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Effects of financial inclusion on women's empowerment in Kibera slums.

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EFFECTS OF FINANCIAL INCLUSION ON WOMEN'S EMPOWERMENT IN KIBERA SLUMS.

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DECLARATION

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

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ABSTRACT

Empowering women is crucial as it enables them to navigate employment challenges and societal constraints, fostering proficiency in resource management, improving well-being, promoting economic growth and gender equality. Financial inclusion is a key factor in promoting women's empowerment. This study aimed to investigate the effect of financial inclusion on empowerment among women living in Kibera slums in Nairobi County, Kenya. The objectives of the study were to establish the effect of access to financial services on women's empowerment, usage of financial services on women's empowerment and the quality of financial services on women's empowerment in Kibera slums. The study was pegged on the public goods theory, community echelon theory of financial inclusion and feminist theory. Furthermore, the study adopted a post-positivist approach and employed a quantitative technique using primary data collected from a sample of 398 women via structured questionnaires. Analysis of the data was done by utilizing a regression analysis and Stata was used for the analysis. The results of the study were presented in tables and figures followed with pertinent interpretation. The study revealed a significant positive relationship between access, usage and quality of financial services and women's empowerment among women in Kibera slums. This study concluded that financial inclusion is key to making women more empowered. The recommendations for the study include prioritizing initiatives to enhance access to diverse financial services, implementing tailored financial education programs through NGOs and community-based organizations, and ensuring collaboration between financial service providers and local institutions to improve the quality of financial services in underserved areas like Kibera Slums.

Key Words: *Financial Inclusion, Women's Empowerment, Access to Financial Services, Usage of Financial Services, Quality of Financial Services*

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

AGPO – Access to Government Procurement Opportunities

HDI – Human Development Index

MFI – Micro Finance Institution

NGO – Non-Governmental Organization

SDG – Sustainable Development Goals

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Despite making up half of the global population, women continue to encounter significant difficulties in obtaining financial service and as a consequence, they experience higher levels of poverty (Pal et al., 2022). There are notable disparities in the prevalence of accounts based on gender, as 46 percent of males in developing nations possess an account at a formal financial institution, while only 37 percent of females do (Allen et al., 2016). Moreover, according to the Global Findex data, women are at a disadvantage as they have 20% less probability of possessing a bank account and face a 17% reduced possibility of securing formal financial loans in contrast to men (Cabeza-García et al., 2019). As poverty affects women at a greater disproportion, it is crucial to offer tailored financial services encompassing savings, lending options, payment handling and risk mitigation (Hendriks, 2019).

Women make up 70% of the poor people in the world resulting in their unequal access to economic opportunities in both developed and developing nations (Arshad, 2023). The imposition of unpaid domestic labor on women by societal norms and expectations leads to financial exclusion based on gender, constraining their ability to effectively utilize financial services and hindering employment opportunities for income generation among them (Aziz et al., 2022). Financial access is often a challenge for women due to several barriers including inadequate resources, distance from formal financial institutions, costly financial services, lack of necessary paperwork and limited trust in these establishments (Pal et al., 2022). The achievement of gender-inclusive financial systems on a global scale necessitates the critical task of overcoming cultural norms and biases towards women, such as those that limit their ability to obtain loans without male consent or guarantees (Aziz et al., 2022).

Enhancing women's empowerment is vital since it equips them with the ability to tackle job-related obstacles and societal limitations, consequently fostering their proficiency in managing resources, boosting well-being while promoting economic expansion as well as gender equality through improved financial inclusion (Arshad, 2023). The lack of empowerment among women has considerable implications for them and their children's well-being, given its correlation with negative economic and health effects on women (Richardson, 2018). The radical approach of women's empowerment aims to transform the existing power dynamics in favor of females and is recognized as essential for global advancement (Bhatia & Singh, 2019). Women experience substantial disparities due to persistent gender inequalities, such as lower wages, limited access to education and assets ownership, and reduced economic influence in comparison to men. These differences have far-reaching negative consequences that affect women's health outcomes, education attainment levels, employment opportunities and autonomy over their lives (Hendriks, 2019).

1.1.1 Women's Empowerment

According to Khan et al., (2023), the concept of women's empowerment is widely recognized as a multifaceted idea that encompasses various dimensions, such as economic, social, political and psychological empowerment which indicates an intricate interplay of factors to form a complex system. Arshad (2023) defines the empowerment of women as embracing their perspectives, improving their status through education, awareness-raising initiatives, literacy programs, and training, and enabling them to be individuals with both the potential to succeed and decision-making authority. Bhatia and Singh (2019) highlight that women's empowerment is characterized by the capacity to make deliberate choices about their lives in situations where they previously lacked such agency, distinguishing it from other marginalized groups' empowerment primarily resulting from gender-related complexities tied to household dynamics and gender-based power disparities. Empowerment is a constantly evolving process where certain aspects, such as improving women's education levels can happen rapidly, but changing societal beliefs and attitudes surrounding the roles of women may take decades to fully manifest (Richardson, 2018).

Bayissa et al., (2018) employed a comprehensive technique composed of six interconnected measurements - economic, familial, psychological, legal, political and socio-cultural- to probe the empowerment of women. Similarly adopting this strategy is our study as it aims to evaluate women's empowerment using multifaceted methodology with multiple indicators for each dimension. The income and asset ownership constitute the economic aspect, while decision-making authority regarding financial and non-financial matters is examined in the familial dimension. The legal component evaluates women's comprehension of their rights under law, whereas self-esteem indicators are explored through psychological factors. Attitudes toward gender equality, willingness to speak out against damaging practices, and preferences for offspring genders fall into the socio-cultural element. Lastly, involvement in legal institutions or public protests as well as voting reflect political dimensions.

In Kenya, despite women constituting 50.5% of the total population according to the Kenya Population and Housing Census, (2019), their representation across wellbeing indicators remains unequal compared to men. Women are more likely to experience poverty, with only 29% of women in Kenya being economically empowered (Kenya National Bureau of Statistics, 2020). Furthermore, women are significantly underrepresented in formal wage employment, comprising only 34% compared to men's 66%. They also endure higher rates of domestic violence, with 57% of married women affected compared to 11% of men (Kenya National Bureau of Statistics, 2017). The employment rate for women in 2019 stood at 52.3%, notably lower than men's 65.1% (Kenya National Bureau of Statistics, 2022). In terms of property ownership, women lag behind men, with only 33% owning a house and 25% owning agricultural land compared to 45% of men owning a house and 31% owning agricultural land (Kenya National Bureau of Statistics, 2022).

In a study carried out in Kibera, the findings showed that there are gender disparities in household dynamics and decision-making power. Men were significantly more likely to be heads of households, with 73% holding this role compared to only 30% of women. This discrepancy stemmed from societal perceptions of men's authority and potential stigma attached to single women. Household labor division also favored men, with 93.3% of women responsible for chores compared to only 41% of men participating. Additionally, 92% of men were engaged in productive activities compared to 77% of women. When it comes to decision-making within households, 73% of men reported having the final say compared to 43% of women (European Union, 2016). These findings show disparities in empowerment with women being less empowered compared to their male counterparts.

Empowering women can be effectively achieved by providing formal financial services, as financial inclusion not only fosters economic activities for women but also improves household nutrition and boosts bargaining power of women inside the home (Mboutchouang Kountchou et al., 2023). For women to achieve growth and empowerment, financial inclusion is a vital factor that helps them overcome hindrances (Arshad, 2023). Mobile money and fintech apps have enabled financial inclusion, resulting in numerous development benefits, stimulating investment in fields like healthcare, education, and businesses, empowering individuals to improve their economic opportunities and contributing towards poverty reduction while promoting overall growth and advancement (Demirgüç-Kunt et al., 2020). Mobile money and fintech apps have stimulated investment in fields such as healthcare and education, enabling financial inclusion and empowering individuals in low- and middle-income countries with access to diverse financial services for increased well-being and opportunities, ultimately working towards poverty alleviation (Duvendack & Mader, 2020). Bhatia and Singh, (2019) also posit that financial inclusion offers a pathway for economic growth and empowerment by allowing access to financial services among individuals who are underbanked or unbanked.

1.1.2 Financial Inclusion

Financial inclusion is the process of ensuring access to fundamental financial services within the established financial system for all members, particularly those living in poverty (Ozili, 2021). According to Duvendack and Mader (2020), the objective of financial programs focused on inclusion is to offer low-cost monetary services, including payments, savings solutions, credit facilities and insurance coverage that cater the financially excluded population while being vigilant about sustainability. Demirguc-Kunt et al., (2017) provide additional clarity on the concept of financial inclusion, describing it as the capacity for adults to obtain and effectively utilize a range of suitable financial services within an environment that is responsibly regulated in order to safeguard consumers while maintaining provider sustainability.

There are three main aspects used to determine financial inclusion which are access, usage and quality (FinAccess Household Survey, 2021). Mahalika et al., (2023) also state that the indicators used to derive financial inclusion are access, usage, and quality. Access indicators gauge how far financial services extend, while usage indicators monitor client participation through activity frequency, duration and metrics such as savings balances and transaction counts. Quality measures check if products align with clients' needs given available options, along with their awareness level or understanding towards these offerings in the market (The World Bank, 2015). The Global Partnership for Financial Inclusion (2016) conduct a thorough evaluation of financial inclusion, considering factors such as access, utilization, and quality. The assessment encompasses various metrics including the ownership of accounts, usage levels for credit facilities or insurance policies, prevalence of digital transactions or online banking services; availability of physical service points; overall literacy regarding finances and relevant consumer protection regulations.

According to the findings of the Comprehensive Poverty Analysis report, 65 percent of women in Kenya are multidimensionally poor, compared to 56 percent of their male counterparts (Kenya Population and Housing Census, 2019). Additionally, there's an evident gender gap when it comes to financial inclusion as men are 18% more likely to own accounts at financial institutions (Demirgüç-Kunt et al., 2020). Women also lag behind when it comes to accessing essential financial services such as mobile money with only approximately one-third , 34% having access compared to nearly half, 48% for males. Moreover, 30% of women headed households live below the monetary poverty line compared to 26 percent of those headed by men (Kenya National Bureau of Statistics, 2020). The Government continues to commit itself to socially equitable society through various affirmative actions such as empowerment of women through channels like Women Enterprise Fund, AGPO and Uwezo Fund (Kenya National Bureau of Statistics, 2018).

Governments, researchers, and society as a whole have shown significant interest in financial inclusion due to the recognition of major disparities in global access to finance that hinder economic stability and progress (Cabeza-García et al., 2019). The G-20 nations have prioritized universal financial access as a crucial catalyst for attaining sustainable development objectives, reducing poverty, achieving gender equality and the World Bank advocates this role, leading to over 60 countries implementing national strategies to ensure financial inclusivity is achieved (Bhatia & Singh, 2019). Moreover, the World Bank highlights that financial inclusion plays a crucial role in achieving seven out of 17 Sustainable Development Goals (SDGs), whilst emphasizing its importance in reducing extreme poverty and promoting shared prosperity. (Mushtaq et al., 2023).

Financial inclusion has been empirically linked to women's empowerment, but the results of studies have been inconsistent. For example, Arshad (2023), Khan et al. (2023), and Hendriks (2019) discovered a positive link between financial inclusion and the empowerment of women. In contrast, Ukanwa et al. (2018), Arshad et al. (2021), and Salia et al. (2018) discovered a negative correlation between financial inclusion and the empowerment of women. The discrepancy could be explained in part by the way the empowerment of women and financial inclusion are defined and measured. Arshad (2023) utilized the presence of a female head in households as an indicator for measuring women's empowerment. Additionally, financial inclusion was evaluated based on various metrics including the availability of ATMs and bank branches per capita. However, due to limitations arising from limited data availability and specificity regarding countries examined during analysis, generalization of findings may be constrained. Narrowly focused on the Kashmir Valley in India, Khan et al., (2023) conducted an examination of women's empowerment with a focus on economic, social, political, and psychological dimensions. However, due to this limited geographical scope, the broader applicability of their study is restricted. Maruta et al., (2023) assessed financial inclusion by measuring access, utilization, and quality of financial services, as well as employing the Females Human Development Index to gauge women's empowerment levels. On the contrary, a negative correlation between financial inclusion and the empowerment of women in Nigerian villages was discovered by Ukanwa et al., (2018), highlighting how perceptions about microfinance are specific to their context. Arshad et al., (2021) explored family cohesion as a measure of empowerment of women in Pakistan and Salia et al., (2018) conducted a similar study in Ghana, both pointing towards a negative relationship.

Due to the inconsistencies observed in previous studies, this study aims to explore the effect of financial inclusion initiatives on women's empowerment in Kenya. The research will specifically concentrate on assessing how financial inclusion relates to various aspects of women's empowerment. In Kenya, there have been various initiatives such as M-Pesa which was introduced in 2007 that played a role in raising financial inclusion levels and had a significant and transformative impact on the country's financial system. It led to a notable increase in financial inclusion, with the percentage of individuals included rising from 26.4% in 2006 to 40.5% in 2009 (Ozili, 2020). The government of Kenya has also developed several measures to encourage financial inclusion among women, including the Women Enterprise Development Fund., Uwezo Fund and AGPO (State Department for Gender and Affirmative Action Report, 2020). However, a gender gap still persists when it comes to women’s financial inclusion.

1.1.3 Kibera Slums

According to UN Habitat, (2020), Kibera, which has the highest settlement density in Kenya and is home to an estimated 250,000 people, is the largest informal settlement in Kenya and possibly all of Africa. Kibera slums is known for its substantial population density, significant movement between homes, poor housing quality, high crime rates and poor government services (Kangwana et al., 2022). The livelihoods of its residents are predominantly rooted in the informal economy, sustained by various supportive organizations within the settlement. For the purpose of this study, data analysis is structured around 18 distinct villages within Kibera slum, namely Laini Saba, Olympic, Makongeni, Karanja, Makina, Silanga, Raila, Kisumu Ndogo, Soweto East, DC Village, Kianda, Ayany, Gatwekera, Kambi Muru, Olympics, Toi Market, Lindi, Mashimoni and Karanja Estates.

1.2 Problem Statement

Globally, women disproportionately experience poverty due to social and structural barriers, leading to them having lower education, pay, ownership, and economic control than men (Saluja et al., 2023). When women lack empowerment, it results in unjust political, economic, and social conditions, limiting the overall potential of society (Cinar & Kose, 2018). This lack of empowerment leads to adverse economic and health outcomes, impacting both women and their children negatively (Richardson, 2018). The barriers to women's empowerment include patriarchal structures, psychological challenges, gender biased income, inadequate financial literacy, and restricted financial accessibility (Saluja et al., 2023). Empowering women enables them to engage in productive activities, make strategic choices, and foster development by leveraging economic opportunities (Zafarullah & Nawaz, 2019). In this way, empowering women not only fosters social growth but also significantly contributes to economic development (Gupta, 2021)

Financial initiatives of inclusion serve as a powerful approach for advancing empowerment of women and contributing to the fulfillment of Sustainable Development Goals such as poverty reduction and inequality restriction (Zafarullah & Nawaz, 2019). Achieving gender parity in financial inclusion is crucial because women and men exhibit different consumption behaviors; women prioritize spending on essentials, enhancing family and community well (Mndolwa & Alhassan, 2020). Despite its importance, women in developing countries face financial exclusion due to aspects such as lack of collateral, limited funds, and gender disparities driven by lower education and male dominance in decision-making (Mushtaq et al., 2023).

A study conducted in Kibera revealed that there are variations based on gender in terms of household dynamics and decision-making power. The investigation showed a significant number of male heads of households, with 73% occupying this role while only 30% were women. This inequality can be attributed to perceptions within society regarding the authority given to men and potential discrimination faced by single women. Furthermore, males had an advantage when it came to division of labor since only 41 % took part in household chores compared to 93 .3 % of women. Furthermore, the study found that 92% of men were involved in productive tasks while only 77% of women participated. Regarding household decision-making authority, a significant disparity was observed; with 73% of men claiming to have final say compared to just 43% among women. This shows that women are less empowered compared to men (European Union, 2016).

In the last few years, there has been a significant rise in the body of literature on evaluating the effects of financial initiatives of inclusion on empowerment of women (Demirguc-Kunt et al., 2017). Recent research on the effect of financial inclusion on women's empowerment show mixed results. Arshad, (2023), Khan et al., (2023), and Hendriks, (2019) report a positive relationship, while Ukanwa et al., (2018), Arshad et al., (2021) and Salia et al., (2018) find a negative correlation. The studies have varying measurements, with Arshad, (2023) using the percentage of households with a female head, Khan et al., (2023) exploring economic, social, political, and psychological dimensions and Maruta et al., (2023) employing the Human Development Index for Females. The measurement of financial initiatives of inclusion also varies, with Arshad, (2023) using indicators like the number of ATMs and bank branches per population and Maruta et al., (2023) measured using access, usage and quality of financial services. Geographical contexts also differ across studies, including Kashmir Valley in India Khan et al., (2023), Nigerian villages Ukanwa et al., (2018), Pakistan Arshad et al., (2021) and Ghana Salia et al., (2018) showcasing the diverse and context-specific nature of the findings.

Kibera which is an urban slum with high population density and informal housing, has a unique context characterized by diverse ethnic groups and an economy based on small-scale trading and casual labor. This contrasts with the rural and more traditional settings of Kashmir Valley, Pakistan, and Nigerian villages, where farming and strict gender roles dominate, limiting women's roles and economic opportunities (Khan et al., 2023; Ukanwa et al., 2018; Arshad et al., 2021). Unlike these regions, Kibera's necessity-driven flexibility in gender roles allows women to engage in various income-generating activities. In contrast, Malaysia with their more developed economies and proactive policies, support higher female workforce participation, highlighting different challenges and opportunities for financial inclusion and women's empowerment (Salia et al., 2018).

There is a notable global increase in financial inclusion, with 76 percent of adults having an account at regulated institutions by 2021 (Demirgüç-Kunt et al., 2022). However, there is a simultaneous trend of widening poverty levels, particularly in Sub-Saharan Africa and South Asia (Baah et al., 2023). The expansion of financial access, driven largely by the adoption of mobile money in developing economies, has not translated uniformly into poverty reduction (Demirgüç-Kunt et al., 2020). Therefore, there is a need for future research that addresses these limitations and explores the link between financial initiatives of inclusion and the empowerment of women specifically within the unique context of Kibera slums.

1.3 Research Objectives

1.3.1 General Objective

The study's overall objective was to establish the effect of financial inclusion on empowerment among women living in Kibera slums in Nairobi County.

1.3.2 Specific Objectives

The following research objectives served as the basis for investigating the general research objective.

1. To establish the effect of access to financial services on women's empowerment in Kibera slums.
2. To establish the effect of usage of financial services on women's empowerment in Kibera slums.
3. To establish the effect of quality of financial services on women's empowerment in Kibera slums.

1.3.3 Research Questions

The investigation aimed to address the following research questions.

1. Does access to financial services affect women's empowerment in Kibera slums?
2. Does usage of financial services affect women's empowerment in Kibera slums?
3. Does the quality of financial services affect women's empowerment in Kibera slums?

1.4 Scope of the Study

The research focused on Kibera slums to examine how financial inclusion initiatives contributed to the empowerment of women. The research objectives are to establish the effect of access to financial services, usage of financial services and quality of financial services on women’s empowerment in Kibera slums. The study was conducted over three weeks. Kibera is the largest informal settlement in Kenya and arguably in the entire African continent (UN Habitat, 2020). Primarily composed of impoverished city inhabitants, informal settlements serve as a means for them to adjust to the systemic lack of equitable access to resources and opportunities (Jimenez-Huerta, 2019). People living in informal settlements face tough living conditions, struggle to access essential services, and often deal with high unemployment rates (Breunig & Majeed, 2020). Given that Kibera slums stands as one of the largest informal settlements, the study's findings hold the potential for generalization to other similar areas. It provides insights that may be applicable and relevant to other comparable informal settlement contexts.

1.5 Significance of the Study

The study examining the effect of financial inclusion on women's empowerment holds profound significance across multiple sectors. Firstly, it offers invaluable insights for women themselves, shedding light on how access to financial services can increase their autonomy, income generation, and decision-making abilities, particularly in marginalized communities. Secondly, policymakers and governmental bodies stand to benefit, as the findings can inform targeted interventions aimed at improving women's access to financial resources, thereby reducing economic disparities and enhancing overall well-being.

Moreover, practitioners in financial institutions and development organizations can utilize the research to tailor financial services to meet the specific needs of women, fostering a more inclusive financial landscape. Additionally, the study's contributions to academic knowledge offer a foundation for further research and scholarly exploration into the relationship between financial inclusion strategies and women's empowerment, serving as a reference point for future studies in this critical area of study.

1.6 Summary of Chapter One

The research topic is introduced in the chapter with a focus on empowering women and acknowledging financial inclusion as an effective solution to overcome obstacles faced by women. The complexity of women's empowerment, significance of financial inclusion and disparities present in earlier studies are all addressed. Moreover, this section highlights the study's background details along with its problem statement, research objectives as well as defining scope and relevance.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is structured into three main sections. In the first section, two theoretical frameworks are explored for their relevance and as guiding principles for the study. Following this, the focus shifts to a review of empirical studies investigating the influence of financial initiatives of inclusion on empowerment of women, aligning with the study's objectives. The study's objectives will guide the review to identify research gaps. Finally, the chapter concludes the conceptual framework which illustrates the relationship between the variables in this study.

2.2 Theoretical Review

2.2.1 Public Goods Theory of Financial Inclusion

The public goods theory was originally introduced by Paul Samuelson in 1954 (Holcombe, 2000). It was further advanced by Peterson Ozili in 2020 to the public goods theory of financial inclusion (Immurana et al., 2021). It serves as a theoretical foundation for understanding the effects of financial initiatives of inclusion on empowerment of women. This theory highlights the characteristics of non-rivalry and non-excludability in goods and services. Non-rivalry implies that the consumption of a good by one person does not diminish its availability to others, while non-excludability means that once a good is produced, it cannot be withheld from potential consumers. Financial inclusion, in this context, aligns with the public goods theory as it is considered a public good, emphasizing that financial services should be accessible to all individuals, irrespective of their status, income level, or demographic differences (Ozili, 2020).

In line with the theory, Shabir and Ali (2022) stress that financial inclusion should be universally accessible, benefiting both the rich and poor, as well as those who are financially included and excluded. Chauhan and Miah (2022) support this by highlighting that the government is essential to advancing financial inclusivity as a public good. Damra et al., (2023) assert that formal financial services and unrestricted access to credit should be available to the entire population, aligning with the fundamental ideas of inclusive finance. Financial inclusion, viewed through the lens of public goods theory, posits that all members of the population should have access to formal financial services without exclusion, resulting in improved economic well-being for everyone (Ozili, 2020).

Financial inclusion is a powerful tool of empowerment, offering economic, social, and political opportunities (Shabir & Ali, 2022). Due to past gender power imbalances where men often had greater access to resources and influence, empowering women by boosting their self-esteem, self-efficacy, and locus of control has become a critical concern (Bello, 2022). According to the public goods theory, financial inclusivity should be available to everyone, regardless of gender, status, or income level, with an emphasis on fostering sustainable development, especially for underprivileged groups in society (Pandey et al., 2023). Sadiq et al., (2023) further emphasize that financial inclusion, when perceived as a public good, encourages economic growth, enabling individuals, including women, to make informed decisions regarding consumption, saving, investment, and risk mitigation.

The public goods theory of financial inclusion provides a valuable framework for understanding the broad benefits of accessible financial services but faces several critiques. One significant challenge is the assumption of universal non-excludability and non-rivalry in financial services, which may not fully reflect the complexities of real-world financial systems. For example, financial institutions often operate with profit motives that can lead to exclusionary practices, especially towards low-income individuals (Cull et al., 2014). Additionally, infrastructure limitations and digital divides can impede equal access, particularly in remote or underserved areas (Demirgüç-Kunt et al., 2018). Therefore, the public goods theory shows the ideal of universal access but may not sufficiently address the barriers of achieving true financial inclusion.

There was an increase in formal financial inclusivity in Kenya, reaching 83.7% from 82.9% in 2019, significantly improving from the 2006 baseline of 26.7%. However, the proportion of adults excluded from both formal and informal financial services increased slightly to 11.6% in 2021 from 11.0% in 2019, considerably lower than the 2006 baseline of 41.3% (FinAccess Household Survey, 2021). Despite the positive trend in financial inclusion, gender disparities persist, with 38% of women owning bank accounts compared to 50% of men. Although the gender gap has narrowed from 12.7% in 2006 to 4.2% in 2021, disparities are particularly evident in formal financial services. Notably, women continue to heavily depend on informal financial products to fulfill their needs, underscoring the ongoing significance of informal finance alongside formal services (Financial Sector Deepening Kenya, 2023).

In summary, the public goods theory of financial inclusivity provides a theoretical framework that aligns with the research topic of the effects of financial inclusion on women's empowerment. It shows the importance of universal access to formal financial services and the role of the government in promoting financial inclusion as a public good.

2.2.2 The Community Echelon Theory of Financial Inclusion

The echelon theory of financial inclusion was introduced by Peterson Ozili in 2020 (Bello et al., 2022). It emphasizes the pivotal role of community leaders in extending financial services to marginalized populations. The theory posits that by leveraging the influence and trust that community leaders command, financial inclusion can be effectively promoted within their respective communities. Community leaders, deeply embedded in their societies, are trusted figures whose decisions are often perceived as beneficial for the community. Through their cultural ties and respected positions, these leaders can encourage community members to embrace formal financial services, thereby potentially enhancing their welfare. While the theory underscores the potential benefits of empowering community leaders to drive financial inclusion, it also acknowledges several challenges, such as the risk of corruption among leaders and the possibility of corporate influence compromising decisions made in the community's best interest (Ozili, 2020).

The correlation between increased financial inclusion and leader decision-making underscores the significance of policy interventions aimed at empowering community leaders to foster greater access to financial services (Setiawan et al., 2023). This alignment with the community echelon theory suggests that empowering political leaders can spur greater financial activity within communities. By addressing the needs and concerns of these marginalized groups through community leaders, financial inclusion initiatives can effectively bridge gaps in access to formal financial services. Overall, the community echelon theory highlights the importance of recognizing and leveraging the influence of community leaders in promoting financial inclusion (Biju et al., 2021). By empowering community leaders and aligning policies with the principles of inclusivity and satisfaction, financial inclusion efforts can better serve marginalized populations and contribute to broader socio-economic development.

The community echelon theory of financial inclusion highlights the influential role of community leaders in promoting financial services access but has notable criticisms. One concern is the potential for corruption and misuse of power among community leaders, which can undermine trust and effectiveness (Ozili, 2020). The theory may also overestimate the uniformity of positive influence, as leaders' interests may not always align with the community's, leading to biased practices (Banerjee et al., 2018). Additionally, the effectiveness of this approach depends on robust regulatory frameworks and support from formal institutions, which may be lacking in underserved regions (Cull et al., 2014). The community echelon theory requires careful consideration of these inherent risks and limitations.

2.2.3 Feminist Theory

Mary Wollstonecraft introduced the feminist theory in 1759 (Ford, 2009). Feminist theory originated by examining how knowledge systems contributed to discrimination against women, perpetuated harm, and was driven by a realization that existing models were insufficient in explaining women's historical positions and their potential for change, with a central emphasis on understanding concrete instances of patriarchal power relations in events, practices and knowledge (Grosz, 2010). Societal inequality, driven by political, economic and social power dynamics is the root cause of women's inferior status (Efthymiadou & Farmaki, 2023). The theory asserts that women's individual status is influenced by political, social, and economic power dynamics, emphasizing the importance of providing women with fair access to all types of power (Obayelu & Chime, 2020). Feminist theory is beneficial in challenging the gender biases present in traditional theories by offering insights into the societal and interpersonal dynamics of women's experiences, highlighting the impact of everyday actions on reinforcing discriminatory social structures (Saulnier, 2000).

In England, organized feminism first developed in the 17th century. The second phase of feminism arose to combat male-centric oppression of women. It was characterized by a variety of political beliefs, including liberal, Marxist, socialist, radical, and ecofeminism. Radical feminists saw patriarchy as the source of women's oppression, whereas liberal feminists fought for equal rights. Marxist feminists focused on class analysis and the necessity for society to value housework, connecting capitalism and patriarchy as causes. Socialist feminists emphasized socialism and the consideration of both class and gender factors. Ecofeminism integrated patriarchy, ecology, and feminism. The third wave introduced new ideologies like cultural feminism, emphasizing gender differences and women-only spaces. Black feminism aimed to empower black women for social justice and postmodern feminism critiques a heterosexual society with male dominance as a source of women's oppression (Kumar, 2022). Due to the diversity of feminist ideologies, it can lead to fragmented efforts and insufficient cohesion towards gender equality.

Feminist theory is closely related to empowerment through its examination of role expectations, status, power differences, and the impact of gender on individuals and societal structures (Turner & Maschi, 2015). Empowerment in feminist theory aims to increase the personal, interpersonal, and political impact of marginalized communities, ultimately driving forward both individual and collective transformation (Grosz, 2010). Feminists see empowerment as a theoretical framework that enables individuals to gain greater control over their lives (AlMaseb & Julia, 2007). Empowerment is seen as a complex concept that goes beyond enhancing women's decision-making abilities, emphasizing the importance of women recognizing and feeling empowered to occupy spaces where they can make decisions (Annan et al., 2021).

In Kenya, empowerment of women is reported at 29%, based on the achievement of set indicators. Urban women show a higher empowerment rate of 40%, while rural women trail at 22% (Kenya National Bureau of Statistics, 2020). Significant strides have been made in promoting empowerment of women through government policies and initiatives. Measures such as the Access to Government Procurement Opportunities, Women Enterprise Fund, and Uwezo Fund aim to address challenges faced by women in informal enterprises and enhance empowerment. Notably, women are increasingly venturing into traditionally male-dominated sectors due to labor reforms and government support, though wage differentials persist. Despite constitutional provisions advocating for gender equality, gaps remain, including unequal access to resources, social and legal discrimination, disproportionate unpaid work, and violence against women. While progress has been achieved in women's political representation, challenges like gender stereotypes and traditional practices continue to impede full empowerment (Ministry of Public Service, Youth and Gender Affairs, 2017).

According to feminist theory, which is based on the acknowledgement of power dynamics in society, the empowerment of women is closely connected with achieving political, economic and social equality. In terms of financial inclusion efforts aimed at empowering women, feminist theory argues that giving them equal access to financial resources and decision-making opportunities is crucial for increasing their personal impact as well as enhancing their ability to influence others. Ultimately this will promote both individual growth and collective transformation.

2.3 Empirical Review of Financial Inclusion and Women's Empowerment

2.3.1 Access to Financial Services and Women's Empowerment

Recent studies across diverse contexts have demonstrated that access to financial services is crucial in promoting women's empowerment. Sakyi-Nyarko et al., (2022) conducted a study on how financial initiatives for inclusion can improve household welfare in Ghana. They used both discrete and continuous models to explore dimensions of financial inclusion, including access to institutions, usage of services, and satisfaction with them. The aspect of accessibility is measured by how long it takes to get to a financial institution. Their findings indicated that greater access led to improved well-being in important areas like nutrition, healthcare use, earnings, and education. Though proximity did show some benefits, it was not always significant. Easy accessibility helps ensure basic needs are met through the utilization of necessary products thereby improving living conditions which makes progress towards attainment of Sustainable Development Goals, particularly in poverty reduction. This study showed the vital role of financial inclusivity in refining the overall quality of life.

Eton and Nkamusiima, (2022) conducted research on the development of women's entrepreneurship in the Kigezi subregion of Uganda with a focus on accessible finance. Employing a cross-sectional design and questionnaire surveys, their study examined women-owned businesses. Access to financial services was measured by in terms of cost and availability of the services. According to the research results, there was an insignificant correlation between women's entrepreneurship development and access to finance. This weak correlation is mainly attributed to the inadequacy of financial services available to women. This leads women entrepreneurs to face challenges in maintaining creativity in their businesses and in their ability to hire employees, fundamental aspects of entrepreneurship. The limitations in access to finance have a direct influence on the expansion and improvement of women-owned companies in the area.

Adera and Abdisa (2023) utilized instrumental variable analysis and endogenous switching regression to examine the relationship between financial inclusivity and women's empowerment in Ethiopia. Their findings revealed that formal savings services had a significant positive impact on empowerment for women. The study also identified account ownership as predictor of access to financial services. The ability to access formal savings services empowers women by helping them save money more effectively which enables better management control over their resources while improving decision-making skills around home finances. This increased resource ownership can challenge traditional gender norms ultimately promoting greater overall well-being through increased female agency.

Esmaeilpour and Karami, (2023) focused their research on how fintech affects financial inclusion and women's empowerment. The study used a cross sectional methodology using data from the Global Findex. The outcome of their study revealed a robust correlation between the two, especially in countries with lower levels of gender discrimination. Though they found that this impact was minimal in nations where such inequality is high. This observation implies that gender inequity restricts women's access to opportunities for financial inclusion and its associated benefits. As such, promoting fintech-enabled financial inclusion could significantly enhance women's economic capabilities primarily in societies with less pervasive gender issues. Gora et al., (2023) also conducted a bibliometric study, which revealed the uncertainty surrounding the effectiveness of Microfinance Institutions (MFIs) in genuinely empowering women or aiding women entrepreneurs. The study highlighted that just having financial services at one's disposal may not be enough to combat poverty and grant empowerment to women.

The discrepancies between positive and negative results found in research on the relationship between financial services access and women's empowerment can be attributed to differences in measurement techniques, methodologies employed as well as contextual elements. Using endogenous switching regression and instrumental variable methods, Adera and Abdisa, (2023) employed a women's empowerment index created from a Demographic and Health Survey in Ethiopia. In contrast, Esmaeilpour and Karami, (2023) utilized cross-sectional regressions with the ordinary least squares' technique to gauge women's empowerment by concentrating on the proportion of female salaried employees in relation to all females. Sakyi-Nyarko et al., (2022) utilized continuous and discrete modeling techniques in the context of Ghana, while in the Kigezi subregion of Uganda, Eton and Nkamusiima, (2022) questionnaire survey for their research study employing a cross-sectional design.

2.3.2 Usage of Financial Services and Women's Empowerment

A significant body of research has been dedicated to exploring how financial inclusivity affects empowerment of women. Al-shami et al., (2018) conducted a study in Malaysia, focusing on the effect of microcredit on women's welfare and decision-making. The usage of financial services was measured using savings. Their findings highlighted that participation in microcredit programs positively impacted women's empowerment. Women who engaged in such programs experienced increased income and gained influence in various aspects of household decision-making, including mobility, purchases, health expenditure, daily expenses, and loan orders. The microcredit program played a pivotal role in granting women economic resources, enhancing their bargaining power within their households, and promoting gender equality. It facilitated women's involvement in self-employment and market activities, breaking down barriers that restricted their mobility.

Murshid (2018) conducted a study in Bangladesh that analyzed the influence of engagement in microfinance on women's empowerment. Using propensity score matching techniques, the research compared levels of empowerment between microfinance participants and a control group. Usage of financial services was measured by whether respondents participated in any of the micro finance services offered. Contrary to optimistic expectations, Murshid's findings showed that women who participated in microfinance did not experience any statistically meaningful changes with regards to their decision-making power, autonomy or justification for partner violence when evaluated against those of non-participants based on socio-demographic factors. Outcomes showed no significant difference between participating females and non-participating ones regarding measures of empowerment.

Another study conducted by Salia et al., (2018) in Ghana shed light on the unforeseen effects of microfinance, highlighting its impact on women's empowerment, business success, and family welfare. The participatory mixed-method approach uncovered a contrast to the conventional belief that microfinance always results in female empowerment. Moreover, it brought forth detrimental outcomes such as heightened domestic conflicts between spouses, increase in polygamy practices among male partners and overlooking household duties assigned traditionally to females due to their focus solely on entrepreneurial activities. Even though there are theoretical merits behind microfinancing endeavors, these findings further highlight how it can bring potential challenges suggesting careful consideration is needed regarding its impact upon a woman's life and holistic well-being.

Maruta et al., (2023) conducted a study that examined the connection between financial initiatives of inclusion and empowerment of women in Africa. Usage of financial services was measured by the volume and frequency of using the financial services. Their research adopted a quantitative approach, employing panel fixed effects models and alternative estimation methods to address potential endogeneity issues. The study revealed an interesting contrast to the microcredit findings. It suggested that the usage indicator of financial initiatives of inclusion, particularly the proportion of adults expressed as a percentage receiving wages into their financial institution accounts, had a more substantial impact on women's empowerment than access and quality indicators. This usage indicator significantly and positively affected the Human Development Index (HDI) of women. This difference in findings highlights the varying influence of different financial initiatives of inclusion indicators on empowerment of women.

The difference in outcomes observed in studies examining the connection between usage of financial services and empowerment of women can be attributed to variations in the measurement of both empowerment of women, the usage of financial services, as well as contextual factors and study limitations. Al-shami et al., (2018) focused on Malaysia, measuring women's empowerment through socio-demographic characteristics and household decisions, utilizing a propensity score matching methodology. In contrast, Maruta et al., (2023) assessed empowerment of women via the Human Development Index and utilization of financial services through the capacity and regularity of transactions. Murshid, (2018)'s study in Bangladesh, measured usage of financial services using microfinance participation as a measure and revealed no statistically significant impact on empowerment suggesting limitations in the construct validity of empowerment measurements. Finally, Salia et al., (2018) study in Ghana measured women's empowerment using family cohesion.

2.3.3 Quality of Financial Services and Women's Empowerment

Research exploring the link between the quality of financial services and women's empowerment has highlighted varying outcomes. Koomson et al., (2021) conducted a study in Ghana that looked into the joint provision of financial literacy and women's empowerment training and its impact on household consumption. The study's outcome variable was household consumption expenditure, and it considered the type of training provided – financial literacy, women's empowerment, or both. The findings revealed that providing both forms of training together had a significant positive impact on household consumption.

Sakyi-Nyarko et al., (2022) conducted a study focusing on the quality of financial services as an independent variable and its influence on household well-being in the context of Ghana. The quality of financial services was measured by the level of client satisfaction. Their findings indicated that individuals who reported high satisfaction with the quality of financial services were significantly more likely to have improved well-being. Notably, they were 22.3% more likely to never go without food and 19.7% more likely to never go without cash. This study emphasizes how high-quality financial services improve consumers' financial security.

Parvathy and Kumar (2022) studied how financial literacy, decision-making skills, and the economic welfare of women in India's community-based organizations are interconnected. Their study incorporated financial capability, decision-making ability, and financial well-being as variables. The results showed that financial competence and financial well-being were significantly positively correlated, with decision-making ability serving as a mediator. Better financial well-being was more likely to be experienced by women with greater financial competence. This perspective presents a nuanced understanding of the quality of financial services, particularly in terms of enhancing women's financial capability and, in turn, their well-being.

Maruta et al., (2023) investigated how financial initiatives of inclusion affects empowerment of women in terms of usage, access, and quality while delving into the larger African environment. Quality of financial services was measured by the level of financial knowledge and quality of the services. They used instrumental variable estimation and fixed effects regression analysis in their research technique. All three aspects of financial inclusion—quality included—had a substantial beneficial impact on women's empowerment, according to the study. The study underlined how crucial quality is to boosting empowerment of women.

The studies were different in the measurement of empowerment of women, the measurement of the quality of financial services, contextual factors, and study limitations. Sakyi-Nyarko et al., (2022) focused on Ghana, measuring empowerment of women through the level of satisfaction with formal financial services, employing continuous and discrete modeling techniques. In contrast, Maruta et al., (2023) measured women's empowerment using the Human Development

Index for Human Development and quality of financial services through financial knowledge and service delivery. The methodology involved fixed effects regression analysis and instrumental variable estimation. Parvathy and Kumar, (2022) explored women's well-being in India, considering financial knowledge, skills, attitude, and behavior as indicators of financial services quality. Their survey-based study focused on Kerala, emphasizing the need for broader geographic representation in future research.

2.4 Research Gap

The extensive literature on access to financial services, usage of financial services, and the quality of financial services concerning women's empowerment provides valuable insights into the multifaceted connection between financial inclusivity and the empowerment of women. However, an empirical gap emerges from the contrasting findings. While some studies indicate positive effects of these programs on women's empowerment, such as increased income and enhanced decision-making, others suggest potential negative consequences, including spousal disputes, polygyny, and neglect of household responsibilities. A conceptual gap also exists in the measurement of empowerment of women. Bhatia and Singh, (2019), Murshid, 2018), Pal et al., (2022) and Al-shami et al., (2018) focused economic, social and political dimensions leaving out familial, legal and psychological dimensions. This study seeks to add the additional dimensions of empowerment of women. These discrepancies show the need for more comprehensive, context-specific research that delves into the nuanced aspects of financial inclusivity and empowerment of women considering cultural, regional, and socio-economic variations.

Another research gap lies in the varying impacts of different financial inclusivity indicators on empowerment of women. For instance, the study by Maruta et al., (2023) emphasizes the significance of the usage indicator within the context of financial inclusion, particularly in Africa. In contrast, other dimensions, such as access and quality, exhibit differing degrees of influence. This suggests a need for further research to explore the differential effects of various financial inclusion indicators and to identify the most effective strategies for promoting women's empowerment, depending on the specific socio-economic and cultural context.

The literature on the quality of financial services and its impact on women's empowerment demonstrates varying outcomes and dimensions of influence. While some studies highlight the positive effects of high-quality financial services on well-being and empowerment of women, others emphasize the importance of other factors, such as training interventions, in achieving better financial outcomes. Additionally, research papers that have attempted to compute financial inclusion indicators have done so with no consideration for the quality dimension which is satisfaction that clients get from financial products/services (Sakyi-Nyarko et al., 2022).

Conducting this study is essential in filling the gaps that currently exist in research, as it will examine how financial inclusion impacts women's empowerment within the unique setting of Kibera slums. The findings from this investigation will enrich existing knowledge and establish a foundation for subsequent studies and empirical evaluations.

Table 2.1: Research gaps

Author	Study Objective	Methodology used	Findings	Research Gap
Al –shami, Razali and Rashid (2018)	To examine whether access affects several aspects of empowerment in Malaysia.	Propensity score matching.	Access to microcredit positively affects women's monthly income.	Contextual
Murshid (2018)	To evaluate whether microfinance participation empowers women.	Probit regression.	Women who participated in microfinance were not statistically different from women who did not participate.	Conceptual
Koomson, Villano and Hadley (2021)	To examine the impact of a joint financial literacy and women's empowerment training program on household consumption.	Ordinary Least Squares regression.	The program significantly improved household consumption for women.	Conceptual
Sakyi-Nyarko, Ahmad and Green (2022)	To investigate the relationship between financial inclusion and household well-being.	Ordinary Least Squares and 2SLS-IV regressions.	There are significant welfare gains from increased financial inclusion.	Conceptual
Eton and Nkamusiima (2022)	To explore the role access to finance plays in women's entrepreneurship development.	Linear regression.	Women entrepreneurs find it difficult to access cheap and adequate financial services.	Contextual
Adera and Abdisa (2023)	To examine the relationship between financial inclusion and women's	Endogenous switching regression.	There was a positive and statistically significant impact of financial	Conceptual

	economic empowerment,		inclusion on women's empowerment.	
Moghadam and Karami (2023)	To examine the effect of financial inclusion through Fintech on women's financial empowerment.	Ordinary Least Squares regression.	The relationship between financial inclusion and women's empowerment is positive and significant in countries classified by low levels of gender discrimination.	Conceptual
Gora, Dhingra and Yadav (2023)	To provide a comprehensive picture of the existing literature on the role of micro-finance and its approaches in MSMEs.	Bibliometric analysis.	The review identified four major themes; access to finance, women's empowerment, performance of MFIs and recent developments.	Empirical
Maruta, Edjigu and Kassa (2023)	To examine the effect of financial inclusion on women's empowerment.	Principal component analysis.	Financial inclusion significantly and positively affects women's empowerment.	Conceptual

2.5 Conceptual Framework

The focus of this conceptual framework was on women's empowerment as the dependent variable and its connection with access to financial services, usage of financial services, and quality of financial services considered as independent variables. Income, education, and age were considered control variables in the analysis, providing a comprehensive view of the factors influencing women's empowerment within the context of financial inclusion.

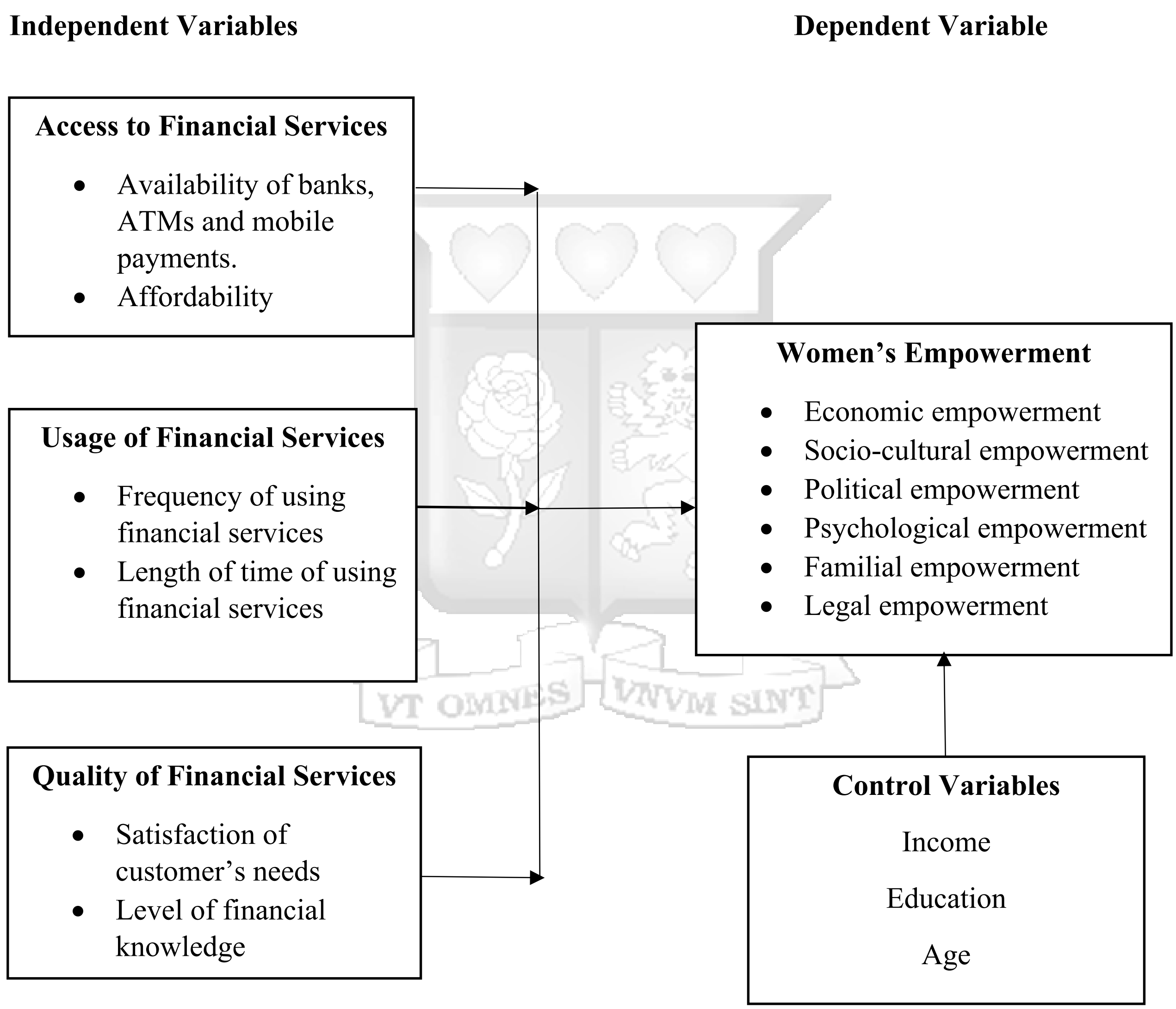

Figure 2.1: Conceptual Framework

2.6 Operationalization of Variables

Table 2.2: Operationalization Table

Variable	Specific variable name	Literature source	Data source	Theory supported
Dependent variable				
Women's Empowerment		Bayissa et al., (2018)	Information from women	Feminist Theory
Independent (test) variables				
Access to financial services	• Number of bank branches • Number of ATMS • Mobile payment options • Electronic payment options	Global Partnership for Financial Inclusion, (2016)	Information from women	Public Goods Theory
Usage of financial services	• Formally banked adults • Usage of credit • Usage of insurance • Participation in cashless transactions • Mobile transactional use • Frequency of account use • Saving propensity	Global Partnership for Financial Inclusion, (2016)	Information from women	Public Goods Theory

Variable	Specific variable name	Literature source	Data source	Theory supported
	• Remittances			
Quality of financial services	• Financial knowledge • Financial behavior • Disclosure requirements • Dispute resolution • Costs of usage	Global Partnership for Financial Inclusion, (2016)	Information from women	Public Goods Theory
Control Variables				
Income	Less than 20,000 KES = 1 20,000 KES - 50,000 KES = 2 50,001 KES - 100,000 KES = 3 100,001 KES - 200,000 KES = 4 More than 200,000 KES = 5 Prefer not to say = 6	Aziz et al., (2022)	Information from women	Public Goods Theory
Education	Primary School or less = 1 High School = 2 Some College/Technical Training = 3 Bachelor's Degree = 4 Postgraduate Degree = 5	Aziz et al., (2022)	Information from women	Public Goods Theory

Variable	Specific variable name	Literature source	Data source	Theory supported
Age	18-25 = 1 26-35 = 2 36-45 = 3 46-55 = 4 Above 55 = 5	Aziz et al., (2022)	Information from women	Public Goods Theory

2.7 Summary of Chapter Two

Divided into three main segments, the chapter centers on literature review. It begins by introducing the chapter's purpose, followed by a theoretical review employing Public Goods Theory and Feminist Theory to understand the dynamics of financial inclusion and women's empowerment. The empirical review then synthesizes findings from various studies, highlighting the positive and negative impacts of financial inclusivity on empowerment of women revealing an empirical, conceptual and contextual research gap. The chapter ends with a comprehensive conceptual framework and operationalization table.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the methodology utilized in conducting the study is presented. It covers various topics including research philosophy, study design and population, sampling size, data collection methods as well as data processing and analysis tools. Further, the chapter discusses the research validity and reliability of the research data, and the chapter concludes by discussing the ethical consideration observed when undertaking this research.

3.2 Research Philosophy

According to Saunders et al., (2009), research philosophy is a set of ideas about knowledge generation that impacts researchers' understanding of study objectives, strategy, data collecting, and interpretation methodologies. This study adopted a post positivist approach. Creswell and Creswell, (2018) posit that post positivism is a philosophical approach to research that challenges the foundational assumptions of positivism. While positivism emphasizes the pursuit of absolute truth and the scientific method, post positivism acknowledges the limitations and uncertainties in understanding the social world. Post positivism embraces a deterministic perspective where causes influence effects or outcomes, emphasizing the need to identify and assess these causal factors, often through experimental methodologies. This philosophy adopts a reductionistic approach, breaking down complex phenomena into variables for testing. Post positivists prioritize careful observation and measurement of an objective reality existing independently of the observer. Notably, this framework is more aligned with quantitative research, emphasizing numeric measures derived from systematic data collection and statistical analysis, as opposed to qualitative research, which delves into the complexities of human experiences and meanings through non-numeric data.

3.3 Research Design

Research design is a roadmap that outlines how a researcher will find answers to their questions. It is the overall plan that guides the research process. This study employed a correlational descriptive design which offers a quantitative description of trends, attitudes, or opinions within a population through the analysis of a representative sample (Creswell & Creswell, 2018). This design was suitable for quantifying study variables. Furthermore, the approach was cross-sectional, involving the collection of data at a single point in time. This study aimed to explain the effect of financial initiatives of inclusion on empowerment of women.

3.4 Population and Sampling

The complete group of cases from which a smaller group is selected is known as the population. The study population is the target people for which a piece of research seeks to gather data for the study. The total population of women in Kibera is 91,569 (Kenya Population and Housing Census, 2019). The sampling size for the study was determined using a formula that considers a 95% confidence level and a probability of 0.5 (Yamane, 1967).

$n = N / [1 + N(e^2)]$

Where n = Sample size, N = Population and e = level of error

With above formula in consideration, the sample size will be:

$91{,}569 / [1+91{,}569(0.05^2)] = 398$

$n = 398$

Following the application of Yamane's formula to determine the initial sample size, the researcher employed the snowballing technique to gather responses from women for the administered questionnaires. The method involved recruiting initial participants who, in turn, referred additional eligible individuals for the survey. The initial participants were drawn from networks. This method aimed to enhance the representativeness and inclusivity of the study sample by leveraging existing social connections within the identified demographic (Heckathorn, 2014).

3.5 Data collection methods

Data collection is the process through which a researcher acquires needed information from a given demographic for standard presentation. This is done so that the researcher can obtain answers to the research questions (Saunders et al., 2009). The study employed structured questionnaires to gather data, which were physically distributed to women in Kibera slums. A woman is defined by an adult female aged 18 years and above (Pal et al., 2022). Kibera slums is divided into 18 villages namely Laini Saba, Olympic, Makongeni, Karanja, Makina, Silanga, Raila, Kisumu Ndogo, Soweto East, DC Village, Kianda, Ayany, Gatwekera, Kambi Muru, Olympics, Toi Market, Lindi, Mashimoni and Karanja Estates. The researcher collected data from 22 women in each village.

3.6 Data analysis

The following regression model was used to satisfy the research objectives:

$$Y=\beta_0+\beta_1X1+\beta_2X2+\beta_3X3+\beta_4X4+\beta_5X5+\beta_6X6+e$$

Where Y = Women's Empowerment

β_0 =Constant

X1= Access to financial services

X2= Usage of financial services

X3= Quality of financial services

X4=Income

X5=Education

X6=Age

e = Error term

The data was coded, cleaned and analyzed using Stata. This tool was applicable for quantitative data because it offers a wide range of statistical tools and techniques that are specifically designed to analyze and interpret numerical data. It enabled the researcher to perform statistical analysis and generate meaningful insights based on the information.

3.7 Research Quality

According to Saunders et al., (2009), research quality is about ensuring that the methods used for collecting and analyzing data are consistent and can produce similar results if applied in different situations. In this study, the researcher focused on maintaining a clear approach in making sense of the raw data collected.

3.7.1 Research Validity

The validity of findings is concerned with whether they are truly about what they appear to be about (Saunders et al., 2009). It establishes if the relationship between two variables is causal with regards to conclusions being based on actual results. To ensure validity of the results a pilot study was carried out to check on any common biases, misinterpretation and other errors that might arise in the process of data collection. Additionally, the measurement of women's empowerment was adapted from (Bayissa et al., 2018) and the measurement of financial inclusion will be adapted from (Global Partnership for Financial Inclusion, 2016).

3.7.2 Research Reliability

The consistency of research results over time is known as the reliability of research (Saunders et al., 2009). Cronbach Alpha test was used to understand if the questions accurately measure the variables. The value 0.7 or greater will be used as cutoff value for Cronbach's alpha and thus for the reliability of the test (Christmann & Van Aelst, 2006).

Table 3.1: Cronbach's Alpha Test for Reliability

Cronbach's Alpha Test	
Average interitem covariance:	0.1760
Number of items in the scale:	6
Scale reliability coefficient	0.8008

The scale of reliability coefficient for Cronbach's Alpha is 0.8008. The coefficient is close to 1. This indicates that the scale or questionnaire is reliable and can be used to make accurate measurements. It also shows a high degree of covariance between the independent variables used in this study. It also indicates that the variables measure the same concept with high consistency.

The average interitem covariance is 0.1760. This measures the extent to which access to financial services, usage of financial services, and quality of financial services are correlated to each other. In this case, the three indicators are moderately correlated. The covariance value is also positive indicating that the three indicators have a positive linear correlation.

3.8 Diagnostic Tests

The study tested the quality of the research by conducting various diagnostic tests. The study adopted normality, multicollinearity and heteroscedasticity tests.

3.8.1 Normality Test

The Shapiro-Wilk test was used to test for normality. This test determines the degree of data normalcy by detecting the presence of skewness, kurtosis, or both. The Shapiro-Wilk statistic ranges from 0 to 1, with values close to zero implying that the data is not normally distributed, while values close to one confirm the data (Hanusz et al., 2016).

3.8.2 Multicollinearity Test

Multicollinearity test was used to examine whether the independent study variables have a correlation between them. A good model for the study should not have correlation between its independent variables. This study employed the Variance Inflation Factor(VIF) to test for multicollinearity. A Variance Inflation Factor greater than 10 implies that multicollinearity is a problem in the model (Sinan & Alkan, 2015)

3.8.3 Homoscedasticity Test

When the variance of the errors of the dependent variable is not the same across the data, heteroscedasticity arises. It arises when the variance of mistakes varies depending on the independent variables' values. This study used Levene's test to check for homogeneity. If the p-value is greater than 0.05, it suggests that the variances are not significantly different and assumptions of homogeneity of variance can be met for subsequent analyses(Valen, 2005).

3.9 Pilot Study

Pilot study is the preliminary testing of a portion of the sample size before the main study is carried out (Crossman, 2019). Pilot testing is significant in that it allows for the preliminary assessment of a portion of the sample size, providing valuable insights before conducting the full-scale study. The primary objective is to enhance the reliability of the data collection tool by implementing revisions based on the findings of the pilot study. The pilot study was done on 39 women from Kibera. This is 10% of the sample size as recommended by Mugenda and Mugenda (2011). The pilot study was done to women who were not included in the main study. All mistakes and inconsistencies in the questions were corrected before the main study.

3.10 Ethical Considerations.

The researcher sought approval from The National Commission for Science and Technology (NACOSTI) and Strathmore University Institutional Scientific and Ethical Review Committee. The research study also complied with five research principles: voluntary participation, informed consent, anonymity, confidentiality, potential for harm, and results communication. When human beings are involved in research, ethical issues are critical since research can have negative implications, thus research subjects must be protected. This research project will take ethical considerations into account by making participation voluntary, so that if a person decides to withdraw, they may do so.

3.11 Summary of Chapter Three

Chapter Three outlines the research methodology employed to investigate the impact of financial inclusivity on empowerment of women in Kibera slums. Adopting a post-positivist research philosophy, the study embraces explanatory research design to clarify cause-and-effect connections. The target population comprises women in Kibera slums, with a calculated sample size of 398. Structured questionnaires are the chosen data collection method, distributed physically to gather information. The study utilizes regression analysis and Stata is selected for data analysis due to its suitability for quantitative data. The chapter emphasizes research quality, validity, and reliability, incorporating a pilot study to address potential biases. Ethical considerations encompass NACOSTI approval, adherence to ethical principles, and ensuring participant confidentiality, anonymity, and voluntary participation.

CHAPTER FOUR

DATA ANALYSIS AND RESULTS PRESENTATION

4.1 Introduction

This chapter highlights the data analysis and results presentation from the study. The chapter is divided into 4 subsections as follows: response rate, demographic data, descriptive results, validity tests and inferential statistics.

4.2 Response Rate

The study was conducted with a total of 398 participants where a total of 398 questionnaires were issued to women in Kibera slums. The study response rate was captured in Table 4.1 below which indicates a positive and good response rate for data analysis. Cooper and Schindler (2014) affirmed that, a 50% response is sufficient, 60% is good and a 70% and above response rate is excellent.

Table 4.1: Response Rate from the Study

Response	Frequency	Percentage
Responded	362	90.95%
Not responded	36	9.05%
Total	**398**	**100%**

4.3 Demographic Data

In this sub section, the results on the demographic information regarding the study respondents were analyzed and presented. The data collection tool diagnosed four demographic parameters of the participants which were age, education level, marital status, and monthly income.

Table 4.2: Demographic Data

Variable	Frequency	Percentage
Age		
18 – 25 Years	14	3.87%
26 – 35 Years	136	37.57%

36 – 45 Years	196	54.14%
46 – 55 Years	16	4.42%
Total	**362**	**100%**
Education Level		
Primary School or less	15	4.14%
Secondary School	144	39.78%
Some College/Technical Training	192	53.04%
Bachelor's Degree	11	3.04%
Total	**362**	**100%**
Marital Status		
Single	161	44.48%
Married	127	35.08%
Divorced/Separated	13	12.98%
Widowed	7	7.46%
Total	**362**	**100%**
Monthly Income		
Less than KES 20,000	114	31.49%
KES 21,000 – 50,0000	176	48.62%
KES 51,000 – 100,000	66	18.23%
KES 101,000 -200,000	6	1.66%
Total	**362**	**100%**

The demographic data provided offers a comprehensive overview of the participants in the study on the effects of financial inclusion on women's empowerment in the Kibera slums. The majority of respondents are aged between 26 and 45 years, making up nearly 91.71% of the sample, which indicates that the study predominantly captures the perspectives of women in their prime working and family-raising years. Educational attainment varies, with over half of the women having some college or technical training, while a significant portion only completed secondary school. This range of educational backgrounds suggests a mix of skill levels and employment opportunities among the participants. Additionally, the marital status data reveals that a significant proportion of the women are single at 44.48% or married at 35.08%, with fewer participants being divorced, separated, or widowed. This distribution can influence the financial dynamics and empowerment levels experienced by these women, as single and married women may face different financial responsibilities and social expectations.

Income distribution among the women in Kibera slums shows that nearly half of the respondents earn between KES 21,000 and 50,000, while a substantial 31.49% earn less than KES 20,000 per month. The limited higher-income brackets, with only 1.66% earning between KES 101,000 and 200,000, highlight the economic challenges faced by these women. This income distribution is crucial in understanding how financial inclusion initiatives can impact their economic empowerment. The predominance of lower-income levels underscores the potential for financial inclusion to provide critical support and opportunities for economic advancement. By improving access to financial services, women in these income brackets could experience enhanced economic stability, increased savings, and better investment opportunities, all of which are vital for empowering women in the Kibera slums.

4.4 Descriptive Results

Descriptive analysis is a statistical method that provides a detailed summary of a dataset's main features. It involves the organization, summarization, and presentation of data to facilitate understanding and interpretation. This section highlights the descriptive results of study variables. Tabulation was conducted and presentation was done in the form of frequencies, mean and standard deviations.

4.4.1 Access to Financial Services

Table 4.6: Access to Financial Services by Women in Kibera Slums

Statements	N	Mean	SD
Access to financial institutions, including bank branches and related services adequately serve the financial needs of everyone in your community.	362	3.34	1.16

There are enough ATMs or cash machines available to ensure convenient access to cash for everyone in your community.	362	3.26	1.01
I have access to cheap financial services.	362	3.10	1.19
Mobile payment options (e-money accounts) meet the financial needs of the population.	362	2.97	1.32
There are enough electronic payment options for the community e.g. credit and debit cards, mobile payment apps, digital wallets, Electronic Funds Transfer, Online payment gateways	362	2.30	1.31

From the responses, it was evident that access to financial institutions, including bank branches and related services, had been viewed relatively positively by the women in Kibera. This suggested that traditional banking services moderately met the community's financial needs. The community also perceived the availability of ATMs or cash machines as moderately convenient, indicating that these services had been accessible. However, there might still have been some issues that needed addressing to enhance convenience further. The rating for these aspects reflected a certain level of trust and reliance on conventional banking infrastructures within the community, despite the overall challenging economic environment in the Kibera slums.

On the other hand, access to affordable financial services showed a mixed level of satisfaction among respondents. This implied that while some women had found financial services affordable, others experienced difficulties, pointing to inconsistencies in the cost of financial services available. Mobile payment options, which has been increasingly important in financially underserved areas, did not entirely meet the community's needs. The diverse experiences reported suggested that while some had found mobile payments useful, others had faced significant challenges with these services. The most critical gap identified was in the availability of electronic payment options, such as credit and debit cards, mobile payment apps, and online payment gateways. The low satisfaction in this area highlighted a substantial need for expanding and improving digital financial infrastructure, indicating that many women in Kibera had struggled with accessing modern, efficient electronic payment methods.

4.4.2 Usage of Financial Services

Table 4.7: Usage of Financial Services by Women in Kibera Slums

Statements	N	Mean	SD
I have a formal account with a financial institution.	362	3.78	1.03
I have been using formal financial services for a significant period.	362	3.84	1.26
I have obtained credit from a regulated financial institution.	362	3.69	1.05
I hold insurance policies, including both life and non-life insurance.	362	2.58	1.39
I engage in cashless transactions using methods such as cheques, credit transfers, direct debits, and credit/debit cards.	362	3.48	1.56
I use my mobile device for making financial transactions.	362	3.62	1.65
I frequently use my formal account for various financial activities, such as withdrawals, electronic payments, purchases, checks, etc.	362	3.92	0.97
I have saved money at a financial institution in the past year.	362	3.85	0.98
I receive domestic and international remittances.	362	3.63	1.04

From the responses gathered, the usage of financial services among women in Kibera Slums moderate level of engagement levels with formal financial institutions. The data illustrated a moderate to high level of interaction, with a notable proportion of respondents indicating possession of formal accounts. This suggested that a foundational level of financial usage had been established, granting women access to basic banking services. Furthermore, the consistently high mean scores across statements concerning the duration of usage and the frequency of utilizing formal accounts underscored a sustained engagement with these services over time. This implied a level of trust and reliance on formal financial systems among the surveyed women.

However, disparities emerged when examining more complex financial products such as insurance and credit. The lower mean score for holding insurance policies suggested a potential gap in coverage, particularly for risk mitigation, which could have left the women vulnerable to financial shocks. Similarly, the relatively lower mean score for obtaining credit from regulated institutions hinted at possible barriers to accessing credit, whether due to stringent eligibility criteria or limited availability of credit products tailored to the needs of this demographic. Despite the evident strides in adopting digital financial services, as evidenced by the use of mobile devices and cashless transactions, there may still have been challenges in fully harnessing the potential of these technologies to enhance financial inclusion. The data showed that there is a need for targeted interventions to address specific gaps in utilization of certain financial products and services.

4.4.3 Quality of Financial Services

Table 4.8: Quality of Financial Services for Women in Kibera Slums

Statements	N	Mean	SD
I feel confident in my understanding of basic financial concepts such as inflation, interest rates, compound interest, risk diversification and insurance.	362	2.24	0.74
I know where to source emergency funds in case of an urgent need	362	2.91	1.38
I understand how financial information is shared with me, including plain language, local language use, and disclosure formats.	362	3.06	1.18
I believe there are effective ways to resolve issues with my bank, both internally and externally.	362	2.87	1.41

I know the average costs associated with opening and maintaining an account at a financial institution.	362	2.90	1.51
I am aware of the informational barriers that may exist in credit markets, affecting the ease with which individuals can access credit.	362	2.18	1.39
I am satisfied with how well my financial needs are met by the services I use.	362	3.03	1.01

From the responses, it was evident that women in Kibera Slums faced a diverse set of challenges and opportunities regarding the quality of financial services offered. The data revealed varying levels of understanding and confidence in financial matters, with many respondents expressing uncertainty about basic concepts such as inflation, interest rates, and risk diversification. This suggested a significant gap in foundational financial literacy among this demographic. Furthermore, there seemed to be a lack of awareness regarding informational barriers in credit markets, indicating potential difficulties in accessing credit facilities.

However, amidst these challenges, there were notable areas of strength. Many women appeared to have had a good grasp of where to source emergency funds, indicating a certain level of preparedness for unforeseen financial needs. Additionally, there was a moderate level of satisfaction with the adequacy of financial services and an understanding of how financial information was shared. These positive responses suggested that despite the obstacles, there were mechanisms in place to effectively communicate financial information and provide services that meet the needs of some women in Kibera. Nevertheless, the disparities between different aspects of financial capability revealed the need for targeted interventions to improve financial literacy and access to services for women in the area.

4.4.4 Women's Empowerment

Table 4.9: Empowerment of Women in Kibera Slums

Statements	N	Mean	SD
I believe my income contributes to my economic empowerment.	362	3.49	1.78
I consider ownership of assets as a factor in my economic empowerment.	362	3.43	1.09
I have decision-making power in both financial and non-financial matters within my family.	362	3.75	1.02
I am knowledgeable about my legal rights.	362	3.88	1.00
I have a positive self-esteem and feel empowered in various aspects of my life.	362	3.92	0.97
I support the idea of treating genders equally, am willing to speak out against harmful practices, and have no preferences for the gender of my offspring.	362	3.85	0.98
I actively participate in legal bodies, public protests, and voting.	362	3.63	1.04

From the responses, it was clear that women's empowerment is perceived and experienced through multiple dimensions. Firstly, there was a prevalent belief among respondents in the significance of income towards their economic empowerment. This suggested a recognition of the role financial stability played in shaping women's agency and opportunities within their communities. Many women articulated the importance of their earnings not just for sustenance but also for asserting their independence and influence in decision-making processes concerning their lives and families. Furthermore, a substantial number of respondents indicated that they wielded decision-making power within their families, spanning both financial and non-financial realms. The responses reflected a growing assertion of agency and autonomy among women in Kibera, indicating a desire to actively shape their destinies and contribute to household dynamics.

In addition to economic and familial domains, the responses highlighted a notable awareness and engagement with legal rights among the surveyed women. Many expressed familiarities with their legal rights, suggesting a concerted effort to educate themselves about their entitlements within the legal framework. This knowledge was crucial for navigating complex societal structures and advocating for oneself effectively. Moreover, there was a visible endorsement of gender equality, with respondents expressing support for equitable treatment and a willingness to challenge discriminatory practices. This reflected a broader societal shift towards inclusivity and recognition of women's rights as fundamental human rights. Lastly, the data showed active participation in formal avenues of civic engagement, such as involvement in legal bodies, public protests, and voting. This indicated a proactive stance towards effecting systemic change and addressing broader societal issues. Overall, the responses painted a dynamic picture of women's empowerment in Kibera, characterized by agency, awareness, and active engagement across various spheres of life.

4.5 Validity Tests

Before inferential and descriptive analyses were conducted, the following tests were conducted with the accompanying objectives.

Table 4.10: Validity Tests

Test	Test Applied	Result Interpretation
Normality test	Shapiro-Wilk Test	This checks whether the data is normally distributed. For normal distribution, p should be greater than 0.05 ($p>0.05$).
Homoscedasticity Test	Levene's test	Levene's statistic is significant at $\alpha= 0.05$, which implies that when p-value is greater than 0.05, the assumption of homogeneity is met.
Multi-collinearity Test	Variance Inflation Factor (VIF)	Checks the strength of correlations between independent variables. VIF of around or greater than 10 shows a high degree of multi-

collinearity. VIF of less than 10 shows little to no multi-collinearity among the variables

4.5.1 Normality Test

The normality test checks whether the data is normally distributed, in which case p>0.05. The study data showed that the data is normally distributed given that the test findings are insignificant at p>0.05. Data is normally distributed when the test results are statistically insignificant.

Table 4.11: Shapiro-Wilk Test for Normality

Variable	**Statistic**	**df.**	**Sig.**
Access to Financial Services	0.9943	362	0.2003
Usage of Financial Services	0.9970	362	0.7490
Quality of Financial Services	0.9931	362	0.0966
Women's Empowerment	0.9924	362	0.0605
Age	0.9956	362	0.4076
Education Level	0.9939	362	0.1589
Monthly Income	0.9829	362	0.1003

The study data showed that the data is normally distributed given that the test findings are insignificant at p>0.05. Data is normally distributed when the test results are statistically insignificant.

The Shapiro-Wilk statistic for all the variables is closer to 1 for all the variables and the p-value (Prob>z) is greater than 0.05 for all the variables. This indicates that the data is normally distributed.

4.5.2 Homoscedasticity Test

Homoscedasticity or homogeneity of variance, is a statistical concept that refers to the condition where the variability of a dependent variable is consistent across different groups in a dataset or the levels of an independent variable.

Table 4.12: Levene's Test for Homoscedasticity

	Levene's Statistic	df1	df2	Sig.
Based on mean	0.7758	283	78	0.9290
Based on median	0.4052	283	78	0.9999
Based on trimmed mean	0.7758	283	78	0.9290

The provided Levene's test for homoscedasticity examined the equality of variances across different groups or conditions, employing three distinct measures: mean, median, and trimmed mean. In this analysis, the Levene's test statistics for mean, median, and trimmed mean were 0.7758, 0.4052, and 0.7758 respectively, with corresponding degrees of freedom of 283 and 78 for both numerator and denominator. The associated p-values were 0.9290 for the mean-based test and trimmed mean-based test and 0.0999 for the median-based test. These results suggested that there is no significant deviation from homoscedasticity across the groups or conditions, as all p-values exceed the conventional threshold of 0.05.

4.5.3 Multicollinearity Test

VIF is a statistical measure that helps to identify multicollinearity in a regression model. This measures the correlation between the independent variables, in this case, access to financial services, usage of financial services, and quality of financial services. A VIF greater than 1 indicates that the variable correlates with other model variables. The higher the VIF, the more correlated the variable is with other variables.

Table 4.13: Variance Inflation Factor

Variable	VIF	1/VIF
Access to Financial Services	1.5	0.667758
Usage of Financial Services	1.43	0.699209
Quality of Financial Services	1.3	0.772177
Age	9.37	0.080808
Education Level	9.92	0.091584
Monthly Income	1.95	0.512514
Mean VIF	**4.25**	

Table 4.5 provides the Variance Inflation Factors (VIFs) for three predictor variables: usage of financial services, quality of financial services, and access to financial services and three control variables: age, education level and monthly income. VIF values assess the extent of multicollinearity among predictors, with figures above 10 typically indicating high multicollinearity. In Table 4.13, the VIF values for the variables indicate that there is low multicollinearity present between the independent variables Access to Financial Services, Usage of Financial Services, Quality of Financial Services, Age, Education Level, and Monthly Income. The mean VIF of 4.25 suggests that the overall level of multicollinearity in the model is not high. This indicates that each variable contributes unique information to the regression analysis and is not redundant with other variables. Overall, the results suggest that there is no significant issue of multicollinearity among the variables in this particular model.

4.6 Inferential Data Analysis

Inferential data analysis is a statistical method used to make inferences or draw conclusions about a larger population based on a sample of data. It is a powerful technique that allows researchers to generalize their findings to a larger population. It provides valuable insights into complex helps researchers make more informed decisions based on empirical evidence. Inferential data analysis can be used to make predictions about future events or to test the effectiveness of interventions or treatments. It is a powerful tool that can provide valuable insights into complex phenomena and help researchers make more informed decisions based on empirical evidence.

Linear regression is a statistical technique employed to predict a dependent variable's value based on one or more independent variables. In multiple linear regression, several independent variables are considered. The study diagnosed the linear regression model of access to financial services, usage of financial services and quality of financial services on women's empowerment as shown below.

4.6.1 Multiple Linear Regression Analysis

Table 4.14: Multiple Regression Analysis of Independent Variables and Dependent Variable

Source	**SS**	**df**	**MS**	Number of obs =	362	
				F(6, 355) =	301.87	
Model	124.86	6	20.810	Prob > F =	0.000	
Residual	24.47	355	0.0689	R-squared =	0.8361	
				Adj R-squared =	0.8334	
Total	149.33	361	0.4137	Root MSE =	0.2626	
Women's Empowerment	**Std. Coef.**	**Std. Err.**	**t**	**P>t**	**[95% Conf. Interval]**	
Access to Financial Services	0.0761	0.0242	3.14	0.002	0.0284	0.1237
Usage of Financial Services	0.1832	0.0306	5.99	0.000	0.1230	0.2433
Quality of Financial Services	0.0522	0.0223	2.34	0.020	0.0083	0.0960
Age	0.1935	0.0761	2.54	0.011	0.0439	0.3430
Education Level	0.4799	0.0729	6.58	0.000	0.3365	0.6233
Monthly Income	0.1545	0.0259	5.96	0.000	0.1035	0.2054

_cons	0.6565	0.1163	5.64	0.000	0.4277	0.8852

The multiple regression analysis aims to explore the relationship between women's empowerment and various factors, including access to financial services, usage of financial services, quality of financial services, age, education level, and monthly income. The model exhibits a high degree of explanatory power, as evidenced by the significant R-squared value of 0.8361, indicating that approximately 83.61% of the variance in women's empowerment can be explained by the independent variables included in the model.

Focusing specifically on the components related to financial services, the coefficients reveal a positive and significant effect on women's empowerment. Access to financial services (Coef. = 0.0761, $p = 0.002$), usage of financial services (Coef. = 0.1832, $p < 0.001$), and quality of financial services (Coef. = 0.0522, $p = 0.020$) all exhibit a positive effect on women's empowerment. Notably, usage of financial services demonstrates the strongest effect, as indicated by its relatively large coefficient and highly significant p-value compared to the other financial services components. This suggests that enhancing both access to and utilization of financial services, along with ensuring their quality, can positively impact women's empowerment. The linear regression equation considering these factors would be:

Women's Empowerment = 0.0761(Access to Financial Services) + 0.1832(Usage of Financial Services) + 0.0522(Quality of Financial Services) + 0.1935(Age) + 0.4799(Education Level) + 0.1545(Monthly Income) + 0.6565

Table 4.15: Multiple Linear Regression Analysis of Financial Inclusion and Women's Empowerment

Source	**SS**	**df**	**MS**	Number of obs =	362	
				F(4, 357) =	432.86	
Model	123.81	4	30.951	Prob > F =	0.000	
Residual	25.53	357	0.0715	R-squared =	0.8291	
				Adj R-squared =	0.8271	
Total	149.33	361	0.4137	Root MSE=	0.2674	
Women's Empowerment	**Std. Coef.**	**Std. Err.**	**t**	**P>t**	**[95% Conf. Interval]**	
Financial Inclusion	0.2258	0.0393	5.74	0.000	0.1485	0.3031
Age	0.1892	0.0774	2.44	0.015	0.0370	0.3415
Education Level	0.5131	0.0734	6.99	0.000	0.3688	0.6575
Monthly Income	0.1696	0.0261	6.5	0.000	0.1183	0.2209
_cons	0.8811	0.1027	8.58	0.000	0.6791	1.0832

The regression analysis explores the relationship between Women's Empowerment and several predictor variables, including financial inclusion, age, education level and monthly income. The model exhibits a high level of statistical significance and demonstrates strong explanatory power, with an R-squared value of 0.8291. This indicates that approximately 82.91% of the variance in Women's empowerment can be explained by the combination of these independent variables. Specifically, financial inclusion emerges as a notable predictor, with a coefficient of 0.2258 ($p < 0.001$), suggesting that increases in financial inclusion are associated with higher levels of women's empowerment. This relationship holds even when controlling for other factors like age, education level, and monthly income.

The regression analysis serves as a robustness test for the predictor variable Financial Inclusion concerning its impact on women’s empowerment. Prior to this analysis, a separate regression had been conducted to explore the predictors of financial inclusion. In this current model, Financial inclusion emerges as a significant factor that has an effect on women’s empowerment, with a coefficient of 0.2258 ($p < 0.001$). This suggests that increases in financial inclusion are associated with higher levels of Women’s Empowerment, even when controlling for other influential factors such as age, education level, and monthly income. The statistical significance of Financial Inclusion in this context underscores its importance as a determinant of Women’s Empowerment, reaffirming its relevance beyond its previous role as a predictor in the context of Financial Inclusion itself.

4.7 Summary of Chapter Four

In this chapter, the data collected underwent thorough validation to ensure its reliability for analysis. Various tests were conducted to confirm the accuracy of the results obtained. Utilizing linear regression, the relationship between access, usage and quality of financial services and women's empowerment was explored. It was found that the independent variables examined had a positive and significant effect on women's empowerment, collectively explaining approximately 83.61% of its variance. Specifically, usage of financial services had the highest effect on women’s empowerment. These findings underscored the pivotal role of financial services in enhancing women's sense of empowerment.

CHAPTER FIVE

DISCUSSION, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary, discussion on the findings, conclusion and recommendations for further research. The objectives of the research were to establish the effect of access to financial services, usage of financial services and quality of financial services on women’s empowerment in Kibera slums.

5.2 Summary of Findings

The study conducted provided a comprehensive analysis of the demographic data, descriptive results and inferential results that highlights the significant relationship between financial inclusion and women's empowerment. With a response rate of 90.95%, the study's demographic analysis revealed that the majority of respondents are in their prime working and family-raising years, predominantly aged between 26 and 45 years. Educational attainment varied, with most women having completed secondary education or some form of technical training, indicating a diverse skill set within the community. Income distribution showed that nearly half of the respondents earn between KES 21,000 and 50,000, highlighting the economic challenges faced by these women.

The descriptive results shed light on the extent of access, usage, and quality of financial services in Kibera. The data showed moderate satisfaction with traditional banking services and ATM availability, yet highlighted significant challenges in accessing affordable financial services and digital payment options. Usage of financial services indicated moderate engagement with formal banking institutions, but lower adoption rates for insurance and credit services suggested barriers to comprehensive financial inclusion. Despite notable strides in digital financial transactions, there remains a need for enhanced digital financial infrastructure and targeted interventions to address gaps in financial literacy and access to advanced financial products.

The inferential results revealed that access to, usage of, and quality of financial services positively and significantly impacted women's empowerment. The multiple regression model shows that these factors, alongside age, education level, and monthly income, explain a significant portion of the variance in women's empowerment (R-squared = 0.8361). Financial inclusion emerged as a critical determinant of empowerment, with significant coefficients indicating that improvements in financial services can lead to increased empowerment for women in Kibera slums. This shows the importance of enhancing financial inclusion initiatives to foster economic stability, decision-making power, and overall empowerment for women in the community.

5.3 Discussion of Findings

5.3.1 Access to Financial Services and Women's Empowerment

Access to financial services positively impacted women's empowerment in Kibera Slums, as evidenced by the inferential findings. The inferential analysis revealed a positive significant relationship between access to financial services and women's empowerment. The findings from the study on access to financial services in Kibera Slums align with recent literature on the relationship between financial inclusion and women's empowerment. Sakyi-Nyarko et al. (2022) emphasized the importance of accessibility to financial institutions in improving household welfare, with greater access leading to enhanced well-being in crucial areas such as nutrition, healthcare utilization, earnings, and education. Similarly, the descriptive findings in Kibera Slums indicated a generally positive perception suggesting that access to financial services plays a significant role in meeting the diverse financial needs of the population and potentially improving living conditions.

Moreover, Adera and Abdisa (2023) highlighted the positive impact of formal savings services on women's empowerment in Ethiopia. Their study found that access to formal savings services empowered women by enabling them to save money effectively, thereby gaining better control over their resources and enhancing decision-making skills regarding household finances. This resonates with the inferential findings in Kibera Slums, which demonstrated a significant relationship between access to financial services and women's empowerment. The study's emphasis on targeted interventions to promote financial inclusivity and foster greater empowerment among women aligns with the recommendations drawn from the descriptive and inferential analyses in Kibera Slums.

In contrast, Eton and Nkamusiima, (2022) found an insignificant correlation between access to finance and women's entrepreneurship development. This could be attributed to the measurement of access which was in terms of cost and availability of the services. Overall, the findings as supported by literature, highlight how important it is to improve access to financial resources for empowering women in underserved areas like Kibera Slums. To make a real difference, interventions must be customized to address the specific needs and challenges faced by women in these communities. By ensuring better access to financial services, we not only empower women but also contribute to overall socio-economic progress in these regions. Thus, focusing on initiatives that expand women's access to financial services is crucial for creating lasting positive change and promoting fair development in marginalized areas.

5.3.2 Usage of Financial Services and Women's Empowerment

The study revealed a positive and significant relationship between the usage of financial services and women's empowermentThis underscores the pivotal role of financial inclusion initiatives in fostering women's empowerment and socioeconomic advancement. The study revealed a significant presence of women in formal financial systems, showcasing high adoption rates of digital and formal banking channels, including owning formal accounts and utilizing mobile devices for financial transactions. These findings highlight a notable level of active involvement in economic activities. However, despite robust engagement in certain financial activities like cashless transactions and mobile banking, women showed lower involvement in obtaining credit from regulated institutions and holding insurance policies. This gap suggests the existence of barriers hindering their complete integration into all aspects of formal finance.

The findings of the study resonate with the research conducted by Al-shami et al. (2018) in Malaysia, which focused on the impact of microcredit programs on women's welfare and decision-making. They found that participation in microcredit initiatives positively influenced women's empowerment by increasing their income and granting them more influence in various household decisions. These programs facilitated women's engagement in self-employment and market activities, ultimately enhancing their economic resources and bargaining power within their households. This aligns with the observed patterns in Kibera Slums, where women's active participation in financial services correlates with greater economic agency and decision-making authority.

Moreover, the study's findings are also supported with the research conducted by Maruta et al. (2023) on financial inclusion and women's empowerment in Africa. They highlighted the significance of financial inclusion indicators, particularly the usage of financial services, in promoting women's empowerment. Their study emphasized that indicators such as the proportion of adults receiving wages into their financial institution accounts significantly contribute to enhancing the Human Development Index (HDI) of women. This underscores the importance of not only access to financial services but also active engagement with them in fostering women's economic empowerment.

Contrary to the positive findings regarding access to financial services and women's empowerment, Murshid (2018) conducted a study in Bangladesh that analyzed the influence of engagement in microfinance on women's empowerment. Usage of financial services was measured by whether respondents participated in any of the microfinance services offered. However, the findings of Murshid's study showed that women who participated in microfinance did not experience any statistically meaningful changes regarding their decision-making power, autonomy, or justification for partner violence when evaluated against those of non-participants based on socio-demographic factors.

Collectively the findings provide robust evidence supporting the notion that usage of financial services plays a pivotal role in women's empowerment through enhancing income and facilitating greater decision-making autonomy within households. By addressing barriers and promoting active engagement with financial services, initiatives like microcredit programs and broader financial inclusion efforts can contribute significantly to advancing gender equality and empowering women economically in diverse socio-economic contexts.

5.3.3 Quality of Financial Services and Women's Empowerment

The findings showed that there was a significant and positive relationship between the quality of financial services and women's empowerment. Despite being the factor with the lowest level of effect, the robust coefficient and its statistical significance underscore the importance of enhancing financial services quality to promote women's empowerment in the context of Kibera Slums. This suggests that while other factors may also contribute to women's empowerment, improving the quality of financial services remains a crucial component in fostering greater economic independence and agency among women in underserved communities like Kibera.

The findings from the study are supported by Sakyi-Nyarko et al. (2022), as they similarly highlight the positive impact of high-quality financial services on consumer well-being. Specifically, their study in the context of Ghana demonstrated that individuals reporting high satisfaction with financial services were significantly more likely to experience improved well-being, including reduced instances of food and cash insecurity, emphasizing the importance of quality financial services in enhancing financial security and overall welfare. This aligns with the findings regarding the significant relationship between the quality of financial services and women's empowerment in Kibera Slums.

The study by Parvathy and Kumar (2022) also complements the findings by emphasizing the interconnectedness between financial literacy, decision-making skills, and the economic welfare of women, particularly in community-based organizations in India. This aligns with the discussion on the significance of improving financial services quality to enhance women's empowerment, as greater financial capability enables individuals to make informed financial decisions and ultimately improves their well-being. Another study conducted by Maruta et al. (2023) provides further support for the findings by investigating the impact of financial inclusion initiatives on women's empowerment across the broader African context. Their research focused on the usage, access, and quality of financial services, finding that all aspects of financial inclusion, including quality, significantly contribute to women's empowerment. This reinforces the importance of quality financial services in promoting women's empowerment, highlighting how initiatives aimed at improving the quality of financial services can have a substantial beneficial impact on empowering women economically and socially

Quality financial services is important in promoting women's empowerment and overall well-being. The findings emphasize how high satisfaction with financial services correlates with improved economic outcomes and reduced financial vulnerabilities among individuals, particularly women in marginalized communities. By highlighting the positive impact of financial competence and inclusion initiatives on women's empowerment, these studies call for concerted efforts to enhance the quality and accessibility of financial services globally. Thus, investing in initiatives aimed at improving financial literacy, decision-making skills, and the overall quality of financial services is essential for advancing gender equality and promoting inclusive growth.

5.4 Conclusions

This study set out to investigate the effect of access to financial services, usage of financial services, and quality of financial services on women's empowerment in Kibera Slums, Nairobi County. Drawing from the Public Goods Theory of Financial Inclusion, Community Echelon Theory of Financial Inclusion, and Feminist Theory, the research aimed to provide insights into the dynamics of financial inclusion and its impact on women's empowerment within Kibera slums. Through a comprehensive analysis drawing from descriptive and inferential methods, as well as insights from relevant literature, the study provides valuable insights into the dynamics of financial inclusion and its impact on women's empowerment in underserved communities. The findings reveal that access to financial services, usage of financial services, and the quality of financial services positively and significantly impact women's empowerment, collectively explaining a significant portion of the variance in empowerment levels.

The findings confirm the theoretical frameworks underpinning this study. The Public Goods Theory of Financial Inclusion is validated by the significant impact of access to financial services on women's empowerment, highlighting the benefits of financial services as public goods. The Community Echelon Theory is supported by the high impact of financial service usage, reflecting the importance of community involvement. The Feminist Theory is affirmed by the enhancement of women's decision-making power through active financial participation. However, the lower impact of service quality suggests a need to further explore this aspect within these theories, particularly in underserved communities.

Usage of financial services showed the highest impact on women's empowerment, meaning that when women are actively involved in things like having bank accounts or using mobile banking, they feel more empowered. This suggests that active participation in financial activities gives women more control over their money and decisions. Access to financial services, like having banks nearby, also plays a big role in empowering women, although not as much as actually using those services. Meanwhile, the quality of financial services, like how good or helpful they are, has the lowest correlation with women's empowerment. Even though it's important, it doesn't seem to impact empowerment as much as the other factors. Overall, the study shows that financial inclusion is key to making women feel more empowered in places like Kibera Slums.

5.5 Recommendations

Access to financial services for women in Kibera Slums should be improved by policymakers and NGOs collaborating to implement targeted interventions. This could involve establishing more accessible financial service points within the community, promoting financial literacy programs tailored to women's needs, and advocating for policies that facilitate the inclusion of marginalized groups in the formal financial sector. Government agencies can provide support by creating regulatory frameworks that encourage innovative financial service delivery models. NGOs can play a crucial role in grassroots outreach, community education, and facilitating partnerships between financial institutions and local organizations to ensure sustainable access to financial services for women in Kibera.

Full usage of financial services requires a multi-stakeholder approach. To address these barriers, financial institutions should design products and services that cater to the specific needs and preferences of women in Kibera, including flexible repayment options, low-cost savings accounts, and tailored financial education programs. NGOs can complement these efforts by providing targeted support to enhance financial literacy, promote entrepreneurial skills development, and facilitate access to microcredit programs. By fostering a supportive ecosystem that encourages active participation in financial services, stakeholders can empower women in Kibera to fully harness the benefits of financial inclusion.

Thirdly, financial service providers and regulatory authorities share responsibility for enhancing the quality of financial services. Financial service providers should prioritize investments in technology, staff training, and customer support mechanisms to improve service delivery. They should also establish feedback mechanisms to gather insights from women and incorporate their feedback into service improvement efforts. Regulatory authorities on the other hand should enforce standards and regulations to ensure that financial services meet quality benchmarks and protect the interests of consumers, particularly women in marginalized communities.

5.6 Limitations of the Study

The study's reliance on a quantitative design provides robust statistical insights into the relationship between access to financial services, usage patterns, and the quality of services on women's empowerment in Kibera Slums. However, this approach has limitations in capturing the different experiences that shape women's empowerment. Secondly, the cross-sectional design employed offers a snapshot of the relationships between variables at a single point in time, which, while informative, may not capture the dynamic nature of women's empowerment and financial inclusion over time. Lastly, the findings, though valuable for Kibera Slums, should be generalized with caution to other contexts, especially developed countries. Kenya's unique socio-economic and cultural characteristics, as a developing nation, may limit the broader applicability of the study's results to urban areas in developed countries.

5.7 Recommendations for further research

To address these limitations, future research could benefit from integrating qualitative methods to complement the quantitative findings. This would allow for a deeper exploration of the lived experiences and contextual factors influencing women's access to and utilization of financial services in Kibera. Qualitative approaches, such as interviews or focus groups, would provide valuable insights into the socio-cultural dynamics shaping empowerment outcomes.

Moreover, researchers should consider longitudinal studies to track changes in empowerment indicators and financial behaviors over an extended period. Longitudinal designs would offer valuable insights into the progressive dynamics of financial inclusion initiatives and their long-term impact on women's empowerment trajectories in Kibera Slums, facilitating a more comprehensive understanding of how these factors evolve and interact over time.

Lastly, future research endeavors should aim to replicate the study in diverse settings, including developed nations, to validate the findings and ensure their relevance across different socio-economic contexts. Conducting similar studies in developed countries would provide a comparative perspective on the dynamics of women's empowerment and financial inclusion across various socio-economic contexts, enhancing the generalizability and applicability of the research findings.

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APPENDICES

Appendix I: Introduction Letter

My name is Michelle Anyango, a student currently pursuing a Master of Science in Development Finance at Strathmore University Business School. In partial fulfilment of the Master's Degree program, I am required to carry out a research project therefore I will be conducting a survey for academic research purposes to contribute to the available literature on the effect of financial inclusion on women's empowerment in Kibera slums. The study intends to answer questions related to access to financial services, usage of financial services and quality of financial services and their effect on women's empowerment.

The information provided by participants will be treated with the utmost confidentiality and involvement in the survey is entirely voluntary. Your privacy is of utmost importance, and your responses will be used solely for research purposes.

Thank you sincerely for your time and cooperation

Appendix II: Questionnaire

Section A: Demographic Information

This section seeks to gather basic demographic information to better understand the diverse backgrounds of our participants. Your responses will remain confidential and will only be used for analytical purposes.

1. Please indicate your age:
    - 18-25 [ ]
    - 26-35 [ ]
    - 36-45 [ ]
    - 46-55 [ ]
    - Above 55 [ ]
2. Marital Status:
    - Single [ ]
    - Married [ ]
    - Divorced/Separated [ ]
    - Widowed [ ]
3. Indicate your level of education:
    - Primary School or less [ ]
    - High School [ ]
    - Some College/Technical Training [ ]
    - Bachelor's Degree [ ]
4. Monthly Income
    - Less than 20,000 KES [ ]
    - 20,000 KES - 50,000 KES [ ]
    - 50,001 KES - 100,000 KES [ ]
    - 100,001 KES - 200,000 KES [ ]
    - More than 200,000 KES [ ]

Section B: Access to Financial Services

Please indicate your level of agreement on a scale from 1 to 5, where 1 indicates "Strongly Disagree" and 5 denotes "Strongly Agree," with the statements presented below concerning your access to financial services.

	Statement	**1**	**2**	**3**	**4**	**5**
1.	Access to financial institutions, including bank branches and related services adequately serve the financial needs of everyone in your community.					
2.	There are enough ATMs or cash machines available to ensure convenient access to cash for everyone in your community.					
3.	There is access to cheap financial services.					
4.	Mobile payment options (e-money accounts) meet the financial needs of the population.					
5.	There are enough electronic payment options for the community e.g. credit and debit cards, mobile payment apps, digital wallets, Electronic Funds Transfer, Online payment gateways					

Section C: Usage of Financial Services

Please indicate your level of agreement on a scale from 1 to 5, where 1 indicates "Strongly Disagree" and 5 denotes "Strongly Agree," with the statements presented below concerning your usage of financial services.

	Statement	**1**	**2**	**3**	**4**	**5**
1.	It is easy to have and use a formal account with a financial institution.					
2.	I have been using formal financial services for a significant period of time.					
3.	I have obtained credit from a regulated financial institution.					
4.	I hold insurance policies, including both life and non-life insurance.					

5.	I engage in cashless transactions using methods such as cheques, credit transfers, direct debits, and credit/debit cards.					
6.	I use my mobile device for making financial transactions.					
7.	I frequently use my formal account for various financial activities, such as withdrawals, electronic payments, purchases, checks, etc.					
8.	I frequently save money at a financial institution.					
9.	I often receive domestic and international remittances.					

Section D: Quality of Financial Services

Please indicate your level of agreement on a scale from 1 to 5, where 1 indicates "Strongly Disagree" and 5 denotes "Strongly Agree," with the statements presented below concerning the quality of financial services you receive.

	Statement	**1**	**2**	**3**	**4**	**5**
1.	I feel confident in my understanding of basic financial concepts such as inflation, interest rates, compound interest, risk diversification and insurance.					
2.	I know where to source emergency funds in case of an urgent need					
3.	I understand how financial information is shared with me, including plain language, local language use, and disclosure formats.					
4.	I believe there are effective ways to resolve issues with my bank, both internally and externally.					
5.	I am aware of the average costs associated with opening and maintaining an account at a financial institution.					
6.	I am aware of the informational barriers that may exist in credit markets, affecting the ease with which individuals can access credit.					
7.	I am satisfied with how well my financial needs are met by the services I use.					

Section E: Women's Empowerment

Please indicate your level of agreement on a scale from 1 to 5, where 1 indicates "Strongly Disagree" and 5 denotes "Strongly Agree," with the statements presented below concerning women's empowerment.

	Statement	**1**	**2**	**3**	**4**	**5**
1.	I believe my income contributes to my economic empowerment.					
2.	I consider ownership of assets as a factor in my economic empowerment.					
3.	I have decision-making power in both financial and non-financial matters within my family.					
4.	I am knowledgeable about my legal rights.					
5.	I have a positive self-esteem and feel empowered in various aspects of my life.					
6.	I support the idea of treating genders equally, am willing to speak out against harmful practices, and have no preferences for the gender of my offspring.					
7.	I actively participate in legal bodies, public protests, and voting.					

Appendix III: Institutional Ethical Review Letter

Strathmore UNIVERSITY

26th March 2024

Ms Anyango Michelle,
michelle.anyango16@strathmore.edu

Dear Ms Anyango,

RE: Effect of Financial Inclusion on Women's Empowerment in Kibera Slums

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC2136/24.** The approval period is from **26th March 2024 to 25th March 2025.**
This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

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

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

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26-Mar-2024
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Appendix IV: NACOSTI Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 607725

Date of Issue: 05/April/2024

RESEARCH LICENSE

This is to Certify that Ms.. Michelle Marion Anyango of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: Effect of Financial Inclusion on Women's Empowerment in Kibera Slums for the period ending : 05/April/2025.

License No: **NACOSTI/P/24/34437**

607725

Applicant Identification Number

Director General

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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