness on the repayment period and 6.2% stated business or income loss. Additionally, some micro-entrepreneurs had more than one reason for default with 4.7% being due to lack of money to pay and business loss/loss of income.

4.4.4.3 Number of Outstanding Loans

The study also sought to assess the level of borrowing, in terms of number of outstanding loans, of the respondents on the response date the outcome presented in table 4.15;

Table 4.15 Number of Outstanding Loans

	Frequency	Percent
None	81	28.4%
1	128	44.9%
2	66	23.2%
3	6	2.1%
Above three	4	1.4%

Total	285	100.0
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Source: Researcher, (2019)

Majority of respondents; 44.9% had only one outstanding loan, followed by 28.4% having no outstanding loan, 23.2% with two outstanding loans, 2.1% with three loans and 1.4% having more than three loans to service. The study outcome shows very high usage of mobile loans amongst micro-entrepreneurs as 71.6% had one or more outstanding loans to service as at the survey date.

4.5 Inferential Analysis

The study further sought to determine the effect of the independent variables on the level of indebtedness among micro entrepreneurs. The research relied on correlation, regression analysis and regression coefficients in the analysis.

4.5.1 Diagnostic Tests

The study further adopted both collinearity and normality tests to examine the linear regression assumptions.

4.5.1.1 Collinearity Test

The study utilized the variance inflation factor and the tolerance values in conducting collinearity testing. The findings are shown below;

Table 4.16 Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Demographics factors	.134	7.470
	Behavioral factors	.430	8.125
	Terms and conditions	.680	4.691
	Level of indebtedness	.730	3.677

The findings of the research above indicate VIF values that were below 10, thus indicating there were no multicollinearity problems. The results further show tolerance values that are greater than 0.1 indicating no cases of multicollinearity.

4.5.1.2 Normality Tests

The research utilized the Shapiro-Wilk test to examine the normality distribution in the data set. The results are as presented in the table below;

Table 4.17 Normality Statistics

	Shapiro-Wilk		
	Statistic	df	Sig.
Demographics factors	.75	284	.084
Behavioral factors	.825	284	.082
Terms and conditions	.784	284	.075
Level of indebtedness	.865	284	.064

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

As a rule of thumb for any data to be normally distributed, the Shapiro-Wilk test dictates that all the sig-value should be above 0.05. From the results indicated, all the variables had a sig. value of above 0.05; hence, the data was from a normally distributed sample.

4.5.2 Correlation Analysis

The study conducted a bivariate correlation analysis using the Pearson correlation formula and the results are shown below;

Table 4.18 Correlation Results

		Level of Indebtedness
Behavioural Factors	Pearson Correlation	.807**
	Sig. (2-tailed)	.000
	N	285
Terms and Conditions	Pearson Correlation	.659**
	Sig. (2-tailed)	.000

	N	285
Demographic Factors	Pearson Correlation	.676**
	Sig. (2-tailed)	.000
	N	285

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

Source: Researcher, (2019)

The results above show the correlation between the study variables. The first objective of the study sought to examine the effect of behavioral factors on the level of indebtedness. Findings showed that there was a positive association between behavioral factors and level of indebtedness as indicated by $P\text{-value} = .807$, $Sig = .000 < .05$. Fatollahi and Samani (2015) are of a similar observation that the borrowers profile has significant effect on their repayment behavior. Mensah, Raphael, Dorcas and Kwadwo (2013) also point out that increased overborrowing and wastage of funds are attributed to loan defaults.

The second objective of the study sought to examine the effect of terms and conditions on the level of indebtedness. Findings showed that there was a positive association between terms and conditions and level of indebtedness as indicated by $P\text{-value} = .669$, $Sig = .000 < .05$. Nawai and Shariff (2012) indicate that the lending policies and monitoring processes have a positive effect on the repayment performance.

The third objective of the study sought to examine the effect of demographic factors on the level of indebtedness. Findings showed that there was a positive association between demographic factors and level of indebtedness as indicated by $P\text{-value} = .676$, $Sig = .000 < .05$. Kyalo and Kiganane (2014) are of the same view that demographic factors such as age, education and income level not only affect access to credit but they also limit the repayment among entrepreneurs.

4.5.3 Regression Analysis

The research sought to establish the effect of effect of mobile loan borrowing on the level of indebtedness of micro-entrepreneurs in Nairobi County, Kenya. The study adopted regression analysis to estimate the interaction between the research variables.

Table 4.19 Regression Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.856 ^a	.732	.716	2.08389

a. Predictors: (Constant), Demographic Factors, Behavioural Factors, Terms and Conditions

Source: Researcher, (2019)

The findings of the research indicate that the mobile loan borrowing factors have a positive relationship with the level of indebtedness as indicated by Adjusted $R^2 = .716$. Holding all other factors constant, mobile loan borrowing factors contribute to 71.6% variations in level of indebtedness among micro entrepreneurs. These results are in agreement with Wamalwa (2016) who indicates that demographic factors; Mensah, Raphael, Dorcas and Kwadwo (2013) borrowers characteristics and profile; Mary-Stella and Kithae (2015) terms and conditions all have varying influence on the loan repayment and indebtedness levels.

4.5.4 ANOVA Analysis

In determining the statistical significance of the research model, the research adopted ANOVA analysis and the results are shown below;

Table 4.20 ANOVA Summary

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	594.519	3	198.173	45.635	.000 ^b
	Residual	217.129	281	4.343		
	Total	811.648	284			

a. Dependent Variable: Level of Indebtedness

b. Predictors: (Constant), Demographic Factors, Behavioural Factors, Terms Conditions

Source: Researcher, (2019)

The regression model was significant sig = .005<.05 testing at 95% confidence interval. An F-value of 45.635 was generated, and this was above the critical value of 2.76 showing the statistical significance of the research model.

4.5.5 Regression Coefficients

The study further sought to determine the coefficients of the regression model. The findings are shown in the table below:

Table 4.21 Regression Coefficients Summary

Model		Unstandardized		Standardized		
		Coefficients		Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-4.251	2.228		-1.908	.002
	Behavioral Factors	.567	.093	.580	6.085	.000
	Terms and Conditions	.138	.112	.132	1.240	.001
	Demographic Factors	.321	.124	.263	2.581	.013

a. Dependent Variable: Level of Indebtedness

Source: Researcher, (2019)

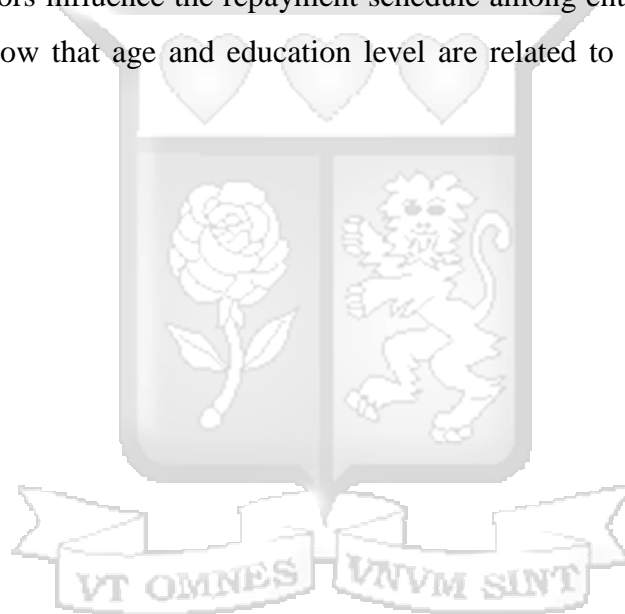
The resultant regression equation was;

$$Y = -4.251 + .567X1 + .138X2 + .321X3 + 2.228$$

The beta value (β) = .567 is significantly different from 0 since the p-value .000<.05. This indicates that there is a statistically significant positive effect of behavioural factors on the level of indebtedness in micro entrepreneurs. A unit change in the level of behavioural factors will result in a .567 change in the level of indebtedness. Maina, Kinyariro, Muturi and Muriithi (2016) are of the view that the borrowers profile and information sharing is a key determinant to the loan default within Sacco institution.

The beta value (β) = .138 is significantly different from 0 since the p-value $.001 < .05$. This indicates that there is a statistically significant positive effect of terms and conditions on the level of indebtedness in micro entrepreneurs. A unit change in the level of terms and conditions will result in a .138 change in the level of indebtedness. Sahani, Bansal, Sahani, Khatiwada and Bhattarai (2018) in their study indicate that loan policies and conditions set by lenders affect the level of indebtedness with microfinance institutions.

The beta value (β) = .321 is significantly different from 0 since the p-value $.013 < .05$. This indicates that there is a statistically significant positive effect of demographic factors on the level of indebtedness in micro entrepreneurs. A unit change in the demographic factors will result in a .321 change in the level of indebtedness. Kyalo and Kiganane (2014) also indicate that demographic factors influence the repayment schedule among entrepreneurs. Ogubazghi and Muturi (2014) show that age and education level are related to the access and default rates.



CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the research findings as obtained from the survey and statically analysed to bring out a clear comprehension of the effects of mobile loans on the level of indebtedness among micro-entrepreneurs in Nairobi County. The discussion is outlined as per the three study objectives.

5.2 Discussion

The main objective of the study was to examine the effect of mobile loan borrowing on the level of indebtedness of micro-entrepreneurs in Nairobi County, Kenya. The research was grounded on the theory of bounded rationality and the life cycle theory of consumption. The research adopted a descriptive research design with the study population being drawn from micro-enterprises operating within Nairobi County. The research relied on quantitative data that was collected using a structured questionnaire. The collected data was analysed using both descriptive and inferential statistics. The findings of the research showed that there was a 71% response rate which was deemed adequate for the research analysis.

5.2.1 Behavioral Factors and Level of Indebtedness

The first objective of the study examined the effect of behavioural factors on the level of indebtedness. The results of the research show that respondents were in agreement that there was an increase in monthly spending due to access to mobile loans, there was limitations in product purchasing among the respondents and there was an increase in impulse purchasing among the respondents due to access to mobile loans. Responses also indicated that there was an increase in the debt burden among the mobile borrowers. Findings showed that there was a positive association between behavioral factors and level of indebtedness as indicated by $P\text{-value} = .807$, $Sig = .000 < .05$. Ottaviani and Vandone (2011) indicate that impulse spending has been attributed to an increase in indebtedness. Murthy and Mariadas (2017) also indicate that diversion of funds by borrowers and nature of their business was attributed to loan defaults and lack of adherence to repayment schedule.

5.2.2 Terms and Conditions and Level of Indebtedness

The second research objective examined interaction between terms and conditions and the level of indebtedness. The responses obtained indicate that understanding the term and conditions was attributed to proper decision making, number of loans to request, poor loan servicing and loan defaults. The results further show that respondents compared the costs before loan application and determining mobile loan selection. Findings showed that there was a positive association between terms and conditions and level of indebtedness as indicated by $P\text{-value} = .669$, $Sig = .000 < .05$. These research findings are in agreement with Makorere (2014) who indicates that lending requirements influence the repayment behavior. Ombongi (2015) also posits that the level of understanding of loan requirements was imperative to good loan performance.

5.2.3 Demographic Factors and Level of Indebtedness

The third objective examined the association between the demographic factors and the level of indebtedness. The responses obtained show that their access to mobile loans was determined by age however there was no limitation to access based on the gender of the respondents. Findings also indicate that the income level and the household consumption was also a determinant of mobile loans utilization. The results also show that poor screening of client's demographics lead to increase in indebtedness. Findings showed that there was a positive association between demographic factors and level of indebtedness as indicated by $P\text{-value} = .676$, $Sig = .000 < .05$. These results are in line with Wamalwa (2016) who indicates that demographic factors affect loan repayment within microfinance institutions. Boateng, Amoah and Anaglo (2015) also point out that gender of borrowers and different age categories have different repayment performance.

5.2.4 Level of Burden or Indebtedness

The study found that a high proportion of micro-entrepreneurs had ever defaulted on loan repayment with the major reason given being lack of money to pay followed by lack of awareness of payment date. The descriptive statistics indicate that the respondents felt that access to mobile loans could lead to over borrowing hence increase indebtedness. Poor planning of money accessed and high interest rates could also lead to indebtedness.

5.3 Conclusions

The research sought to determine the relationship between mobile borrowing and the level of indebtedness. The results of the research indicate that holding all other factors mobile loan borrowing factors contribute to *Adjusted R*² = .716; 71.6% of the variations in level of indebtedness among micro entrepreneurs.

5.3.1 Behavioural Factors

The research concludes that the increase in access to mobile loans has led to impulsivity in purchasing and increased the monthly spending among the borrowers. The study also concludes that there has been an increase in unplanned purchases as a result of access to mobile loans which has contributed to increased debt burden which is a precursor to higher level of indebtedness.

5.3.2 Terms and Conditions

The research concludes that the awareness of the consequences of default was found to be a determinant of the indebtedness. The study further concludes that understanding of the terms and conditions contributes to loan servicing and increase decision making among borrowers. The study further concludes that awareness of terms and conditions can determine the choice of loan apps and help in determine the borrowing frequency.

5.3.3 Demographic Factors

The study further concludes that age determines the access to the mobile loans whereas gender was found to have direct effect on the default rates of mobile borrowing. The research further concludes that income level of the borrower and their consumption pattern contributes to their access to mobile loans and inherently their indebtedness levels.

5.4 Recommendations

5.4.1 Policy Implications

Consumer Federation of Kenya should introduce awareness campaigns to educate borrowers on planned spending, investment of borrowed money and how to avoid impulse purchasing. This recommendation aims at improving the consumer habits through behavioural change by spending from an informed point of view.

The study also recommends that the government comes up with measures for legislation to streamline mobile lending and safeguard borrowers from unfair borrowing terms. The study further recommends that the Communications Authority as the key regulator in the telco market should come with regulations and guidelines that can help in streamlining the mobile lending services. Further the Central Bank of Kenya should seek collaboration with the firms offering mobile loans as a step towards including them as a player in the financial sector.

5.4.2 Practice Implications

This study recommends that mobile loan providers should provide summarized key information relating to the terms and conditions of the loans to enable sound financial decision making. The research further recommends that the mobile loan providers should foster their borrower screening process as this will help in reduction of default rates. The study further recommends that the management teams of the mobile loan providers should conduct sensitization programmes to their customers as way of fostering their financial literacy and usage of the funds borrowed as this will limit increasing default rates.

5.5 Areas for Further Research

This study recommends that further studies be carried out to assess the impact of supply side and external factors on the level of indebtedness of micro entrepreneurs. This will inform policy making by both the government and the lenders as they would understand the impact of their decisions on the level of indebtedness of the borrowers.

This study also recommends that further studies on the demand side factors be carried out in other parts of the country to assess the applicability of these research findings in those areas.

5.6 Limitations of the Research

The study was limited to Nairobi County, the hub of financial activities in Kenya. It would be important to replicate the study in other parts of the country to ascertain whether the study findings still apply.

The research was also limited to the demand side factors that influence the level of indebtedness, it would be important to also assess the impact of the supply side and external factors on the level of indebtedness of micro-entrepreneurs.

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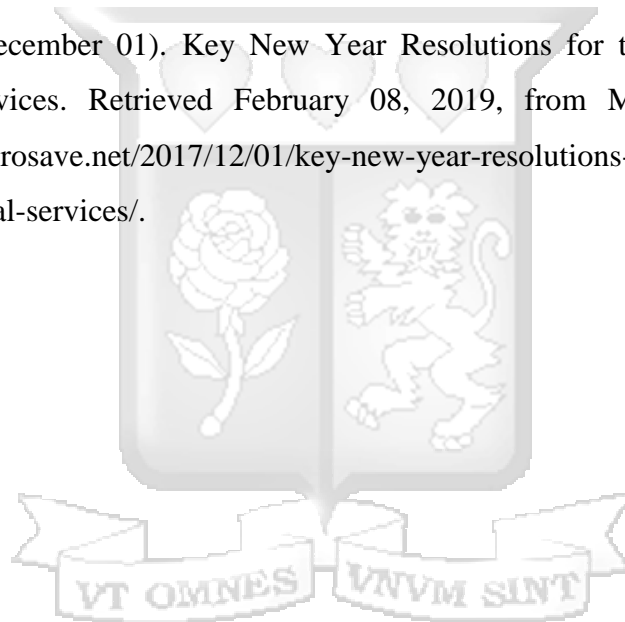
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APPENDICES

Appendix I: Letter of Introduction

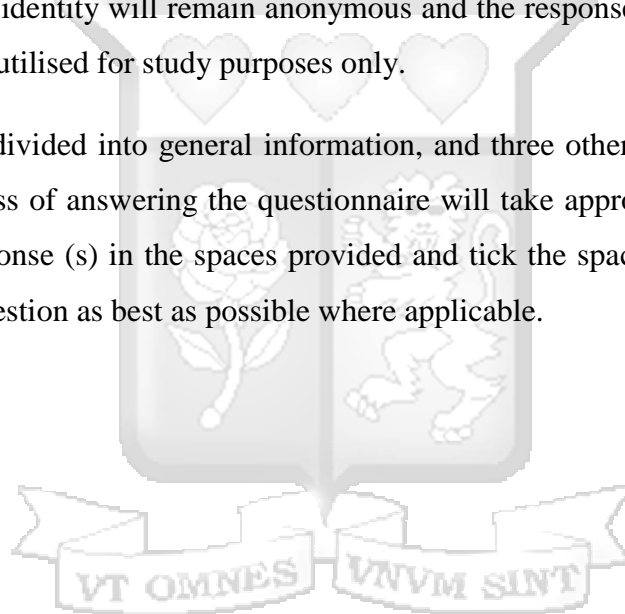
Dear Respondent,

My name is Mary Karungu, a student at Strathmore Business School undertaking Master of Business Administration. As part of the academic requirement, I am undertaking a research titled “*The Effect of Mobile Loan borrowing on the Level of Indebtedness of Micro-entrepreneurs in Nairobi County*. You have been sampled as part of the target study population and your participation in the research is hereby requested by way of a survey questionnaire to help me achieve the research objectives.

Kindly note that your identity will remain anonymous and the responses given will be highly confidential and only utilised for study purposes only.

The questionnaire is divided into general information, and three other sections on the study objectives. The process of answering the questionnaire will take approximately ten minutes. Please give your response (s) in the spaces provided and tick the space or box that matches your answer to the question as best as possible where applicable.

Thank you.



Appendix II: Questionnaire

Section A: Background Information

1. What is your age?

- 18 - 25
- 26 - 33
- 34 - 41
- 42 - 49
- 50 and above

2. What is your gender?

- Male
- Female

3. What is your highest level of education?

- Primary School
- Secondary School
- College Diploma
- Undergraduate Degree
- Graduate Degree

4. Which Business are you engaged in?

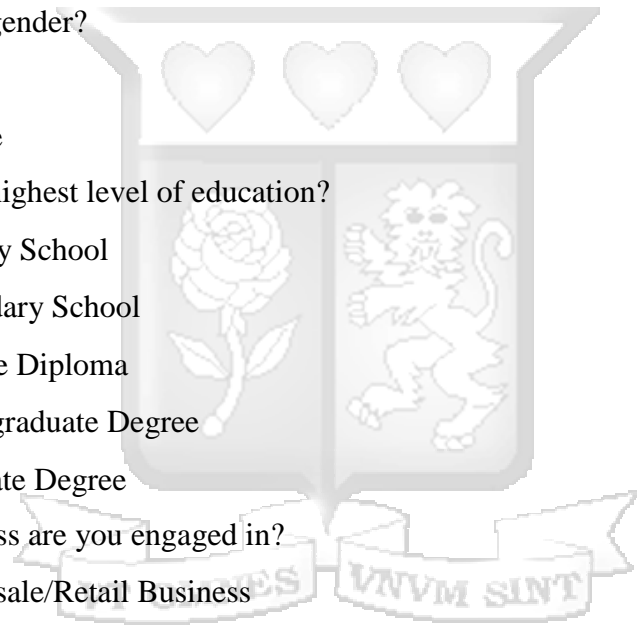
- Wholesale/Retail Business
- Financial Services Business
- Manufacturing
- Food Vending
- Other.....

5. How many employees do you have?

- 1-3
- 4-6
- 7-9

6. How many times in a month do you borrow from the mobile loan platforms?

- Never
- Once



- Twice
- Thrice
- More than thrice (Specify the number of times)

7. Which mobile money loans have you used? (Please tick all the ones that you have used)

- M- Shwari
- KCB-M-PESA
- Branch
- Tala
- M.Co-op
- Zidisha
- Other(s)

Specify.....

Section B: Influence of Behavioural Factors on the Level of Indebtedness

Please indicate in the table with a tick (√) or a cross (×) with a scale of

5= strongly agree 4= Agree 3= Moderately Agreed 2= Disagree 1= Strongly Disagree

Kindly answer the following questions based on your agreement with how behavioral factors have influenced your level of indebtedness. The scale level ranges from 1 – 5

No	Behavioral Factors and Indebtedness	5	4	3	2	1
1.	Access to mobile loans has increased my monthly spending					
2.	There are products I would not purchase if I did not have access to mobile loans					
3.	I tend to make unplanned purchases now that I have access to mobile loans					
4.	I only purchase the products I need regardless of my access to mobile loans					

5.	I am more impulsive in my purchasing decisions due to access to mobile loans					
6.	I have increased my debt burden due to availability of various platforms of mobile loans					

Section C: Influence of Terms and Conditions on the Level of Indebtedness

Please indicate in the table with a tick (√) or a cross (×) with a scale of

5= strongly agree 4= Agree 3= Moderately Agreed 2= Disagree 1= Strongly Disagree

Kindly answer the following questions based on your agreement with how terms and conditions have influenced your level of indebtedness. The scale level ranges from 1 – 5

No	Terms and Conditions	5	4	3	2	1
1.	Understanding the terms and conditions of mobile lending enhances proper decision-making during loan application.					
2.	Poor understanding of terms and conditions results in poor loan servicing and eventual loan default.					
3.	Terms and conditions help a customer to determine the amount of loans to request from mobile loan platforms					
4.	Proper awareness on loans terms and conditions enables the borrower to make a better choice of mobile loan app					
5.	I compare the costs of different loans before settling on the one to borrow from					
6.	The repayment period determines the selection of the mobile loan app					

1. Do you read the terms and conditions laid out before borrowing from mobile platforms?
 - Yes
 - No

2. Do you know the interest rates charged by the various mobile lenders that you use?
 - Yes
 - No

3. Do you know the repayment period given for those mobile loans?
 - Yes
 - No

4. Do you know the consequences of failing to pay the mobile loans on time?
 - Yes
 - No

5. What is your level of understanding of the terms and conditions for accessing mobile loans from your preferred lender?
 - None
 - Basic understanding
 - Average understanding
 - Above Average understanding

Section D: Influence of Demographic Factors on the Level of Indebtedness

Please indicate in the table with a tick (√) or a cross (×) with a scale of

5= strongly agree 4= Agree 3= Moderately Agreed 2= Disagree 1= Strongly Disagree

Kindly answer the following questions based on your agreement with how demographic factors have influenced your level of indebtedness. The scale level ranges from 1 – 5

No	Demographic factors	5	4	3	2	1
1.	The accessibility to mobile borrowing is determined by the borrowers' age					
2.	The gender identity of respondents does impact the					

	ability to repay mobile loans					
3.	I believe my income level determines my access to multiple mobile platforms loan offers					
4.	My household consumption level determines the demand for mobile loans					
5.	Poor screening of client's demographics by mobile lenders has led to increased level of indebtedness					

Section E: Level of Burden or Indebtedness Caused by Mobile Borrowing

Please indicate in the table with a tick (√) or a cross (×) with a scale of

5= strongly agree 4= Agree 3= Moderately Agreed 2= Disagree 1= Strongly Disagree

Kindly answer the following questions based on your agreement with your level of indebtedness. The scale level ranges from 1 – 5

No	Level of Indebtedness	5	4	3	2	1
1.	Ease of Access to mobile loans leads to over borrowing					
2.	Poor planning of money acquired from mobile lenders leads to increased indebtedness					
3.	Interest rates charged by mobile lenders increases the level of indebtedness of a client					
4.	Lack of strict compliance has led to increasing default rates on mobile loans					
5.	Lack of regulation of mobile lending has led to increased level of indebtedness					

1. Have you ever defaulted on a mobile loan payment?

- Yes
- No

2. If yes, why did you default on the payment?

- Lack of money to pay
- Lack of awareness about the repayment date
- Other (Specify).....

3. How many outstanding mobile loans do you have as of today?

- None
- 1
- 2
- 3
- Above 3



Appendix III: Ethics Approval



21st May, 2019

MARY WANGUI KARUNGU
P.O Box 193-00208,
Ngong Hills.
Email: wanguikamanda@gmail.com

Dear Ms. Mary,

REF: SU-IERC 0407/19 (AMENDMENT) PROPOSAL "THE EFFECTS OF MOBILE LOAN BORROWING ON THE LEVEL OF INDEBTEDNESS OF MICRO ENTREPRENEURS IN NAIROBI COUNTY, KENYA."

I make reference to your application for the approval of a proposed amendment submitted on April 23, 2019.

We acknowledge receipt of the following submitted documents for amendment;

- a) Amendment cover letter date April 13 2019
- b) Study Proposal version 3 date April 13, 2019
- c) Participant Information and Consent form version 3
- d) Study Materials- Indepth interview guide, Study Questionnaires
- e) Study budget
- f) CV for all Investigators

The committee noted the following amendment:

1. The Principal Investigator needs to make an amendment of the proposal title "AN ASSESSMENT OF THE ECONOMIC BEHAVIOUR OF LOW INCOME MOBILE LOAN BORROWERS IN NAIROBI COUNTY" to reflect the variables being studies.

The Committee concluded that the suggested amendments are justified and will not result in increased risk to the participants. The proposed changes have therefore been granted **approval** for implementation.

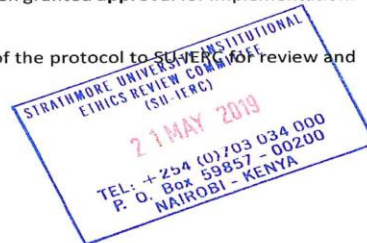
You may continue with your study.

You are required to submit any further changes to this version of the protocol to SU-IERC for review and approval prior to implementing any additional changes.

Sincerely,


for: Prof. Florence Oloo

Secretary
Strathmore University Institutional Ethics Review Committee



Appendix IV: NACOSTI Approval



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/29774/30703**

Date: **7th June, 2019.**

Mary Wangui Karungu
Strathmore University
P.O. Box 59857 00200
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on *“Effects of mobile borrowing on the level of indebtedness of Micro Entrepreneurs in Nairobi County, Kenya.”* I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **7th June, 2020.**

You are advised to report to **the County Commissioner, and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


BONFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nairobi County.

The County Director of Education
Nairobi County.

National Commission for Science, Technology and Innovation is ISO9001:2008 Certified