

**FINANCIAL TECHNOLOGY AND FINANCIAL INCLUSION OF SMALL AND  
MEDIUM ENTERPRISES IN KABATI MARKET KITUI COUNTY, KENYA.**

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## **DECLARATION**

This research project has never been examined in any examination body and I, therefore, declare it's my original work. Kenyatta University and I are the only parties who can give out consent for one to replicate this work.

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## **DEDICATION**

I dedicate this work to my parents Fredrick Muthengi Nzambu and Janepher Kanyaa Muthengi, my family members and friends for being instrumental in making my course successful. I count myself extremely privileged to be surrounded by loving and caring people like you. Despite facing teething obstacles, most of you understood the nature of this course and appreciated the effort i was making. Our destiny is intricately and inseparably linked together in God. He is the only one who can precisely reward you for your support. May the Almighty Father sanctify you.

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## OPERATIONAL DEFINITION OF TERMS

- Agent Banking:** Is a means by which engaged agents under agency agreement provide some of financial and banking services to everybody in society on behalf of the commercial banks.
- Financial Inclusion:** Is a process by which individuals and businesses have access to useful affordable financial products and services that meet their needs when it comes to making transactions, payments and credit access.
- Financial Innovation:** Is the process of creating new financial products, services or processes by gathering latest technique ideas to reduce costs and make financial services available and affordable.
- Financial Technology:** Is an innovation that seeks to improve and automate the delivery and use of financial services.
- Fuliza:** Is an overdraft facility provided by Safaricom through M-pesa toolkit and serves as a financial product by enabling in completion of M-pesa transaction when one has insufficient funds in M-pesa account.
- Google Play Store:** Is an official application which supports and stores all Android operating systems which enable users to download applications like the digital loan app lenders.
- M-Pesa:** is a mobile banking service that enables users to store and transfer money through their mobile phones.

**Mobile Money:** Is a technology that through use of cell phone enables people to access services like send money, store, receive, obtain loans and spend money.

**Mobile Loan Apps:** These are digital apps supported by google play store which provides lending service through inventure access.

**Online Banking:** Is an automated system which permits customers of the bank with accountability to manage all their accounts processes and makes direct transactions with the bank via the internet.

**Small and Medium Enterprises:** These are businesses that are known to have between one and ninety-nine employees.

## ABBREVIATIONS AND ACRONYMS

<b>ADB</b>	Asian Development Bank
<b>CGoKTI</b>	County Government of Kitui
<b>DFS</b>	Digital financial services
<b>FIs</b>	Financial Institutions
<b>Fin Access</b>	Financial Access
<b>FinTech</b>	Financial Technology
<b>FDIC</b>	Federal Deposit Insurance Corporation
<b>FSDK</b>	Financial Sector Deepening Kenya
<b>G-20</b>	Great- 20 Countries
<b>GDP</b>	Gross Domestic Product
<b>GOK</b>	Government of Kenya
<b>GFD</b>	Global Findex Database
<b>GPFI</b>	Global Partnership for Financial Inclusion
<b>ICT</b>	Information and Communications Technology
<b>IFC</b>	International Finance Corporation
<b>KAM</b>	Kenya Association of Manufacturers
<b>KBA</b>	Kenya Bankers Association
<b>KNBS</b>	Kenya National Bureau of Statistics

<b>MTP</b>	Medium Term Plan
<b>PWC IL</b>	Price Waterhouse Coopers International Limited
<b>SMEs</b>	Small and Medium Enterprises
<b>WBG</b>	World Bank Group



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## ABSTRACT

SMEs play a vital role which are growth drivers in the development roadmap, as they aid in transforming the country to become a middle-income developed state by 2030 by achieving blue print goals which are pillars of vision 2030. Due to the effective deployment of financial technology and financial institution services, individuals and other organizations now have more financial access. Despite this progress, access to useful affordable financial products and services that meet daily needs when it comes to making transactions, payments and credit access by Kenyan small and medium-sized businesses continues to be a major problem. This research therefore intended to find out how financial technology and financial inclusion affect SMEs in Kenya's Kabati market. Specifically, this study sought to establish Agency banking services effect, find out the Mobile money services effect, establish online banking effect and investigate mobile loan apps lenders effect on SMEs' financial inclusion. Pecking Order Theory, Asymmetric Information Theory, Technology Acceptance Model, Relationship Lending Theory, and Financial Intermediation Theory all serve as foundations for the study. Descriptive cross-sectional approach was adopted for use in this study whereby stratified random sampling method was applied with sample size of 223 enterprises on all merchants and wholesalers SMEs in the Kabati market which had a total population of 502 SMEs. Questionnaires were used in the study to collect primary data. The data was analyzed by descriptive statistics as well as inferential statistics. Summary statistics included means, standard deviations, percentages and frequencies. Inferential statistics included correlation and multiple linear regression analyses. Tables, figures, pie charts and graph were used to present data of the research findings. The study concluded that Financial technology have significant effect on financial inclusion. Most SME holders of the county are now able to access financial services, from access to credit to financial planning tools, with the help of online banking and mobile money platforms thus driving business growth and further enhancing financial inclusion. The study also concludes that costs involved in accessing the financial technology services and products discourage most SMEs since they feel it consuming most of their profits. The study recommended that the government to contribute in promotion and support of FinTech strategies such as Agency banking, M-pesa services, online banking and Money Lending Apps, since they facilitate the provision of financial services faster and in a more convenient and efficient manner in areas that are underserved by financial institutions. In order to increase the adoption of FinTech among SMEs the government can help in coming up with legislation to regulate the operations of FinTechs with regards to transaction costs and user data privacy since they are increasingly being adopted by many businesses. This will prevent exploitation of SMEs by the FinTech products helping them to stay in business and continue to grow which further promotes financial inclusion for all. The study also recommended that government to provide licenses at low fee as for FinTechs to have more products and services at an affordable fee targeting SMEs since this group does not necessarily always have access to financial products provided by conventional institutions and this will lead to greater financial inclusion to SMEs as well as increased loyalty and profit for the FinTech companies. The study also recommended that future studies focus on the effects of adoption of financial technology service delivery methods by SMEs across the country.

## **CHAPTER ONE**

### **INTRODUCTION**

#### **1.1 Background of The Study**

Financial technology is defined as the process of applying the most up-to-date approaches by today's organizations in order to maximize the provision of financial services at the lowest feasible cost (Asian Development Bank, 2014). Different ways have been discovered by companies in order to achieve the goal of achieving the lowest cost of finance. Globally according to PwC, FinTech transformation is considered to have helped the industry achieve the goal of financial inclusion to a large extent, according to (PwC, (2018). Firms and individuals can now get their financial needs handled with fewer restrictions and in real time.

Accordingly, in Africa more commonly firms have used the financial inclusion model, which aims to achieve not only a low cost of capital through debt, but also to ensure that debt is accessible to all creditworthy businesses regardless of their ability to raise collateral (Demirgüç-Kunt, Klapper, Singer & Van, 2015). When a business is financially included it can meet their financial obligations through loans, even if they do not have bank accounts.

The financial needs of businesses and what financial institutions have to provide have been found to be vastly different in numerous studies around the world. In most countries, SMEs have been unable to obtain financing from financial institutions as they have a shortage in collateral in terms of assets. The enterprises are discovered to run on their own, relying on their financial flows for investment and development, thus limiting their capacity to seize any advantage advanced through market opportunities. Due to severe financial illiteracy, the majority of these businesses are known to be held by individuals. As a result, financial inclusion knowledge has been shown to be poorly embraced in SMEs (Alexander, 2017).

Financial inclusion has been a stumbling block for SMEs across Africa, particularly in emerging countries. The order of the day has been financial exclusion in most of these countries' economies. This is accomplished in a variety of ways, with the goal of facilitating a greater focus on SMEs in developing markets over the medium term. Financial inclusion is identified by Demirgüç-Kunt, Klapper Singer and Van (2015), as a constituent of most pressing issues confronting African institutions, financial institutions, central banks, and governments. According to a study by Nwanko and Nwanko (2014), the majority of people in underdeveloped countries are unable to obtain financial services. This is because of their smaller transaction volumes, the financial sector in these countries views poor people as unviable consumers, while those who are significantly underserved remain to be most individuals residing in rural areas.

Nationally, the poor have benefited from being recognized as viable consumers by financial institutions, as well as having the capacity to be reached by financial institutions, thanks to the usage of financial technology (Aduda & Kingoo, 2017). Financial inclusion is a significant driver of economic growth and is required for SMEs to achieve inclusive financial growth. Financial inclusion, according to an African study, reveals that the majority of persons do not have a bank account (Global Findex, 2014).

According to a KNBS poll, almost 400,000 MSMEs in Kenya shuttered their doors before earning a second year of experience, raising concerns about the sector's long-term viability (KNBS, 2016). Between 2010 and 2016, they reported that 2.2 million SMEs shut down. Kenya is one of the countries where financial technology has advanced because to the M-Pesa mobile money system, agency banking, and internet transaction services (Mbiti & Weil, 2014). Digital payments, Robo-advisers, crowdfunding, peer-to-peer (P2P), and insurance telematics are



examples of fintech advances implemented by financial users, which enable SMEs to access financial services and so continue to operate (World Bank, 2017).

In emerging countries, SMEs are becoming more adaptable to technology advancements (Manimala, Vijay & Devi, 2012). The financial sector Medium Term Plan (MTP) program has improved in reaching Kenya's strategic development blueprint goal, as expressed in Kenya's Vision 2030, from 2012 to 2017. The need for increased financial inclusion is a top priority aim for the sector (Fin Access, 2018). Small businesses are among the unbanked and underserved.

The goal of this study is to determine whether or not small businesses are financially included. According to Allen, Demigurre, Klapper, and Soledad (2012), through provision of employment opportunities coupled with economy diversification, SMEs are constantly viewed as essential in developing Kenya's economy. In Kenya, owners in the banking industry came to an agreement that the SMEs sector would be prioritized in the improvement of the private sector. To this end, Financial Sector Reforms and the Kenyan Development Strategy Vision 2030 supports improved financial inclusion for SMEs (Kenya, 2013).

### **1.1.1 Financial Inclusion**

According to World Bank, financial inclusion is defined as a process by which individuals and businesses have access to useful affordable financial products and services that meet their needs when it comes to making transactions, payments and credit access. Access to credit becomes required to meet the financial needs of enterprises, including transactional, bill payment, and savings, and it should be done in a fair manner (World Bank, 2017). Financial inclusion,

according to Nandru, Anand, and Rentala (2016), is the process of making credit available to credit-worthy businesses, particularly those that do not make deposits in financial institutions.

State organizations with the goal of increasing their economies must address financial inclusion policies in order to nurture lower-level enterprises that can contribute to economic growth (Thankom & Rajalaxmi, 2015). Mutegi and Phelister (2013), found that many people who had reached adulthood were unable to support their everyday operations due to financial policies that excluded them and prevented them from accessing financial services. According to the World Bank (2017), all countries should strive to achieve financial inclusion for both businesses and individuals in order to achieve economic stability and progress.

It is reasonable to consider that more savings by underbanked adults in financial institutions could enhance the global economy (World Bank, 2014). Financial services should be made available to low-income earners, unbanked groups, and disadvantaged people at a reasonable cost. This is seen as a strategy to improve financial inclusion and economic development in our country. (Allan, Massu, & Svarer, 2012; DemirgüçKunt & Klapper, 2012).

On the same note, financial inclusion can potentially be boosted among Sub-Saharan countries through mobile money (Global Findex Database, 2017). Since 2014, there has been a growth in the number of adults with an account in the region who have been constantly migrating their accounts from financial institutions to mobile money accounts at a rate that has nearly doubled in the previous three years, with a huge percentage of adults having only one mobile money account (World Bank, 2014). According to global Findex data, there are gender and income disparities in these fields.

Individuals who hold mobile money accounts in Africa's emerging countries lessen poverty. M-Pesa accounts and internet banking are used by 88 percent of account holders in Kenya, and

opportunities are sure to boost account ownership (GFD, 2017). Financial inclusion in Kenya has increased by 56.2 percent since 2006, while exclusion has decreased by 30.3 percent since 2006. (Fin Access, 2019). Since 2006, Kenya's financial inclusion landscape has changed dramatically. According to Fin Access 2019, there has been a drop-in transition in the following aspects: rural to urban areas and vice versa, rich and poor people, as well as males and women. All of these discrepancies were brought to light by the expansion of ICT, government backing and initiative, as well as mobile money use.

Governments and digital IT expanded adoption is required to pay attention to the disadvantaged group by deepening usage of financial services by enabling the unbanked to access by deepening financial enclosure, particularly in rural areas, as evidenced by this research (Global Partnership for Financial Inclusion, 2012). Financial services should be made available, affordable, adequate, and accessible to underserved sections in society while adhering to minimal consumer protection criteria through the use of financial technology.

### **1.1.2 Financial Technology**

Financial technology has been defined as the application of the most up-to-date approaches by present organizations in order to maximize the provision of financial services at the lowest possible cost (Asian Development Bank, 2014). Emergence of Fintech companies has resulted in a revolution of the finance industry (Kregel, 2016). Biometric identification, cloud computing, blockchain technology, and quantum computing are all examples of technological advancements that are currently being integrated into the financial industry, as seen by the Fintech businesses' transformation.

Fin Access, (2018), Fintech investment has increased by more than thrice since 2014 globally. The financial industry believes on a good chance that automation could take over the industry.

This is evidenced by the fact that banks have been investing billions of dollars in information technology, possibly to meet market demands for convenience in financial transactions. According to PwC Global FinTech, this financial market transformation was considered as helping the industry achieve the goal of financial inclusion to a large extent, according to PwC, (2018). Firms and individuals can now get their financial needs handled with fewer restrictions and in real time. The progress has been discovered to be double-edged, coming from both the side of regulations that appear to be improving as well as technology itself (Ngui, 2014).

In Africa, a lot has been proven to be happening in the business based on the rapidly rising mobile banking, which improves customers' banking experiences and the financial inclusion process. The rise of digital finance has resulted from the availability of mobile money, which is transforming the economy's focus. Individual resource management, individual and business insurance, and boosting SMEs' access to external funding are all goals of digital finance. In Sub-Saharan Africa, mobile money setups including M-pesa have come with significant hype of being financial technology next generation (Fintech Africa, 2018).

Kenya's fintech sector is one of Africa's fastest-growing, with enhanced technology now defining the country's day-to-day operations of industries. Many new enterprises are driving innovation, particularly in the field of mobile money (CBK, 2016). Fintech companies employ banks for the purpose of supplying formal financial services aimed at bringing on board micro-businesses and SMEs with constrained capital access (Shim & Shin, 2016). Through the use of mobile money in Kenya, lenders have been able to reduce financial services acquisition cost and achieve a larger number of consumers. The Kenyan Central Bank controls the conventional lending business, but alternative lending platforms are not governed by any legislation (CBK, 2015).

Fintech innovation has facilitated the reduction of regulatory compliance expenses, which has been a hurdle in securing finance for Small and Medium Businesses (PWC, 2016). Fintech solutions can help lower the risks of delivering technology-enabled financial services as well as other compliance costs by incorporating regulatory regulations into information technology procedures. If the government can keep up and provide solutions for the risks associated with the delivery of financial technology-enabled services, the financial inclusion curve for our country will change for the better in the next ten years, allowing all citizens, regardless of wealth status, to benefit from digital payments (Global Findex Database, 2017).

### **1.1.3 SMEs In Kabati market Kitui County**

Kabati market Kitui County is located in the eastern province, is one of the 47 counties established by virtue of the Republic of Kenya's 2010 constitution. It is one of the largest and busy market in Kitui west sub-county, in Kenya (CGoKTI, 2016). The sub-county's climatic condition has been determined to be semi-arid, which has been linked to low agricultural output, which has been dubbed the "backbone" of the entire economy. Again, the county has been designated as having low industrialization, which means that the majority of the items and consumables consumed in the area are manufactured in adjacent counties. This indicates that the service industry and retail firms, which dominate the county, are largely reliant on the county's gross domestic output (CGo KTI, 2016).

The banking business in Kabati market has been discovered to extend its services to the County due to the availability of other industries. Financial services are critical to all other industries since growth necessitates the banking industry's support services. Agriculture, retail, and service enterprises that dominate Kitui county's economy have been reported to be less stable as a result of the county's negative economic conditions, necessitating financial institution

support for their survival. Improvements in connection and accessibility of available and inexpensive financial approaches are used to reduce the cost of doing business and post-harvest waste. Expansion and improvement of some road networks to all-weather roads has made this practicable (CGoKTI, 2016). Borrowing from KNBS data, the County's economy is mainly reliant on mixed farming, followed by marginal mixed farming, and finally formal employment, which accounted for 52 percent, 44 percent, and 4 percent of the county's economy, respectively (KNBS, 2016). It becomes an essential component in determining the interconnections that exist between financial technology and the levels of financial inclusion of SMEs in the Kabati market in Kitui County.

The Kabati market is a big livestock, business, and agricultural market that is located along the main Nairobi Garissa highway. It is one of Kitui County's main markets. M-Pesa agents, Banking agents, mini-supermarkets, Butcheries, Chemistry, health centers, Hotels, Electronics shop, wines and spirit shop, tailors' shop, saloon shops, Beauty shops, Shoes and apparel dealers, and gas stations are among the 502 SMEs listed in the report (Appendix III).

However, because the province's work and gross domestic product are generated by the service sector, and the county is known to be less industrial and semi-arid, this county's employment and gross domestic product are generated by the service sector. Wholesale and retail businesses are part of the service industry (KNBS, 2016). The majority of the residents of this county rely on the trade of their firm's products. As a result, there is a compelling reason to investigate SMEs' financial inclusion in this county.

## **1.2 Statement of the Problem**

Financial inclusion plays a dynamic role in Small and Medium Enterprises as it's recognized by policymakers as an economic actor to achieve poverty alleviation and sustainable growth. Even though, SMEs face greater financing obstacles than larger firms World bank (2014), SMEs play a main role as they contributes in the achievement of four big agendas in vision 2030, as a key growth driver on development blueprint which seeks to convert our country into a developed middle-income nation, by provision of standard life to all people within the nation by the year 2030 (KNBS, 2015; CBK, 2016).

To achieve this, the Kenya Association of Manufacturers and Government of Kenya have implemented several reforms. These reforms include creating a conducive environment to SMEs entrepreneurship and development thus leading to the future security of the business. KAM helps in the provision of strategic leadership whereby it sets long term plans on how to support manufacturing SMEs towards Global financial inclusion competitiveness. (KAM, 2019; GOK, 2018).

The Central Bank of Kenya in conjunction with financial institutions, has worked on launching a financial infrastructure which supports Small and Medium Enterprises obtaining external finance and mainly focused on credit information system (CIS), Creditor rights and regimes, securing transactions legislations and registries, and thus coming up with stronger Accounting and Auditing team to support SMEs sector (CBK, 2016). Despite increased development of fintech, government initiatives and support increased execution of several restructurings by Kenyan government and support of financial infrastructure by CBK and financial institutions, some SMEs still face challenges of financially being excluded (KNBS, 2019). Regardless of all this, past statistics indicate 2.2 million SMEs closed down between 2010-2016 (KNBS,

2016). The Access to External finance of SMEs has become more troublesome and costly while their accessibility has suddenly declined. SMEs financial restrictions limit their investment opportunity and stagnant growth (Irwin & Scott, 2010).

Kashangaki (2014), argues that to date, growing SMEs still face challenges of accessing finance. Through new tactics and a paradigm change by current financial institutions, SMEs can be led to the center of the innovation process and product banking (Miller & Nyauncho, 2014). According to Nyagah (2018), SMEs in Kenya confront a variety of issues, the most prominent of which being stagnation and high failure rates. A thorough assessment of the literature reveals that microfinance institutions can help SMEs and banks overcome some of the issues they face.

George, Namusonge, and Waiganjo (2017), conducted research on the effects of SMEs financial performance on their access to finance in Mombasa County, Kenya, with the goal of establishing a link between SMEs performance and financial limitations. Tonny and Timothy (2014), conducted research on forming creative teams to increase financial inclusion by providing appropriate financial services that are accompanied with better products to the underserved. According to the research on services supplied by firms and people on financial inclusion in Africa, African countries are still lagging behind in terms of growth (World Bank, 2008). Another study which detailed micro financial institutions effects on the SMEs sector, on the other hand, revealed that micro financial institutions have a favorable impact on SMEs (Priscilla, Ombongi, & Wei, 2018). These studies failed to empirically analyze financial technology and financial inclusion of Kenyan SMEs, resulting in an empirical gap that was the subject of the current study.



## **1.3 Objectives of The Study**

### **1.3.1 General Objective**

The study's general objective was to find out how financial technology and financial inclusion affect SMEs in Kabati market Kitui County.

### **1.3.2 Specific Objectives**

To achieve the aforementioned objective, this study sought to:

1. Establish the agency banking services effect on financial inclusion of SMEs in Kabati market Kitui County.
2. Find out the Mobile Money services effect on financial inclusion of SMEs in Kabati market Kitui County.
3. To establish the online banking effect on financial inclusion of SMEs in Kabati market Kitui County.
4. Investigate Mobile loan apps services effect on financial inclusion of SMEs in Kabati market Kitui County.

## **1.4 Research Hypotheses**

This study was guided by the hypotheses stated below:

**H<sub>01</sub>:** Agency banking have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.

**H<sub>02</sub>:** Mobile money have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.

**H<sub>03</sub>:** Online banking have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.

**H<sub>04</sub>:** Mobile loan Apps have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.

### **1.5 Significance of The Study**

The stakeholders listed herein are expected to benefit from the findings as well as recommendations of this study as it is tailored to be of use to them; Government of Kenya, SMEs owners, and the management team, the employees of SMEs business its customers, students studying on SMEs, in addition to academicians as well as other researchers studying on the financing of startup SMEs. The researcher provided researchers working on this subject with more insight on the topic and areas for further research.

### **1.6 Scope of The Study**

Kenya's Kitui County, at Kabati Market provided the location where the investigation took place. The research was confined to 223 SMEs, which was a sample size chosen for study data with the use of the sampling formula by the researchers (Yamane, 1967). The study focused on small and medium businesses in the Kabati market, which had a total population of 502 SMEs, according to the data (Appendix III). Applied for the purpose of data collection were questionnaires which were provided to the business owners, managers, and immediate supervisors of retail and wholesale firms, where responses were obtained in a fortnight. This study set to discover financial technology and SMEs' level of inclusion in Kitui County, thereby bridging the gap between fintech and SMEs' financial inclusion. The study was carried out in the year 2021.

## **1.7 Limitations of The Study**

Some participants were hesitant to reply to surveys during fieldwork as they expressed fear at the possibility of the information, they divulged being utilized for other purposes other than academic; they were therefore afraid and failed to provide the necessary information owing to security concerns. Others refused to complete the questionnaires, believing that they are being investigated or that their competitors are spying on them. To avoid this, the researcher submitted a university research permit letter and NACOSTI research permit during the distribution of questionnaires as proof that utmost confidentiality would be guaranteed when processing the data and reporting findings. In addition, participants were assured of the academic scope within which findings would be used. Due to covid-19 pandemic some of the questionnaires were google forms generated but due to lack of digital literacy to some of the participants the other questionnaires were distributed physically by ensuring total observation of covid-19 preventive measures.

## **1.8 Organization of The Study**

Five chapters are covered in detail by this study. The study's context was established through the production of chapter one, which established the research topic and the gap in academic work that the study aimed to fill. In chapter two, a theoretical review and literature was compiled based on current studies from the global, regional, and local economies that were relevant to the research issues, summary of research gaps and conceptual framework. In the third chapter of the study, a description of the research methodology was presented, demonstrating the strategy taken by the study in data collecting and analysis. Chapter four gives out summary of the key findings of the analysis results and discussions. Lastly, chapter five

which outlines a summary of the data findings, the study's conclusions, recommendations and suggestions of further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

Important theories supporting the study are discussed, as well as empirical data. This chapter contains a literature review on study variables, a conceptual framework, a study gap, and a summary of the literature review.

#### **2.2 Theoretical Review**

Asymmetric information theory, Pecking Order Theory, Technology Acceptance Model, Relationship Lending Theory, and Financial Intermediation Theory are all used to support this research. Because external funding is more expensive, the Pecking Order Theory was used to describe how SMEs finance using internal money first, then debt, and finally equity.

Theory of asymmetric information discusses how having more knowledge in one agent between borrowers and lenders affects financial inclusion of SMEs due to the existence of information asymmetry between security holders and managers. Individuals accept and use technology differently based on the availability of particular factors, according to technology acceptance models. The criteria that lead to a successful quality lending index in SMEs have been identified by relationship lending theory. The theory of financial intermediation was utilized to determine how financial technology has resulted in increasing SMEs financial inclusion, which has led to economic progress.

##### **2.2.1 Pecking Order Theory**

In the year 1984, Myers proposed this theory. According to this notion, if a company is able to meet its funding and investment needs in a hierarchical manner, it is considered to be financially included. The firm will meet this, according to Myers (1984), by prioritizing

internal finances, debt, and equity. External funding is more expensive for riskier securities, according to pecking order theory. This is why most businesses choose to finance themselves, starting with internal money, debt, then equity, in that order. With regard to the assertions of Matias and Serrasqueiro (2016), when enterprises are unable to generate sufficient capital, their funding decisions are guided by the pecking order theory which is often preferred by management when internal funding is done by informed managers (Chen & Huang, 2018). Optimistic managers, on the other hand, concentrate on increasing the company's profit margins in order to maximize cash inflows and permit internal funding.

According to pecking order theory, small business owners prioritize their own financial requirements first since capital restrictions and liquidity restrictions are tightened by financial institutions following the global financial crisis (Bhaird & Lucey, 2016). This indicates that banks examine and charge higher lending rates of interest to SMEs (Gudov, 2013). Financial institutions have a lower frequency of financial statements, poor quality, and a lack of public information than large firms, making it harder for SMEs to be financially involved (Yoshino & Yamagami, 2017).

Despite the expenses of debt financing, risk averse managers prefer external financing (Proença, 2014). In most circumstances, for example, there is no room for equity financing due to the direct link between fund shortfall and debt financing. This argument is used to explain why SMEs are still having difficulty acquiring external financing as a result of banking institutions' stricter capital and liquidity restrictions following the global financial crisis. According to Chen and Huang (2018), this has made it difficult for SMEs to take a chance on new financial technology and obtain external financing.

### **2.2.2 Asymmetric Information Theory**

In 1970, George Akerlof proposed this theory when arguing about asymmetric information. Furthermore, Asymmetric Information indicates that individuals who buy cars observe a difference from those who sell cars. As a result, merchants are more likely to sell products of lower market quality. Small businesses are unable to acquire external capital, resulting in information asymmetry. In this arrangement, certain agents have access to information while others do not. Furthermore, most SMEs face funding difficulties as a result of knowledge inequalities (Edvos, Andy, Sara & Stephen, 2017). Lending to SMEs is hampered by information gaps between borrowers and lenders. This creates possible issues for start-ups and expansion when seeking external funding (Bhaird & Brian, 2015). External finance concerns are the main restraints in SMEs, with internal financing as a fallback alternative. Because market institutions have evolved swiftly, both sellers and purchasers have equal knowledge.

Due to technological advancements, everyone has access to the information they require, particularly when it comes to financial transactions, worker performance, and product quality (Nafsigner & Weicheng, 2011). This theory was employed in this study to show that securing external financing remains a barrier for SMEs. This is due to lenders' difficulty determining the quantity of information a customer possesses, making it harder to risk; this threatens the use of financial technology and, as a result, SMEs' inclusion. Due to asymmetric information, it becomes difficult for SMEs to use financial technology services in order to be completely financially engaged.

### **2.2.3 Technology Acceptance Model**

Proposed by Davies in 1989, this model was developed anticipate the adoption of information technology in an organization as well as user acceptance of it. The goal of the Technology

Acceptance Model is to use specific services or technology to explain attitudes (Bertrand & Bouchard, 2018). Various meta-analyses have shown that the Technology Acceptance Model is a potent, strong, and valid model.

With regard to technology acceptance, TAM is the most widely applied model. In addition to this, the Technology Acceptance Model is accompanied by external variables to explain dynamism in the supposed ease of use and utility (Marangunic & Granic, 2015). The key components of the Technology Acceptance Model were also linked to facilitating situations, subjective norms, and self-efficacy (Schepers & Wetzels, 2007). These external variables, which vary among investigations, present personal capacities (Adams, Nelson, & Todd, 2016). As a result, how much work a person thinks it takes to use technology is what actually encompasses perceived ease of use. The behavior intention predicts use in various variants of the Technology Acceptance Model (Scherer, Siddiq, & Teo, 2015). The direction of this relationship is not deterministic because pleasant user experience can influence future behavioral intentions (Straub, 2019).

This model determines how people use technology based on their perceptions of its utility, ease of use, and level of acceptance (Ndubisi, Jantan, & Richardson, 2014). In this study, anticipate client acknowledgement was employed, and it was chosen based on perceived usefulness and utility. Given available fintech, it predicts consumer attitudes and behavior intentions toward using financial services. Even though financial technology has advanced, elements such as adequacy, accessibility, affordability, and awareness are still lacking in the SMEs sector, preventing them from being completely financially engaged.



#### **2.2.4 Relationship Lending Theory**

This theory was proposed by Phyle in the year 1977. The author stated that, the longer a relationship exists between a borrower and a lender the greater the information flow between the two parties. This theory predicts technology lending in different countries with diverse institutional setups in terms of fiscal, social, and legal systems (Namara, Murro, & O'donohoe, 2017). According to a study by Acharya, Tim, and Christian (2015), enterprises who had syndicated loan arrangements with banks that had larger exposure debt saw a sharper contraction in lending during the debt crisis. Some of the variables that lead to a successful quality lending index include relationship quality, satisfaction level, proximity, amount of information sharing, commitment, and trust (Retap, Abdullah & Hamali, 2016).

According to Rajan (2016), single relationships result to informational monopoly whereby single informed bank expropriates some rents from borrowers which distort SMEs from making proper choices on investment. The strength of Lending relationship may be undervalued by the duration, so there must be future expectation of dealing with same customer (Elsas,2013). Relationship intensity between a financial institution and borrower cannot be observed direct thus leading to high cost of exchanging confidential information (Von & Ruckers, 2014).

To support the fact that, it is still difficult to determine the quality of a relationship, level of satisfaction, closeness, amount of information sharing, commitment, and trust, regardless of the fact that there have been advancements in both financial technology as well as application of digital financial services all of which are said to be factors of successful quality lending, SMEs continue to struggle to obtain external financing, this theory is used in this study.

### **2.2.5 Financial Intermediation Theory**

This theory was proposed by Diamond in the year 1984. It states that the financial system develops quicker than a country's wealth during its economic development, according to Diamond (1984). As a result, this theory is integral in economy development as well as developing financial institutions, resulting in disparities in the quality and quantity of services provided by financial institutions.

This theory has been widely employed in studies to evaluate how financial technology has led to increasing SMEs financial inclusion, which has resulted in economic progress. Financial intermediation theory was used in a study by (Shittu, 2016) to examine how financial intermediation affects Nigerian economic growth. The study would reveal that financial intermediation plays a significant role on an economy's development. Salome (2018), used financial intermediation theory to investigate the extent of commercial bank stability through financial inclusion in Kenya. According to the findings, banks manufacture and deliver a specific financial product to satisfy their consumers through financial intermediation.

As a result, the focus of this research will be on financial technology and financial inclusion of SMEs in Kenya, both of which are thought to boost growth. Examining the impact of important financial indicators of financial inclusion, such as financial intermediation, on SMEs' payment, savings, and credit affordability (Scholtens & Wensveen, 2014). This theory supports the financial technology variable; whereby it is a condition that financial institutions should utilize the available fintech so as to function smoothly in their intermediation process. It also explains that without SMEs inclusion, the economy remains underdeveloped hence forming a non-inclusive economy.

## **2.3 Empirical Literature Review**

### **2.3.1 Agency Banking and Financial Inclusion**

According to Kinyanjui (2016), success stories concerning Agency Banking have been documented from India, Peru, Brazil, and Colombia. This is a type of banking that does not have any physical locations. This type of banking model has aided in the promotion of financial inclusion in developing countries. Waihenya (2014), conducted research on the association between agent banking in Kenya and financial inclusion. Agent banking is the most popular banking practice in Kenya's rural areas, according to reports. Because of the poor infrastructure and huge distances between bank branches, people choose this method of banking. Agent banking was found to be common in the descriptive survey, and it considerably aided the rise of financial inclusion.

According to Nganga and Mwachofi's (2013), study on Banking Agency and Technology Adoption in Rural Kenya, SMEs' adoption of agency banking and mobile technology is hampered by a lack of knowledge, skills, inadequate training, and resources in culture, technology, compatibility with existing services, and technological services. According to the conclusions of the study, advances in mobile phone technology could result in rapid improvements in connectivity. However, in most countries, this technology does not address the need for internet penetration.

Mark (2015), examined Kenyan agency banking effects and discovered a strong positive link between agency banking and financial inclusion. The agency banking aspect variable was found to be able to predict financial inclusion factors. As a result, we cannot disregard the financial institution's agency banking effect; yet, because it is a measure of poverty reduction, all stakeholders should embrace it. Additional research should be performed to have a better

knowledge of how agency banking affects the country's economic development, according to the report. The current research aims to learn more about financial technology and financial inclusion in SMEs, with agency banking as a specific goal in assessing its role in SMEs' financial inclusion.

### **2.3.2 Mobile money and Financial Inclusion**

M-Pesa mobile banking is a mobile-based microfinance, lending and remittance service that allows consumers to withdraw funds from a network of agents. A link between a bank account and the user's mobile account is required for M-Pesa mobile banking services (Mbiti & Weil, 2014). M-Pesa, for example, launched M-Kesho after collaborating with Equity Bank in 2010 to provide insurance and a broader range of financial services.

In Kenya, Antoine and Leo (2017), conducted research on Mobile money and financial inclusion. According to the findings, the majority of poor and uneducated people do not benefit from this banking system since they are unable to get frequent and speedier remittances. According to another study conducted by Joseph (2018), in Kitui County, Kenya, Mobile money technology significantly impacts financial inclusion in the country. The study concluded that policymakers should consider mobile technologies when formulating policies. The impact of mobile banking could be greater if more customers use these services and if technology evolves.

Wamuyu (2014), did more study on mobile money transfer for B2C and B2B transactions, but none for C2B or e-commerce transactions using mobile money transfer. The research also found that M-Pesa technology significantly impacts financial inclusion in the country. According to users, M-Pesa is more convenient, faster, cheaper, and safer than the former national money transfer service (FSDK, 2011). According to this analysis, the advent of M-

Pesa has improved Kenya's payment infrastructure. This study objective is to discover the effect of Mobile money services and financial inclusion on SMEs, as it has been previously overlooked by extant literature, and to find out the extent to which SMEs should use Mpesa for savings, transfers, and withdrawals, as well as their ability to obtain loans from M-shwari, KCB M-Pesa, and Fuliza.

### **2.3.3 Online Banking and Financial Inclusion**

Individuals can use online transaction services to pay their insurance premiums, pay bills, make purchases, and apply for credit. According to Donner and Escobari (2018), the role of online transactions is to boost corporate growth. According to a study conducted by the CBK in 2015, all electronic card payments have been surpassed by online banking in terms of overall payment value and number of customers. According to a separate study by DemirgüçKunt et al. (2015), Kenya is the leader in mobile banking in Sub-Saharan Africa. According to the findings, Kenyans account for 86 percent of those who use mobile money, compared to only 23 percent elsewhere in Sub-Saharan Africa. What this suggests is that Kenya is firmly the global financial innovation epicenter. Kenyan bank is the continent's most successful mobile phone service provider and microfinance-focused bank, as well as the global largest supporter of mobile payments.

Several studies have pursued the description of the history of current financial innovations and their introductions (Siedek, 2013; Jepkorir 2014; Hughes & Lonie, 2011). Despite following a trend of descriptive statistics provision on Kenya's financial inventions, these studies fall short of empirical research. Frame and White (2014), found a lack of empirical consistency in their analysis. The connection existing between corporate success and financial innovations in Kenya is also demonstrated by a handful of studies, according to Makini (2015), and Mwando

(2013), studies on financial inclusion and the involvement of Kenya's SMEs in internet banking have left a knowledge gap.

#### **2.3.4 Mobile Loan App Lenders Services and Financial Inclusion**

The digital app lenders services, access to financial planning tools, free inquiries, and advice services are all available through the Google Play Store. The user's perspective has shifted as the world undergoes a financial revolution. This was made possible by the new technology of mobile phones (Beck, Demirgüç-Kunt, & Levine, 2016). Nevertheless, technology-driven alternative lenders are making progress in lowering the cost and time of extending credit availability and loan applications.

Consumer Protection Issues in Emerging Markets for Digital Financial Services. Study conducted by Mlady (2016), revealed superior higher financial data inclusion can results from improved financial inclusion. However, Mlady (2016), noted that this may not be contingent on increased usage of digital finance. Another study by Edward, Delbridge, and Munday (2011), looked into the impact of innovation on SMEs' financial performance and concluded that innovation helps SMEs improve their financial performance and market products over time; nevertheless, innovation has an impact on investments and resources.

According to a study conducted by Shaikh et al., (2017), on the stimulation of financial innovation in relation to financial and banking sector reforms, a strong link exists between financial inclusion innovation and the promotion of digital banking culture in Pakistan. The role of Google Play Store services in SMEs' financial inclusion is among this study's objectives. Due to the lack of knowledge gap that the study wants to investigate, developing digital financial services (DFS) should address the aforementioned relationship.

## **2.4 Summary of Literature Review**

SMEs are critical enterprises on a local and global scale because they provide jobs and income to people. Developing countries confront challenges that lag behind the growth of SMEs, owing to problems in adapting financial technology (Edward, 2014). The cost of using foreign technological equipment in SMEs is high, and due to the difficulty in obtaining ownership rights, business owners choose to use foreign licenses rather than local patents (Mlady, 2016). As a result of their technological superiority, developed countries maintain a competitive advantage over developing countries. In developing countries, SMEs are progressively adapting to technology developments (Nganga & Mwachofi, 2013).

Because of the competitive nature of the business world, SMEs should invest in technology. Financial inclusion, according to Terzi (2015), is an effective program for financial literacy that entails growing awareness of financial factors and how to use financial services. It creates a significant divide between the rich and the poor because it allows individuals to assess gains and losses.

## 2.4 Study Gaps and Literature Review Summary.

Table 2.1 summary of study gaps

AUTH OR	TOPIC	FINDINGS	RESEARCH GAP	ADDRESSING THE GAP
Antoine Dubus & Leo Van Hove, (2017)	M-PESA and financial inclusion in Kenya	The study indicated that most poor and non-educated people are the ones who do not benefit from this banking system because they are not capable of receiving frequent and faster remittances.	-Focused on financial inclusion and M-PESA in Kenya	- concentrated on M-Pesa and financial inclusion on the specific sector which is SMEs.
Edward. (2014)	innovation and financial performance on SMEs	Found that innovation assists SMEs through improving financial performance, and market products on a long-term basis; however, investments and resources will be affected by innovation.	-The study Focused on innovation and financial performance on SMEs	-focused on financial technology and financial inclusion of SMEs
Frame & White, (204)	Financial innovation Empirical studies	Found that there was lack of empirical consistency.	Focused on financial innovation	-focused on financial technology and financial inclusion of SMEs.
Joseph Keli, (2018)	Relationship between M-Pesa and financial inclusion in Kenya	Indicated that Mobile phone technology has a significant impact on financial inclusion.	The study Focused on mobile technology only.	-Extended on more financial technology factors and its financial inclusion on SMEs.
Mark K. Mumoru (2015)	Agency Banking effect on Kenya's Financial Inclusion.	Indicated that Agency banking has a significant impact on financial inclusion in Kenya.	-Focused Agency Banking effects.	- Addressed on Agency Banking effect on Kenya's Financial Inclusion.



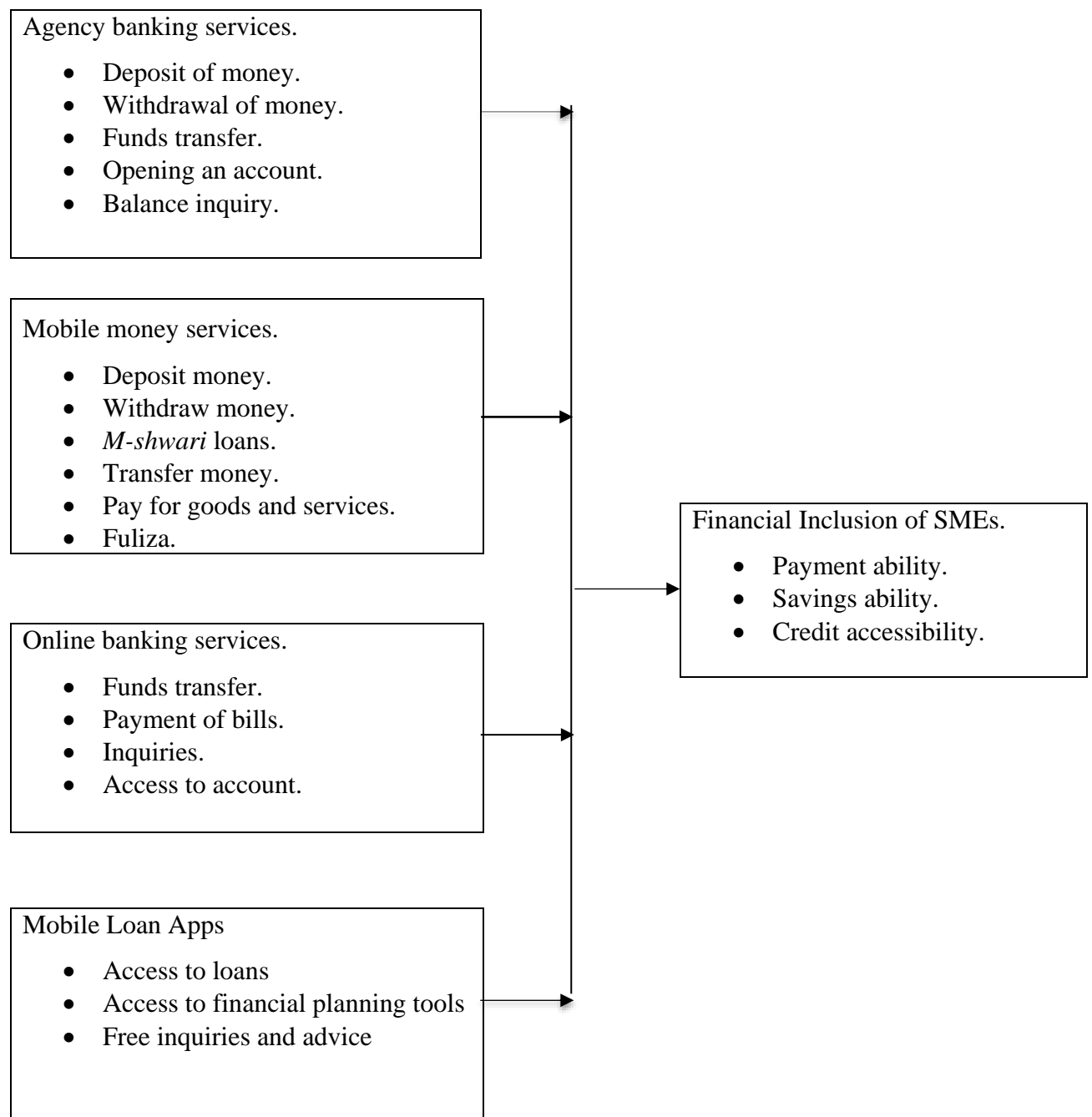
AUTHOR	TOPIC	FINDINGS	RESEARCH GAP	ADDRESSING THE GAP
Mlady, L. (2016)	Digital Financial and Consumer Protection Issues Markets that are emerging.	Digital financial services have greater financial data inclusion.	-The study focused on consumer protection issues for digital financial service.	-Addressed on mobile loan apps and financial inclusion of SMEs
Nganga, & Mwachofi, (2013)	Technology Adoption in Rural Kenya and the Banking Agency.	According to the findings, lack of knowledge, skills, inadequate training and resources of culture, technology, compatibility with existing services and technological services affect the adoption of agency banking and mobile technology by the SMEs. .	-Focused on The Banking Agency and Technology Adoption in Rural Kenya	-Focused on Banking Agency Technology effects on financial inclusion
Sammy Mwando, (2013)	Agency Banking effects on Commercial Banks in Kenya Financial Performance.	The study concludes that a high positive influence on the financial performance of commercial banks in Kenya has been realized by the move by the CBK regulation.	-Focused on Agency Banking effects on Commercial Banks in Kenya Financial Performance	-Addressed on financial inclusion on SMEs and Agency Banking in Kenya
Waihenya, (2014)	Relationship between and agent banking in Kenya and financial inclusion.	Indicated that Agent banking is the most preferred banking method in the rural area of Kenya.	-Focused on the relationship between agent banking in Kenya and financial inclusion.	-concentrated on financial inclusion of SMEs in Kabati market Kitui County, Kenya.
Wamuyu, Patrick Kanyi, (2014)	Factors influencing successful use of mobile technologies to facilitate E-Commerce in small enterprises: The case of Kenya	The study found positive relationships between technologies to facilitate E-Commerce and Performance of SMEs	-Focused on mobile technologies to enable E-Commerce	Shall focus on Mobile money services and financial inclusion of SMEs.

Source: Researcher, (2019).

## 2.5 Conceptual Framework

Independent variable

Dependent variable



Source: Researcher (2019)

Figure 2.1: Conceptual Framework

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This section of the study presents the methodology that was followed while carrying out the field work and analysis of results in the study. The chapter specifically covered the adopted research design, a focus of the study population, discussion of the sampling method, the tests conducted on the data and the approach taken to analyses data.

#### **3.2 Research Design**

Kerlinger (1986) indicated that a research design can be viewed as the master plan that is used by the researcher in attempt to achieve research objectives and find the answers of the research questions that were developed based on the objectives. To test the research hypothesis, the researcher adopted a descriptive cross-sectional approach that is found to be more appropriate for addressing the issues like the ones being addressed in the current study (Kothari, 2008). It has been discovered that the data collected over a period of time for the targeted group can be used to characterize their behavior using this descriptive approach. This was the situation in this study. The respondents in this study came from a variety of backgrounds, and the study's research data was collected at a specific time.

#### **3.3 Target Population**

Individuals, objects, and cases having homogenous or heterogeneous visible characteristics have been seen as a population. The population for the study, according to Cooper and Schindler (2011), is the group that the researcher intends to take a broad view of the study's findings. This was limited to SMEs in Kabati market, Kitui County, Kenya. There were 502 SMEs in Kabati market as indicated by appendix III.

### 3.4 Sampling Technique and Sample Size

A sample is a part of population that is particularly selected from certain population under use of procedure so as to be used in representation of characteristics of entire population (Burns & Grove, 2003). According to Mugenda (2008), a sampling technique should be used to obtain a group that represents the complete population. for fair representation of the study population, a stratified random sampling approach was adopted. The study population was initially grouped into stratum assisted by sampling formula for selecting the sample size by (Yamane, 1967). This ensured selection of the random sample is not biased to over concentrate in one nature of the firms in the selection of the 223 SMEs out of the total population of 502 SMEs reported in the Kabati business center (appendix III). The heterogeneous data allowed ease construction of strata that were classified in the following groups from which on a fair basis two fifths rounded up were selected in each stratum as shown in the Table 3.1 below.

**Table 3.1 Table for The Strata's**

No. of strata's (L)	Name of Enterprise	Total Number ( $N_h$ )	Samples from each stratum ( $n_h$ )
1	Agrovets shop	15	7
2	Auto spares shop	17	8
3	Beauty shops	13	6
4	Bookshops	4	2
5	Butchery	21	9
6	carpentry shops	10	4
7	Car wash	5	2
8	cereals shops	13	6
9	Co-op <i>Kwa Jirani</i> Agent	3	1
10	Cybercafé shop	11	5
11	Designer shops	7	3
12	Electronic shops	11	5

13	Equity agents	9	4
14	Garage service areas	3	1
15	Hardware shop	9	4
16	Health care centers	4	2
17	Hotels & restaurant	27	12
18	KCB <i>Mtaani</i> Agent	6	3
19	Kinyozi shops	27	12
20	Laundry	3	1
21	malimali shops	11	5
22	Min supermarket	3	1
23	M-Pesa Agents	53	24
24	Pesa pap Agents	2	1
25	Petrol station	2	1
26	Pharmacy & chemistry shops	12	5
27	Phone repair shops	14	6
28	Photo studios	6	3
29	Posho mills shop	13	6
30	Retail industry shops	37	16
31	Saloon shops	43	19
32	Tailor shops	16	7
33	bars, clubs, and pubs	21	9
34	textile shops	14	6
35	welding shops	17	8
36	Wholesale industry shops	11	5
37	Wines & spirit shops	9	4
	Total number of SMEs	(N) 502	(n) 223

**Source: researcher (2019)**

The sampling formula for selecting the sample size by Yamane (1967).

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

n = Size of sample

N = Size of population

E = Precision level

$$n = 502 / (1 + 502(0.05)^2)$$

$$n = 223$$

Proportionate Stratified Random Sampling Formula for the sample size for each stratum is given by  $n_h = (N_h / N) * n$

$N_h$  = Population size of the specific stratum ( $h^{\text{th}}$ )

$n_h$  = Sample size of the specific stratum ( $h^{\text{th}}$ )

N = Total population

n = Sampled population

### **3.5 Data Collection Instrument**

As the researcher targeted primary data, the most appropriate data collection tool was found to be the use of questionnaires. According to Bolarinwa (2015), research questionnaires are the best methods for gathering data. The researcher used both closed and open-ended well-structured questionnaires to obtain data from respondents based on this assumption. The questionnaire collected information about the respondents' backgrounds as well as information about the dependent and independent variables.

### **3.6 Pilot Test**

Malays (2016), defines a pilot test as small preliminary study used to test proposed research study, it's done on research methodology to be utilized, specifically on instruments to be used in data collection, sampling strategies to be employed as preparations are made for the main study. This research is frequently conducted prior to the core study in order to uncover any

potential flaws in the research procedures that will be employed in the main study. The validity in addition to reliability of research instruments are assessed for the purpose of achieving this (Mugenda & Mugenda, 2003). The researcher chose 15 people at random from Tulia market, which is close to Kabati market, to take part in the pilot study.

### **3.6.1 Validity of the Research Instruments**

Validity is interpreted as the extent to which a specific tool in a study accurately measures what it is supposed to measure (Bolarinwa, 2015). This was determined in this study by seeking expert and supervisor opinions on the content validity of the questionnaires.

### **3.6.2 Reliability of the Research Instruments**

This is interpreted as the extent to which a test produces similar results in repeated trials (Bolarinwa, 2015). A general conclusion on research cannot be reached until independent observers agree on the replication of being able to use a specific instrument to get consistent measurements. Cronbach alpha ( $\alpha$ ) coefficient was discovered to be the most appropriate reliability test for the purpose of researcher certifying the study instrument's dependability.

The Cronbach's alpha formula utilized in the current study was as follows:

$$\text{Cronbach's alpha } \alpha = (N \times \bar{c}) / (\bar{v} + (N-1) \bar{c})$$

N= Population for the study

$\bar{c}$ =Average covariance between items

$\bar{v}$ =A average covariance

Summary of findings from pilot analysis was presented in table 3.2 and 3.3.

**Table 3.2 Reliability statistics table**

Reliability statistics		
Cronbach's alpha	Cronbach's alpha based on standardized items	No. of items
.823	.834	5

Source: study data (2019)

**Table 3.3 Reliability test table**

Item-Total Statistics					
	Scale mean if item deleted	Scale variance if item deleted	Corrected item total correlation	Squared multiple correlation	Cronbachs Alpha if item Deleted
Agent banking	12.00	84.50	.846	.	.710
Mobile money	12.00	95.50	.807	.	.726
Online banking	12.00	155.50	.031	.	.930
Mobile loan apps	12.00	118.00	.883	.	.746
Financial inclusion	12.00	109.50	.767	.	.749

Source: study data (2019)

From table 3.3 results shows that Variables gave out a coefficient value above 0.70 whereby according to it is considered reliable in the questionnaire (Mohsen, & Reg, 2011). Therefore, in this case all questionnaires under this study were acceptable.

### 3.7 Data Collection Procedure

The study ensured full compliance of with the regulations relating to data collection procedures. Before gathering data, consent was obtained from Kenyatta University's School of Business, as well as authorization from several ministries within the county government and permission from the research institute. The researcher then distributed questionnaires to the sampled SMEs in Kabati market. The filled questionnaires were collected within approximately one week after they were issued.



### 3.8 Data Analysis and presentation

The study adopted both descriptive and inferential statistics to analyze collected data. For assessing respondents' quantitative data, the descriptive analysis included frequencies and percentages. The application of standard deviation and means was used to analyze both independent and dependent variables. Inferential statistics were used to test the presence of a relationship between two quantitative variables and this was done using multiple linear regression analysis and correlation studies (Gogtay and Thatte, 2017). T-test was employed in the study to test the hypotheses at 95% confidence level (p-value=0.05). The study also used coefficient of determination ( $R^2$ ) to test contribution of independent variables towards dependent variable. Analysis of variance (ANOVA) was also used to test level of variability within regression model through F-test by undertaking a regression at 5% level of significance. Through a modeling statistical strategy of associating a dependent and independent variable, the researcher linked correlation analyses and multiple linear regression studies. The Pearson correlation coefficient for a pair of variables XY is given by (Hauke and Kossowski, 2011).

$$\text{cov}(x,y)/(\text{std.dev}(x)*\text{std.dev}(y)) = \text{correlation}$$

The following Multiple Linear Regression Model of Y on  $X_1$ ,  $X_2$ ,  $X_3$ , and  $X_4$  was used in the study.  $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Whereby; Y represents SMEs financial inclusion

$\beta_0$  represents constant (value of the dependent variable at zero value of independent).

$X_1$  represents Agency banking services

$X_2$  represents M-Pesa services

$X_3$  represents Online banking services

$X_4$  represents Google play store services

$\varepsilon$  represents Error Term (sampling measurement and coverage errors)

$\beta_1, \beta_2, \beta_3, \beta_4$  represents regression coefficients of independent variables.

### **3.9 Ethical Consideration**

Ethical consideration according to Schulze (2002), is said to be the principles that bind the researcher while carrying out the research work. Research ethics in this study guided the researcher in seeking permission to research participants. The researcher-maintained Ethics and integrity as efforts were made to ensure the information gathered from participants was treated with utmost confidentiality and as well applied purely for academic purpose.

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSION

#### 4.1 Introduction

This chapter discusses the findings, interpretation, and analysis of data in relation to the objectives and research hypotheses on financial technology and financial inclusion of SMEs in Kenya's Kabati Market. Means, frequencies, standard deviation, Cronbach alpha coefficients of reliability, correlations, and regression analysis were used to present, interpret, and analyze the findings.

#### 4.2 Response Rate

Kabati market SMEs owner, manager and immediate supervisor as at September 2019 were issued with the questionnaires and the summary of how they responded is shown in table 4.1.

**Table 4.1 Response Rate**

Respondents category	Questionnaires Issued	Returned Questionnaires	Percentage returned
SMEs Owner/Manager/Immediate supervisor	223	192	86%

**Source: study data (2019)**

Table 4.1 above shows 223 respondents were targeted whereby out of these, 192 respondents were able to fill in fully questionnaires provided by the researcher. The study response rate was 86% Which is sufficient in line with assertions of Mugenda and Mugenda (2003). The researcher would pursue 100%, but due to coverage and sampling errors it could not be achieved.

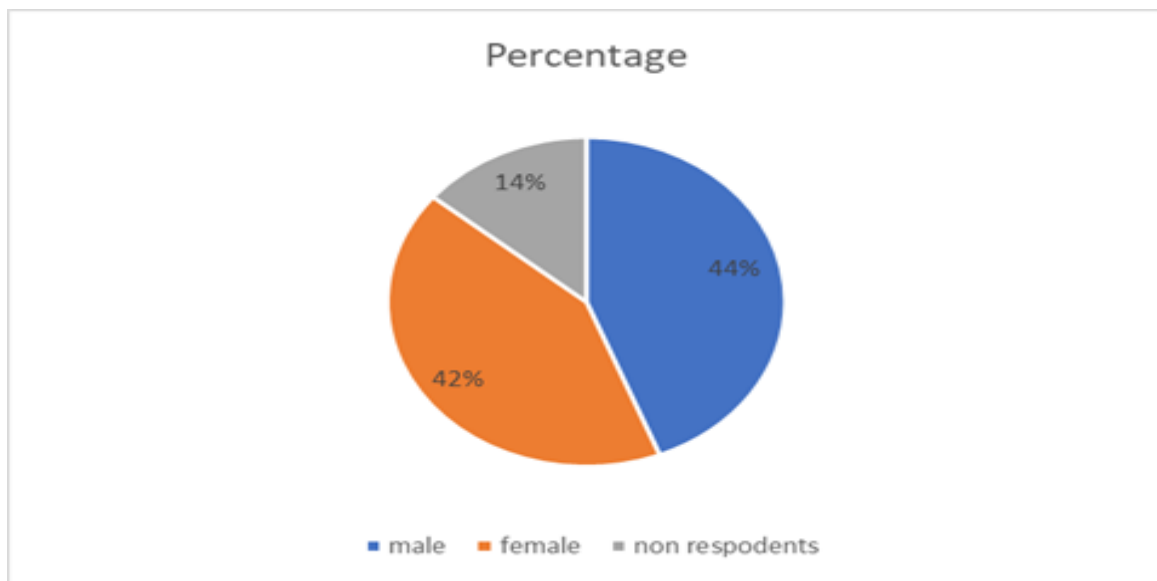
#### 4.3 Respondents Demographics

Characteristics of respondents in researches have an important function in disclosing if the people in the study are representing sample of the target population. The researcher background

information regarded respondents Gender, respondents Age distribution, respondent's education and respondent's year distribution of business experience.

### 4.3.1 Gender of Respondents

The figure below shows the distribution of gender in respect to financial technology and financial inclusion of SMEs. Researcher decided to investigate the gender respondent whereby summary is presented in figure 4.1.



**Figure 4.1 Gender of respondents.**

**Source: study data (2019)**

From above figure Forty-four (44%) of the respondents were males, forty-two (42%) were females and Fourteen (14%) non respondent. From above figure it can be observed that most men are the financiers and controller of most businesses in Kenya (Karanja, 2014). This implies that women have difficulties in adaptation of financial technologies compared to men when it comes to financial services and product access.

### 4.3.2 Age of Respondents

Age in research helps the researcher in indicating level of maturity of the respondents.

Researcher used table 4.2 below to illustrate respondents' age.

**Table 4.2: Respondents' Age**

Age/years	Frequency	Percent (%)
Below 20	2	1
21-30	29	15
31-40	70	37
41-50	64	33
51 and above	27	14
Total	192	100

**Source: study data (2019)**

From table 4.2 above, the study found out that 1% of respondents aged below 20years, 13% aged between 21-30years, 31% aged between 31-40, 29% aged between 41-50, and 12% aged between 50 and above. From the study data it can be observed that individuals in the 31-40 age bracket have a higher exposure to opportunities with regards to accessing financial services and products. Individuals in the 21-30 age brackets are still behind when it comes to financial inclusion. Findings were in agreement with Franssen, Stijnen and Hamers (2020), who found that age brackets 31-50 in Kenya are the most owners of SMEs since they are experienced, energetic, most working class and responsible and has skills to acquire financial technology.

### 4.3.3 Respondents Education Level

The researcher established education level for the respondents by examining their academic qualification. Researcher assessed the education level and the results were shown in below table 4.3

**Table 4.3 Education level of the respondents**

	Frequency	Percent	Cumulative Percentage Distribution
Primary	5	2.6	2.6
Secondary	90	46.9	49.5
Diploma	57	29.7	79.2
Degree	28	14.6	93.8
Masters	8	4.1	97.9
Doctorate	4	2.1	100
TOTAL	192	100	

**Source: study data (2019)**

results from table 4.3 above indicated that most of the respondents had only KCSE certificate comprising of 46.9% followed by Diploma Holders who comprised of 29.7%, bachelor's Degree holders who had 14.6%, Master's degree holders 4.1%, K.C.P.E certificate holders 2.6% and thus Doctorate degree 2.1%. This indicated that most SMEs in Kabati market are run by K.C.S.E certificate holders. This indicates that the level of education of SMEs owners in Kabati market disables them from being financially included. This is in agreement with Antoine and Leo (2017), who states that most poor and non-educated people are the ones who do not benefit from this financial technology banking system because they are not capable of receiving frequent and faster remittances Simply their level of education limits, them from acquiring banking services, M-pesa services, online banking services and google play store app lenders services this dis enables them in payment ability, savings ability and credit accessibility

thus less financially included. This calls for need of training SMEs on acquiring financial technology so as to improve on their financial inclusion.

#### 4.3.4 Years of Business Operation

The researcher sought to establish the respondent’s business experience. The results were shown in Table 4.4.

**Table 4.4 respondents’ business experience**

Years	Frequency	Percent (%)
Below 1 year	102	53.1
1-5	69	36.0
6-10	11	5.70
11-15	7	3.60
Above 16 yrs.	3	1.60
Total	192	100

**Source: study data (2019)**

Findings from table 4.4 above, found out that majority of SMEs in Kabati market had an experience of 1 year and below which comprised of 53.1% of the respondents. This shown that majority of the businesses were still in formative stages. 36.0% of the businesses of the respondent had experience of between 1-5 years this indicated that after formative stage most of the SMEs closed down before celebrating first anniversary. 5.7% of the businesses of the respondent had experience of between 6-10 years. 3.6% businesses had experience of between 11-15years and thus 1.6% business had experience of above 16 years. Results indicated that the more the years increased enterprises kept on closing down and this might be due to lack of accessing financial technology services. The findings were in agreement with Nganga and Mwachofi (2013), who found that lack of skills, resources of culture and capability with

existing technological services affect adoption of financial technology by SMEs. All this resulted to inability in making payments, savings inability and in ability in accessing credit which led to low and low financial inclusion on the SMEs leading to closure of the enterprises.

#### 4.4 Descriptive Statistics

The study wanted to find out the perception of the respondents concerning the study variables by use of questionnaires. The means and standard deviation of the responses were established by the researcher in Likert scale of 5 points to help in making interpretations.

##### 4.4.1 Agency Banking Services and Financial Inclusion in Kabati Market Kitui County

The aim of the researcher was to establish the opinions of the respondent concerning agency banking services usage in their operation of businesses, to employees as well as customer's service. Table 4.5 presents Findings from analyzed results.

**Table 4.5 Respondents perception on agency Banking services**

Description	Services offered.	N	Mean Rating	Std Dev
i)	Making daily deposits through Agency banking reduces the challenge of keeping a lot of money in my business premises.	192	3.359	0.448
ii)	I like Agency banking due to their more extended opening hours; one can make deposits at the closure of business and as well withdraw to pay suppliers.	192	3.195	0.791
iii)	I can pay my employees via Agency banking.	192	2.287	0.805
iv)	Cost of operation has been reducing since I started using Agency banking. Opened an account through Agency banking.	192	1.192	0.731
v)	Agency banking helps businesses scale to a larger level, access to digital services, and provides a source of income for our agents.	191	4.394	0.583

**Source: study data (2019)**

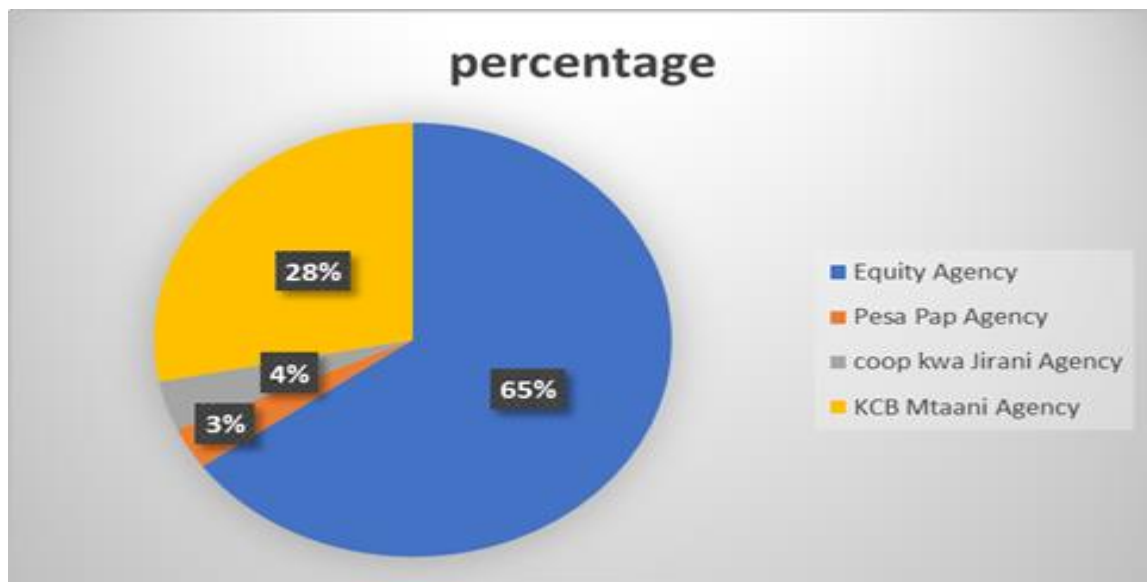


The table above, showed that the respondents decided that they make daily deposits through Agency banking and reduces the challenge of keeping a lot of money in premises (mean score =3.359), respondents also agreed with the statement that Agency banking due to their more extended opening hours; one can make deposits at the closure of business and as well withdraw to pay suppliers (mean of 3.195) and a relatively small standard deviation (std. dev=0.791). This was in agreement with Waihenya (2014) who stated People prefer Agency banking because of the bad infrastructure and long distant location of bank branches. Respondents were neutral (mean score= 2.287) that they can pay employees via Agency banking, the small standard deviation (std.dev= 0.805) shows most of the respondents' opinions were close to neutral. The respondents weakly agreed that Cost of operation has been reducing since they started using Agency banking (mean score= 1.192). This is in agreement with Nganga and Mwachofi (2013) who stated that absence of knowledge, skills, insufficient training and resources of culture, technology, compatibility with existing services and technological services affect agency banking adoption and mobile technology by the SMEs. Still the respondents were in consensus with the statement that Agency banking helps businesses scale to a larger level, access to digital services, and gives an income source to the agents (mean of 4.394).

This implied that Agent banking services are the most preferred and used by SMEs in kabati market because they are readily available and nearly located in the market and thus, this has contributed to increment on financial inclusion of SMEs within Kabati market. This agrees with Kinyanjui (2016) who states that Agency banking Model has helped in fostering financial inclusion in countries that are evolving.

#### 4.4.1.1 Highly Used Agency Banking Service

The researcher went further to establish the most commonly used Agency banking for financial services in Kabati market SMEs business. Respondents were to select one of the methods as outlined in table figure 4.2 below



**Figure 4.2 Most used Agency banking service**

**Source: study data (2019)**

From above figure 4.2, there is an indication that Equity Agents registered the highest percentage of the SMEs most used agency services. The finding was in consensus with Mark (2015), who discovered that Equity agency services are the most used bank agents in rural areas in Kenya because they are readily established and available. In order to improve financial inclusion of SMEs in the rural areas other banks should establish their agencies in rural areas.

#### 4.4.2 Mobile Money Services and Financial Inclusion in Kabati Market Kitui County

The researcher wanted to find out the opinion of the respondents concerning usage of Mobile Money Services in their enterprise operation, to employees and customers' service. Findings from analyzed results were presented in table 4.6

**Table 4.6 Respondents perception on Mobile Money Services**

	Description of Services offered	Mean (Rating)	Std Dev
i)	I make deposits through M-Pesa for every daily sale.	4.439	0.865
ii)	I withdraw money through M-Pesa for petty cash use in case of shortages.	3.966	0.570
iii)	I make savings in my <i>M-shwari</i> account through M-Pesa to increase the chance of loan limit.	4.047	0.571
iv)	I use M-Pesa to pay my employees and suppliers.	4.221	0.961
v)	I have fully implemented the <i>Lipa na</i> M-Pesa services. My clients make payment via <i>Lipa na</i> M-Pesa.	4.757	0.924
vi)	I am aware of <i>Fuliza</i> service, and it helps in emergency times.	4.007	0.009
vii)	M-Pesa has enhanced the effectiveness of the operation in doing business.	4.804	0.501

**Source: study data (2019)**

According to table 4.6, the respondents were in agreement that they can make deposits through M-Pesa for every day transaction, with a mean of 4.439 and a standard deviation of 0.865. Despite this, with a mean of 3.966 and a standard deviation of 0.570, respondents stated that they withdraw money through M-Pesa for petty cash use in case of shortages. With a mean score of 4.047 and a standard deviation of 0.571, respondents also agreed with the assertion that people save in M-shwari accounts using M-Pesa to boost their chances of getting a loan limit. With a mean score of 4.221 and a standard deviation of 0.571, respondents also agreed to use M-Pesa to pay their employees and suppliers, meaning that the majority of replies were close to the mean. This is consistent with the findings of Wamuyu (2014), who found that M-

Pesa technology had a major impact on Kenya's financial inclusion. With a mean of 4.757 and a standard deviation of 0.924, respondents also stated that they do not receive cash payments from consumers since they have completely accepted the lipa na mpesa service. Further, with a mean of 4.007 and a standard deviation of 0.009, respondents agreed that they are aware of the Fuliza service and think it is useful in an emergency. With a mean of 4.804 and a standard deviation of 0.501, the respondents highly agreed that M-Pesa had improved the efficacy of the operation in doing business. These findings suggested that mpesa services have a major positive impact on SMEs' financial inclusion since they are able to obtain financial services at a lower cost than the average. This is in agreement with Joseph (2018), who claims that Mobile money technology has a substantial impact on Kenya's financial inclusion in Kitui County, Kenya.

#### 4.4.2.1 Mobile Money Method Used to Finance Business

The researcher went further to establish the most commonly used Mobile money method to finance enterprises in Kabati market. Respondents were to select one of the methods as outlined in table 4.7 below.

**Table 4.7: Mobile money method used to finance business**

Mobile money Method	Frequency (SME's Using service)	Percent
KCB-MPESA	13	6.7
M-SHWARI	130	67.7
FULIZA	3	1.6
ALL	46	24
TOTAL	192	100

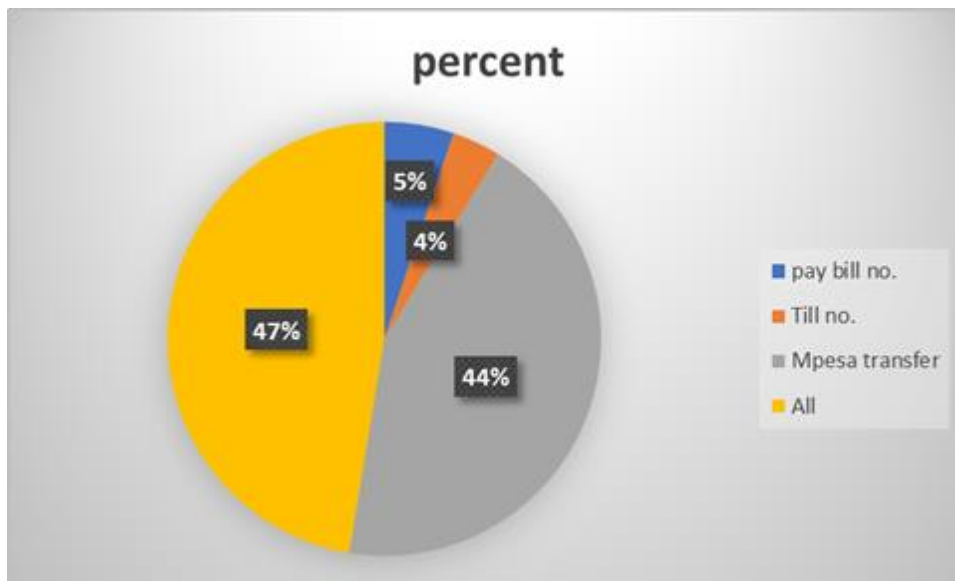
**Source: study data (2019)**

According to the findings, the majority of SMEs in the Kabati market (67.7%) employed the M-shwari approach to fund their businesses. This is due to the ease with which they were able to save in M-shwari, and the fact that this service is compatible with all sorts of phones.

This was followed by all with 24 percent, indicating total users of the above-mentioned methods. This indicates that some SME owners sought to gamble with all feasible M-pesa methods in order to enable them in payment, savings, and credit accessibility. KCB-mpesa came in second with 6.7 percent. The results confirmed that M-Pesa is more convenient, faster, cheaper, and safer than prior national money transfer services, according to users (FSDK, 2011). Because the business owners didn't comprehend it well and some weren't aware, Fuliza came in last with 1.6 percent. This necessitates training for SMEs on the latest financial technology so that they can use all available financial technology instruments, resulting in financial inclusion.

#### 4.4.2.2 Mobile Money Method Used to Make Payments

The researcher went ahead to establish the method used through Mobile Money to make payments by SMEs in Kabati Market. The findings were shown in figure 4.3 below.



**Figure 4.3 Mobile money methods used to finance business.**

**Source: study data (2019)**

From the above figure SMEs owners in Kabati market are able to make payments via lipa na m-pesa services as well as m-pesa transfer. This implies that mobile money services have high contribution in financial inclusion of SMEs (Joseph, 2018).

#### 4.4.3 Online Banking Services and Financial Inclusion in Kabati Market Kitui County

The study sought to establish respondents' opinions regarding to use of online banking services in their business operation, to employees and customer's service. Findings from analyzed results were presented in table 4.8

**Table 4.8 Online Banking Services.**

Description	5	4	3	2	1	Mean (Rating)	Std Dev
I rely on online banking for all my fund's transactions	7.3	49	38	4.7	1	4.206	2.051
I pay my bills direct from my bank account through online banking	8.9	33.3	47	8.9	2.1	2.858	0.801
Online banking enables me to track transactions in my bank account	8.9	39	43.8	4.7	8.9	3.322	0.839
I access my account balances through online banking	11.5	42.7	20.8	20.8	4.2	4.848	0.835
Existence of online banking has prevented theft of money that arises in the business premises.	13.1	43.2	33.3	8.3	2.1	4.936	0.950
Online banking is convenient in terms of time and cost of the transaction	31.3	44.8	13.5	5.2	5.2	1.399	0.538

**Source: study data (2019)**

Respondents agreed with the assertion that they use internet banking for all transactions, with a mean response of 4.206 and a standard deviation of 2.051 in the table above. Respondents who used internet banking were evenly split on whether they could pay bills directly from their personal bank account, with a mean of 2.858 and a standard deviation of 0.801. In agreement

with Donner and Escobari (2018), online transaction services enable individuals to pay insurance premiums, pay bills, conduct transactions, and acquire credit. Respondents neutrally agreed that they can track transactions in their bank account via online banking, with a mean response of 3.322 and a standard deviation of 0.839. Furthermore, with a mean of 4.936 and a standard deviation of 0.950, the respondents strongly agreed that the introduction of internet banking had prevented theft of money that occurs in the business premises. With a mean response of 1.399 and a standard deviation of 0.538, respondents did not agree that online banking is easy in terms of time and cost of transaction, which was in line with a study done by Frame and White (2014).

Except for paying bills directly from a bank account through online banking, respondents agreed on all aspects of online banking services. This could be due to a lack of internet connectivity in rural areas, as well as a disparity in educational levels and awareness of the advantages of using internet banking, resulting in poor financial inclusion among SMEs.

#### **4.4.4 Mobile Loan Apps Services and Financial Inclusion in Kabati Market Kitui County**

The researcher wanted to find out the opinion of the respondent concerning the usage of Mobile Loan Apps services in their business operation, to employees and customer's service. Results were summarized in table 4.9.

**Table 4.9 Mobile Loan Apps Services**

	Description	5	4	3	2	1	Mean	Std Dev
I	Mobile Loan Apps have enabled me to gain enough finances to grow my business	1	13	33.9	31.3	20.8	3.978	0.890
ii	The presence of Mobile Loan Apps relieves me the costs of opening a bank account.	1.6	17.2	34.4	26	20.8	2.843	0.352
iii	Through the use of Mobile Loan Apps, am able to obtain credit financial institutions and planning tools online.	19.3	17.2	36	23.4	4.1	4.237	0.995
iv	Access to Mobile Loan Apps enables me quick response during time of emergency and in need of funds.	15.6	26.1	29.7	27.6	1	4.441	0.052

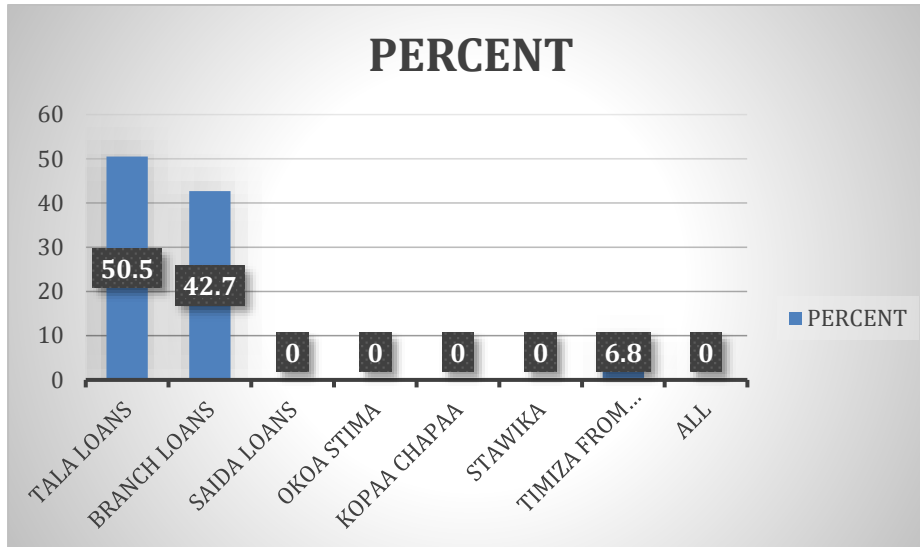
**Source: study data (2019)**

According to the above table 4.9, Mobile Loan Apps have helped to financial inclusion of SMEs by enabling SMEs to obtain sufficient funds to build their operations, with a mean rating of 3.978 and a standard of 0.890. With a mean of 2.843 and a standard of 0.352, respondents agreed that the presence of Mobile Loan Apps reduces the costs of creating a bank account. Respondents also reported that they may acquire credit financial institutions and planning tools online by using Mobile Loan Apps, with a mean of 4.237 and a standard deviation of 0.995. These findings corroborate the findings of Beck, Demirgüç-Kunt, and Levine (2016), who claim that technology-driven alternative lenders are reducing the cost and time involved with expanding credit access and loan applications. The survey also found that having access to Mobile Loan Apps allows them to respond quickly in times of need, with a mean of 4.441 and a standard deviation of 0.052. According to a study by Edward, Delbridge, and Munday (2011), technology innovation helps SMEs improve their financial performance, resulting in a high contribution to their financial inclusion.



#### 4.4.4.1 Mobile Loan Apps

The researcher went ahead to establish the type of loan app used through Google Play Store to make payments by SMEs in Kabati Market. The findings were shown in figure 4.4 below.



Source: study data (2019)

Figure 4.4: Mobile loan app lenders

The above figure shows that, Tala app is the most used mobile loan app from Google play store with 50.5% followed by Branch app lender with 42.7% and thus Timiza app lender. The other app lenders were not known nor used by SMEs which seemed to have been due to difficulties in the adaptation of financial technology (Edward, 2014).

#### 4.4.5 Financial Inclusion of SMEs In Kabati Market Kitui County

The researcher sought to establish respondents' views in regard to financial inclusion of SMEs in Kabati market. Findings and results were established and presented in the table 4.10.

**Table 4.10 Perception on Financial Inclusion of SMEs**

	Description	5	4	3	2	1	Mean	Std Dev
i)	The available financial technology services enable payment ability.	30.2	26.6	28.6	4.2	10.4	3.601	0.810
ii)	The available financial technology services enable savings ability	15.6	28.1	33.9	20.8	1.6	3.9071	0.860
iii)	The available financial technology services have increased credit accessibility ability	30.7	35.4	31.3	1.0	1.6	4.140	0.959
iv)	There is an indication of the tremendous growth of businesses in this market since the development of financial technology.	34.4	29.2	34.9	1.0	1.5	4.587	0.960

**Source: study data (2019)**

From the above table respondents indicated that the available financial technology services enable payment ability whereby 30.2% of respondents strongly agreed and mean response being 3.601 and standard deviation of 0.810. Respondents agreed that the available financial technology services enable savings ability with a mean of 3.9071 and standard deviation of 0.860 whereby 33.9% of the respondents neutrally agreed. Respondents highly agreed with 35.4% that the available financial technology services have increased credit accessibility ability by a mean of 4.140 with standard deviation of 0.959. Respondents also agreed that there is an indication of the tremendous growth of businesses in this market since the development of financial technology by a mean of 4.587 with standard deviation of 0.960 where 34.9% of the respondents highly neutrally agreed. The results implied that the innovation of new financial technologies has enabled SMEs in payment ability, savings ability and credit accessibility thus increased financial inclusion (Wamuyu, 2014).

#### 4.5 Inferential Statistical Analysis.

The researcher sought to carry out inferential statistics to examine relationship between the independent and dependent variable. The findings of correlation analysis, Model summary, ANOVA and multiple linear regression are outlined in subsection below.

##### 4.5.1 Correlation Analysis

The researcher sought to use Pearson correlation coefficient to examine the strength of linear relationship between independent variable and dependent variables. The findings were summarized in table below.

**Table 4.11 Pearson correlation analysis**

	Financial Inclusion	Mobile money Services	Agency Banking services	Online Banking services	Mobile loan Apps
Financial Inclusion	1				
Mobile money Services	.910*	1			
Agency Banking services	.979**	.944*	1		
Online Banking services	.962**	.764*	.562	1	
Mobile loan Apps	.973**	.678*	.782	.997*	1

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

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

The correlation between financial inclusion and the independent variables Mobile money services, Agency Banking, Online banking and Mobile loan app services was strongly positive implying that there exists a positive relationship between financial inclusion and financial

technology variables under study. The correlation values were statistically significant at 0.05 level of significance.

Table 4.11 shows that Agency Banking services and SMEs' financial inclusion have an average positive significant connection. At the 0.05 threshold of significance, the correlation coefficient achieved was 0.979, which was deemed to be significant. This suggests that Agency Banking services were a significant determinant of SMEs' financial inclusion in the Kabati market in Kitui County. The results backed up Marks (2015), assertion that agency banking has a major impact on financial inclusion. As a result of growing use of Agency Banking services, SMEs are more financially included (Waihenya, 2014).

From the above table 4.11, the study established an average of a positive significant relationship between Mobile money and Financial Inclusion of SMEs ( $r=.910$ ,  $p<0.01$ ). This showed that there was a direct relationship between Mobile money and Financial Inclusion of SMEs as it was indicated by (Joseph,2018). The successful financial inclusion of SMEs is dependent on the use of mobile money services.

From table 4.11 the results showed the presence of average positive significant between Online Banking and financial inclusion of SMEs ( $r=.962$ ,  $p=0.01$ ). This showed that there was a direct linear relationship between Online Banking and financial inclusion of SMEs. This was in line with Wamuyu (2014), whose study found a positive relationship between mobile technology and facilitation of e-commerce and performance of SMEs. Therefore, in order to enhance financial inclusion of SMEs in Kabati market, Kitui county, there should be an increase in the use of Online Banking services.

Table 4.11 shows that there is an average positive significant relationship between mobile Loan apps and SMEs' financial inclusion ( $r=.973$ ,  $p=0.01$ ). This revealed a direct linear association

between the mobile loan apps and SMEs' financial inclusion. As a result of the increased use of mobile loan app lenders, SMEs' financial inclusion has improved. The findings echoed those of Mlady (2016), who found that digital financial services have a higher data inclusion rate. As a result, increased use of mobile loan app services is needed to improve financial inclusion of SMEs in Kabati market, Kitui county.

#### 4.5.2 Regression Analysis

The study sought to determine the proportion of variation in the dependent variable that can be attributed to the independent variable. The findings of the coefficient of adjusted determination ( $R^2$ ) were summarized in table 4.12

**Table 4.12 Regression Weights for Overall Model**

Model	R squared	Adjusted R square	Std Error of The Estimate
1	0.966	0.9465	0.16547

a. Predictors: (Constant), agent banking, Mobile money, online banking, Mobile loan apps

b. Dependent Variable: financial inclusion

From table 4.12 above the results of coefficient of determination of adjusted ( $R^2$ ) =0.9465, which translates to 94.65%. This implied that 94.65% of financial inclusion of SMEs in Kabati market, Kitui county could be explained by change on financial technology while 5.35% of the change of financial inclusion is attributed by other factors outside the study scope. These factors may include cultural beliefs, infrastructure and economic factors like law policies, wages, government activities and Tax rates.

### 4.5.3 Analysis of Variance

The researcher sought to determine whether the overall regression model was significant for the study through the F-test. The regression was undertaken at 5% level of significance and the alpha value compared to p-value to determine the significance of the model. The significant test results were summarized in table 4.13

**Table 4.13 Significant Test Results**

ANOVA						
Model		Sum of squares	Df	mean squares	F	Sig.
1	Regression	20.812	4	5.203	36.435	0
	Residual	1	7	0.1428		
	Total	21.812	11			

a. Dependent Variable: Financial Inclusion

From the results it can be observed that ( $F = 36.435$ ;  $p < 0.05$ ) which is less than the level of significance alpha, therefore it was statistically concluded that the model is significant.

### 4.5.3 Hypothesis Testing

The study sought to test the hypothesis by relating the dependent and independent variables.

The study's general objective was to find out how financial technology and financial inclusion affect SMEs in Kabati market Kitui County.

Where by the specific objectives used to achieve the main objective of the study were.

1. Establish the agency banking services effect on financial inclusion of SMEs in Kabati market Kitui County.

2. Find out the Mobile Money services effect on financial inclusion of SMEs in Kabati market Kitui County.
3. To establish the online banking effect on financial inclusion of SMEs in Kabati market Kitui County.
4. Investigate Mobile loan apps services effect on financial inclusion of SMEs in Kabati market Kitui County.

The hypotheses stated as: -

**H<sub>01</sub>:** Agency banking services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.

**H<sub>02</sub>:** Mobile money services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.

**H<sub>03</sub>:** Online banking services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.

**H<sub>04</sub>:** Mobile loan App services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.

The study employed T-test in testing of null hypotheses at 95% confidence level ( $p$ -value=0.05) and results presented in table 4.14

**Table 4.14 Results for Overall Model**

Model	Coefficients						
	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	5.120	1.05		4.876	.000	5.120	5.120
Mobile money	-2.322	2.04	-3.651	-1.138	.000	-2.322	-2.322
Agency banking	.826	.077	1.211	10.727	.000	.826	.826
Online banking	1.674	.065	3.086	2.575	.000	1.674	1.674
Mobile loan App	.424	.075	.481	0.565	.000	.424	.424

a. Dependent Variable: financial inclusion

The results of T-statistics shown in table 4.14 were employed to test the null hypothesis.

**H<sub>01</sub>: Agency banking services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.**

The first objective of the study sought to establish the effect of Agency banking services on financial inclusion of SMEs in Kabati market Kitui County and the findings are as shown in table 4.14. To achieve this objective a null hypothesis, H<sub>01</sub>, that Agency banking services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County was formulated. In table 4.14 the coefficient of Agency banking services  $\beta=0.826$ ,  $p=0.000<0.05$  this shows a positive statistically significant relationship between Agency banking services and financial inclusion. Henceforth the null hypothesis that Agency banking services have no



significant effect on financial inclusion of SMEs in Kabati market Kitui County was rejected at 5% level of significance.

The findings indicate that the increased use of Agency banking services increases the financial inclusion of SMEs. The findings were in agreement with Mark (2015), who indicated that Agency banking has significant impact on financial inclusion in Kenya.

**H<sub>02</sub>: Mobile money services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.**

The second objective of the study sought to determine the effect of Mobile money services on financial inclusion of SMEs in Kabati market Kitui County. The findings are as shown in table 4.14. To achieve this objective a null hypothesis, H<sub>02</sub>, that Mobile money services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County was formulated. In table 4.14 the coefficient of M-Pesa services  $\beta = -2.322$ ,  $p = 0.000 < 0.05$  this shows no significant impact relationship between Mobile money services and financial inclusion. Henceforth the null hypothesis that Mobile money services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County was rejected at 5% level of significance. The findings indicate that the increased use of Mobile money services has no effect on financial inclusion of SMEs. Therefore, the findings were not in consisted with Joseph (2018), who found out that mobile money technology has positive significant impact on financial inclusion.

**H<sub>03</sub>: Online banking services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.**

The third objective of the study sought to establish the role of online banking on financial inclusion of SMEs in Kabati market Kitui County and the findings are as shown in table 4.14.

To achieve this objective a null hypothesis,  $H_{03}$ , that Online banking services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County was formulated. In table 4.14 the coefficient of Online banking services  $\beta=1.671$ ,  $p=0.000<0.05$  this shows a positive statistically significant relationship between Online banking services and financial inclusion. Henceforth the null hypothesis that Online banking services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County was rejected at 5% level of significance.

The findings indicate that the increased use of Online banking services increases the financial inclusion of SMEs. The findings were in agreement with study done by Donner and Escobari (2018), they found out that the role of online transactions is to increase the economic growth of business.

**$H_{04}$ : Mobile loan apps services have no significant effect on financial inclusion of SMEs in Kabati market Kitui County.**

The fourth objective of the study sought Examine influence of mobile loan app services on financial inclusion of SMEs in Kabati market Kitui County and the results were displayed in table 4.14. A null hypothesis,  $H_{04}$ , was developed to achieve this goal, stating that mobile loan app services had no substantial influence on financial inclusion of SMEs in Kabati market Kitui County. Table 4.14 demonstrates a favorable statistically significant link between mobile loan app services and financial inclusion with a coefficient of  $=0.424$ ,  $p=0.0000.05$ . At a 5% level of significant, the null hypothesis that mobile loan app services have no meaningful effect on financial inclusion of SMEs in Kabati market Kitui County was rejected.

According to the research, higher use of mobile loan app services improves SMEs' financial inclusion. The findings backed with a study by Shaikh, Glavee-Geo, and Karjaluo (2017),

who discovered a link between financial inclusion innovation and the promotion of digital banking culture in Pakistan.

#### **4.5.4 Multiple Linear Regression Analysis.**

The study sought to establish the relationship between financial inclusion and financial technology service and products (Online banking, M-Pesa, Agency Banking and Loan Apps). delivery strategies to SMEs in Kabati market. The multiple linear regression equation model results are presented as follows:

As per the results in table 4.14 the model coefficients were fitted in this model equation.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

$Y$  represents SMEs financial inclusion

$\beta_0$  represents constant (value of the dependent variable at zero value of independent).

$\beta_1$ =Coefficient for Agent Banking services

$\beta_2$ =Coefficient for M-pesa services

$\beta_3$ =Coefficient for Online banking

$\beta_4$ =Coefficient for Google play store app lenders services

$\varepsilon$  represents Error Term (sampling measurement and coverage errors)

The multiple linear regression equation model therefore becomes;

$$\mathbf{Y = 5.120 + 0.826X_1 - 2.322X_2 + 1.674X_3 + 0.424X_4 + 0}$$

## **Model Interpretation**

Holding all other factors constant, the level of financial inclusion is 5.12. An increase in the level use of Agency banking service by the SMEs in Kabati market results in increase in the level of financial inclusion by 0.826. An increase in the use of Mobile money services reduces the level of financial inclusion by 2.322 units, a unit increase in use of online banking services results in increase in the level of financial inclusion of SMEs by 1.674 units and a unit increase in the use of mobile Loan Apps results in the increase of financial level inclusion by 0.424 units all other factors held constant.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presents the summary of findings in respect to the study objectives. The conclusions based on the findings obtained from analysis of data collected in respect of Financial technology and financial inclusion of SMEs in Kabati market, Kitui County and as well as the recommendations of the study. This chapter in reference to the objectives of the study and the outcomes, outlines the recommendations made both for policy and suggestions for further research studies.

#### **5.2 Summary**

Past studies, argues that to date, growing SMEs still face challenges of being financially included. SMEs can be led to Centre of innovation process and banking of products through innovative strategies and paradigm shift by current financial institutions. SMEs are known to confront a variety of difficulties. Another study on the effects of micro financial institutions on the SMEs sector, on the other hand, revealed that micro financial institutions have favorable impact on SMEs. This research had conflicting findings on financial technology and financial inclusion of Small and Medium Enterprises, resulting in a knowledge gap that the study's major emphasis preceding studies did not seem to cover.

Financial inclusion is a vital role in SME's because policymakers acknowledge it as an economic player in achieving poverty reduction and long-term growth. SMEs play a significant part in Vision 2030 because they contribute to the achievement of four major agendas. They are also a key growth driver on the development roadmap, which aims to transform our country into a developed middle-income country by 2030 by providing a quality of living to all citizens.

Despite rising fintech development, government initiatives and assistance, and the Kenyan government's execution of various restructurings, as well as CBK and financial institution support of financial infrastructure, certain SMEs continue to confront financial issues. Despite this, figures show that 2.2 million SMEs closed between 2010 and 2016. SMEs' access to funding has gotten more difficult and expensive, while their accessibility has unexpectedly decreased. As a result, the study's objective was to establish financial technology and financial inclusion for SME's in the Kabati market in Kitui County. The study was guided by the following specific objectives. Determine the effect of Agency banking services. Determine the importance of mobile money services, as well as the importance of online banking. Examine the contribution of mobile loan apps services on SMEs' financial inclusion in Kitui County's Kabati market.

Pecking Order Theory, Theory of Asymmetric Information, Technology Acceptance Model, Relationship Lending Theory, and Financial Intermediation were all used in the research. This study utilized a descriptive cross-sectional study design. All retailers and wholesalers SMEs in Kabati market were included in the target population, with a sample of 223 SMEs chosen. The research was based on primary data gathered through questionnaires. In order to predict financial technology and financial inclusion of SMEs in Kabati market, Kitui County, descriptive statistics were used to analyze quantitative data, while inferential statistics were used to analyze qualitative data.

The study's first objective was to determine the effect of agency banking services on SMEs' financial inclusion in the Kabati market in Kitui County. The research looked into if there was a statistically meaningful link between Agency banking services and financial inclusion. As a result, the growing usage of Agency banking services boosts SMEs' financial inclusion.

The study's second objective was to investigate the effect of Mobile money services on SMEs' financial inclusion in the Kabati market in Kitui County. Mobile money services were found to have no significant effect on financial inclusion of SMEs in the study. From the results, increased use of Mobile money services has no effect on SMEs' financial inclusion. The study's third objective was to determine the impact of online banking on SMEs' financial inclusion in the Kabati market in Kitui County. According to the findings, there is a positive statistically significant effect between online banking services and financial inclusion. This claims that SMEs' financial inclusion is boosted by increased use of online banking services.

The study's final objective was to investigate the impact of mobile loan app services on SMEs' financial inclusion in the Kabati market in Kitui County. The research looked into whether there was a statistically significant link between mobile loan app lender services and financial inclusion. According to the research, higher use of mobile loan app lender services improves SMEs' financial inclusion.

### **5.3 Conclusions**

In line with the objectives as well as the findings of this study data shows that; Agency banking, online banking and mobile loan apps have a positive significance on financial inclusion of SMEs. With the support of agency banking and online banking majority of SME owners in Kabati market are able to access financial services, ranging from credit to financial planning tools, driving business growth and further expanding financial inclusion of SMEs.

From the analysis of study data, the results show that mobile money services are well known and most used financial technology in Kabati market. However, they have negative and significant influence effect on financial inclusion of SMEs. This may be result of high cost incurred while making transactions. The study concludes that the transactional costs associated

with use of mobile money services financial technology are unpopular among SME owners because they eat into their already thin profit margins, leading to a reluctance on the part of some SME owners to embrace the services in order to reap the benefits, and as a result, some SMEs being financially excluded thus owners end up closing down.

Study results shows that agency banking and online banking have increased financial inclusion in SMEs thus leading to growth of SMEs hence providing employment opportunities to individuals in Kabati market. FinTech services are appealing and have a high rate of acceptance among this group of business owners because they expand access to financial services and consequently financial inclusion.

#### **5.4 Recommendations**

The study's findings have major implications for stakeholders such as the Kenyan government, SMEs owners, management teams, SMEs employees, customers, students studying small and medium enterprises, entrepreneurs, academicians, and researchers studying SMEs financial inclusion. The study yielded a number of recommendations. Financial technology has a major impact on SMEs' financial inclusion, according to the report.

According to the study's findings, financial institutions should develop more banking agents in rural areas, because they are the most favored and used by SMEs. They are preferred by SMEs because they are conveniently available, have extended opening hours, and are close to the market, resulting in improved financial inclusion.

According to the study, online banking services have a significant role in financial inclusion. As a result, when it comes to performing financial transactions and paying bills, users should use online banking services. It was discovered that online banking services benefit customers by being time efficient, preventing money theft on business premises, allowing users to view



account balances at any time, and allowing users to track transactions simply and at any time. As a result, transaction costs must be reduced, as internet banking has the greatest impact on the expansion of the financial inclusion index for SMEs.

According to the report, the government should help to the promotion and support of FinTech delivery strategies such as Agency banking, Mobile money services, online banking, and mobile loan app lenders. These make it easier to provide financial services in places that are underserved by traditional financial institutions faster, more conveniently, more efficiently.

Although, FinTech is progressively being accepted by many enterprises, the government should come up with regulations to regulate the activities of FinTechs in terms of transaction costs and user data protection in order to boost the adoption of FinTech among SMEs. This will prohibit FinTech products and services from exploiting SMEs.

The research also suggests that the government issue low-cost licenses so that FinTechs can offer additional products and services to SMEs at a lower cost. SMEs may not always have access to financial products provided by traditional banks, which will result in higher financial inclusion for SMEs as well as enhanced loyalty and profit for FinTech firms. Closing the financial inclusion gap in SMEs can lead to drastic growth in our nation

### **5.5 Suggestions for Further Research**

The study found that the adoption of the technologies increased the levels of financial inclusion in the county because they offer products offered by traditional financial institutions but packaged in a way to accommodate the underserved individuals. The study also discovered that the transaction costs associated with these Fintech strategies are hampered to some extent. The study also discovered that use of mobile money services has no effect on financial inclusion. Based on these findings, the study suggests that future research examine the extent to which

Fintech has influenced the adoption of traditional financial institutions' products in suburban areas, as well as the effects of Fintech in general.

Moreover, similar studies could include more Fintech solutions in order to determine their impact on financial inclusion in the country as a whole. Because Fintech has only been around for a few years, this study also recommends that more research be done on Mobile money services and its effect on SMEs financial inclusion.

## REFERENCES

- Adams, D. A., Nelson, R. R., & Todd, P. A. (2016). Perceived Usefulness, Ease of Use and Usage of Information Technology: A Replication, *MIS Quarterly*, Vol. 16(2), 227-247.
- Aduda, J., & Kingoo, N. (2017). The relationship between Electronic banking and financial performance among commercial banks in Kenya. *Journal of Finance and Investment Analysis*, Vol.1 (3), 99-118.
- Acharya, V., Tim, E., & Christian, H. (2015). Addressing the SME Finance Problem. *International Journal of Business Management Tomorrow*, Vol.2 (3), 1-7.
- Agelyne, M., & Musau, M. (2021). Financial Technology and Financial Inclusion of Small and Medium Enterprises in Kabati Market Kitui County, Kenya. *International Journal of Academic Research in Business and Social Sciences*, Vol.11(4), 362-377.
- Alexander, R. (2017). SMEs and financial inclusion globally. *Journal of Financial Economics*, Vol. 98(3), 626-650.
- Allen, F., Demirguc-Kunt, A., Klapper, L., & Soledad, M. (2012). The Foundations of Financial Inclusion: *Understanding Ownership and Use of Formal Accounts*. World Bank Policy Research Working Paper No. 6593.
- Antoine, D., & Leo, V. (2017). The Middle East toward Incubator Benefits: Case Studies. ICBMEF 2012: *International Conference on Business, Management, Economics and Finance*, 29-31.
- Allan, A., Massu, M. & Svarer, C. (2013). Exploring the role that large-scale financial inclusion can play in boosting the global economy. *American Economic Journal: Applied Economics*, Vol. 5(1),163-192.

- Asian Development Bank. (2014). Capital Market Financing for SMEs: *A Growing Need in Emerging Asia*. Regional Economic Integration Policy Research Working Paper, 2984.
- Aremu, M., & Adeyemi, S. (2011). Small and medium scale enterprise as a survival strategy for employment generation in Nigeria. *Journal of sustainable development*, Vol. 4(1), 200- 206.
- Berger, A., & Udell, L. (2011). Bank size, lending technologies, and small business finance. *Journal of Banking and Finance*, Vol.35, 724-735.
- Bertrand, M., & Bouchard, S. (2018). Applying the Technology Acceptance Model to VR with people who are favorable to its use. *Advances in Social Sciences Research Journal*, Vol. 3(9), 65-78.
- Bhaird, C., & Brian, L. (2015). Determinants of capital structure in Irish SMEs. *Journal of small business economies*, Vol. 35, 357-375.
- Bhaird, C., & Lucey, B. (2016). An empirical investigation of the financial growth lifecycle. *Journal of Small Business and Enterprise Development*, Vol. 18(4), 715-731.
- Beck, T., Demirgüç-Kunt, A., & Levine, R. (2016). Finance, Inequality and the Poor. *Journal of Economic Growth*, Vol. 12(1), 27–49.
- Bolarinwa, O. (2015). Principles and methods of validity and reliability testing of questionnaires used in social and health science researchers. *Niger Postgrad Medical Journal Vol. 22*, 195-201
- Burns, N., & Grove, K., (2003). 3rd edition. Understanding Nursing Research. *Journal of critical care*, Vol. 10, 376-382.
- Central Bank of Kenya. (2015). *Bank Supervision Annual Report*. Nairobi, Kenya

- Central Bank of Kenya. (2016). *Bank Supervision Annual Report*. Nairobi, Kenya.
- Central Bank of Kenya. (2016). *Financial inclusion for the unbanked and SMEs*. Nairobi, Kenya.
- County Government of Kitui. (2016). *Annual Development Plan*, Nairobi, Kenya.
- Cooper, C. R., & Schindler, P. S. (2011). *Business Research Methods* (11th ed.).
- Chen, D., Chen, C., Chen, J., & Huang, Y. (2018). Panel data analyses of the pecking order theory and the market timing theory of capital structure in Taiwan. *International Review of Economics and Finance*, Vol. 27, 1-13.
- Cracknel, D. (2012). Policy Innovations to Improve Access to Financial Services in Developing Countries. *International journal of scientific research*, Vol.2, 7.
- Davies, F. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly*, Vol. 13(3), 319-340.
- Demirgüç-Kunt, A. & Klapper, L. (2012) “*Measuring Financial Inclusion: The Global Findex Database*” Policy Research Working Paper, No. 6025.
- Demirgüç-Kunt, A., Klapper, L., Singer, D., & Van Oudheusden, P. (2015). The Global Findex Database: *Measuring Financial Inclusion around the World*. World Bank Policy Research Working Paper No. 7255.
- Demirguc-Kunt. A., Klapper, L. & Soledad, M. (2016). The foundations of financial inclusion: Understanding ownership and use of formal accounts. *Journal of Financial Intermediation*, Elsevier, vol. 27(C), 1-30.

- Diamond, W. (1984). Financial Intermediation and Delegated Monitoring, *Review of Economic Studies*, Vol. 51(3), 393-414.
- Donner, J., & Escobari, M., (2018). A Review of Evidence on Mobile use by Small and Micro Enterprises in Developing Countries. *Journal of International Development*, Vol.22, 641-658.
- Edwards, T., Delbridge, R., & Munday, M. (2011). Linking innovative potential to SME performance: *An assessment of enterprises in industrial South Wales Procedia - Social and Behavioral Sciences*, Vol. 195, 334-342.
- Ed Vos, A., Andy, J., Sara, C., & Stephen, T. (2017). The happy story of small business financing. *Journal of Bank finance*. Vol. 31, 2648-2672.
- Financial Sector Deepening Kenya (FSDK) (2016). *Fin Access National Survey*
- Financial Sector Deepening Kenya (FSDK) (2013). *Fin Access National Survey*
- Financial Sector Deepening Kenya (FSDK) (2019). *Fin Access National Survey*
- FinTech in Sub-Saharan Africa: Fintech Africa. (2018) *What Has Worked Well, and What Hasn't*: NBER Working Paper No. 25007.
- Frame, W.S., & White, L.J. (2014). Empirical studies of financial innovation. *Journal of Economic Literature*, Vol. 42(1), 116–144.
- FSD Kenya. & Central Bank of Kenya. (2011). Financial Inclusion in Kenya. *Survey results and analysis from Fin Access*.
- George A. Akerlof, 1970. The Market for "Lemons": Quality Uncertainty and the Market Mechanism, *The Quarterly Journal of Economics*, Oxford University Press, vol. 84(3), 488-500.

- George, O., Namusonge, G., & Waiganjo, E. (2017). the effect of access to finance on the financial performance of SMEs in Mombasa county Kenya. *Strategic journal of business and management change*, Vol. 4, (25), 335-346.
- Goldsmith, R. W. (1969). *Financial structure and development* (No. HG174 G57).
- Gogtay, N. J., & Thatte, U. M. (2017). Principles of correlation Analysis, *Journal of The Association of Physicians of India*, Vol. 65, 78-81.
- Gudov, A. (2013). Combining formal and informal financial sources: Russian early entrepreneurs' and established firms' structure of external financing. *Journal of Chinese Entrepreneurship*, Vol.5(1), 39-60.
- Global Findex Database. (2014). *Measuring Financial Inclusion and the Fintech Revolution*. World Bank: Washington, DC.
- Global Findex Database. (2017). *Measuring Financial Inclusion and the Fintech Revolution*. World Bank: Washington, DC.
- Global partnership for fin. (2012). *Optimal Lending Contracts and Firm Dynamics*. Review of Economic Studies 71 (2), 285–315.
- Hassan, M. A. & Olaniran, S. O. (2011). Developing small business entrepreneur through assistance institutions: The role of the industrial development center, Osogbo, Nigeria. *International journal of Business and Management*, Vol. 6(2), 213-226.
- Hauke, J. & Kossowski, T. (2011), Comparison of values of Pearson's and Spearman's correlation. *Journal economic paper*, vol.30, issue 2, 87-93.

- Hughes, N. & Lonie, S. (2011). M-PESA: Mobile money for the unbanked turning cell phones into 24-hour tellers in Kenya, *Innovations* Vol. 2, 1–2.
- Irwin, D. & Scott, M. (2017). Barriers faced by SMEs in raising bank finance. *International Journal of Entrepreneurial Behavior & Research*, Vol. 16 (3), 245-259.
- Jepkorir, S. 2014. Challenges of implementing financial innovations by commercial banks in Kenya, *The international journal of business and management*, vol. 7 (4), 15-24.
- Joseph, K. (2018). Effect of mobile technology on financial inclusion in Kitui County, Kenya. *Journal of mathematical finance*. Vol. 12 (1), 1-10
- Karanja, N. (2014). *Gender mainstreaming in organizational culture and agricultural research processes*. Development in Practice. (UK). ISSN 0961-4524. 21(3):379-391.
- Kashangaki, J. (2014). *Transforming SME Finance*. Project Briefing Note 1, Growth Cap/FSD Kenya.
- Kenya (2013) *Kenya vision 2030: Second Medium Term Plan 2013 – 2017*, Nairobi [www.vision2030.go.ke](http://www.vision2030.go.ke).
- Kenya national bureau of statistics. (2016). *Micro, small and medium establishment survey Basic*. Nairobi: Kenya.
- Kenya National Bureau of Statistics. (2019). *Strategic Plan on deepening inclusion of Micro, small and medium 2006-2019*. Nairobi: Kenya.
- Kerlinger, F. (1986). *Foundations of Behavioral Research*, 3rd edition, Holt Rinehart & Winston.



- Kothari, C. (2008). *Research Methodology: Methods & Techniques*, 3<sup>rd</sup> edition. New age International Publishers. New Delhi.
- Kinyanjui, K. (2016). *Money markets, agency banking, run into hurdles*. Business Daily Monday, June 11, 2016.
- Kregel, J. (2016). Financial experimentation, technological paradigm revolutions and financial crises. W. Drechsler, R. Kattel, & E. Reinert, (Eds.) *Techno-Economic Paradigms: Essays in Honor of Carlota Perez*, 203-220.
- Mark, K., M. (2015). *International Journal of Science and Research*. ISSN (Online): 2319-7064 Index Copernicus | Impact Factor (2015): 6.391.
- Marangunić, N., & Granić, A. (2015). Technology acceptance model: a literature review from 1986 to 2013. *Universal Access in the Information Society*, Vol. 14(1), 81-95.
- Manimala, L., Vijay, M., & Devi. K. (2012). Technology Business Incubators (TBIs): A *Perspective for the Emerging Economies*, Bangalore Research Paper No. 358.
- Malays F. P. (2016). Development and validation of a financial self-efficacy scale. *Journal of Financial Counseling and Planning*. Vol. 22(2) 54–63.
- Makini, S. O. (2015). The relationship between financial innovation and financial performance of commercial banks in Kenya. *South Africa Journal of economic and management sciences*, Vol. 1, 2222-3436.
- Mohsen, T., & Reg, D. (2011). Making Sense of Cronbach's Alpha. *International Journal of Medical Education*. 2011; Vol. 2, 53-55.
- Myers, S.C. (1984). The Capital Structure Puzzle, *The Journal of Finance*, Vol. 39, No. 3.

- Mlady, L. (2016). Consumer Protection Issues for Digital Financial Services in Emerging Markets. *Banking & Finance Law Review*, Vol. 31(2), 389-401.
- Matias, F., & Serrasqueiro, Z. (2016). Are there reliable determinant factors of capital structure decisions? An empirical study of SMEs in different regions of Portugal. *Research in International Business and Finance*, Vol. 40, 19-33.
- Mbiti, I. & Weil, D. (2014). Mobile Banking: The impact of M-PESA in Kenya. *National Bureau of Economic Research*, Working Paper No. 17129.
- Mwando, S. (2013). Contribution of agency banking on the financial performance of commercial banks in Kenya. *Journal of Economics and Sustainable Development*. Vol. 4(20), 26–34.
- Myers, S.C. (2001). Capital structure, *The Journal of Economic Perspectives*, Vol. 15 (2), 81-102.
- Mutegi, K., & Phelister, N. (2015). Financial literacy and its impact on loan repayment by small and medium entrepreneurs. *International journal of economics, commerce, and management the United Kingdom* Vol. 6 (12), 58 – 76.
- Miller, M., & Nyauncho, E. (2014). *State of Practice of SME banking*. Growth Cap/FSD Kenya.
- Mugenda. O.M., & Mugenda. A.G. (2003). Research Methods: Quantitative and Quantitative approach. *Journal of college student retention research, theory and practice*, Vol. 2 (1), 41-58.
- Mugenda, B., (2008). *Social Science Research: Theory and Principles*. Nairobi. Applied Research and Training Services.

- Nafsigner, J., & Weicheng, W. (2011). Determinants of start-up firms external financing. *Journal of Bank finance*, Vol. 35, 2282-2294.
- Nandru, P., Anand, B., & Rentala, S. (2016). Determinants of financial inclusion: Evidence from account ownership and use of banking services. *International Journal of Entrepreneurship and Development Studies*, Vol. 4(2), 141-155.
- Namara, A., Murro, P., & O'donohoe, S. (2017). Countries lending infrastructure and capital structure determination: The case of European SMEs. *Journal of Corporate Finance*, Vol. 43, 122-138.
- Ndubisi, N., Jantan, M., & Richardson, S. (2014). Is the technology acceptance model valid for entrepreneurs? Model testing and examining usage determinants. *Asian Academy of Management Journal*, Vol. 6(2), 31-54.
- Nganga, S. I., & Mwachofi, M. M. (2013). Technology Adoption and the Banking Agency in Rural Kenya. *Journal of Sociological Research*, Vol.4(1), 21-32.
- Ngui, T. (2014). The Role of SMEs in Employment Creation and Economic Growth in Selected Countries. *International Journal of Education and Research*, Vol. 2(12), 461-472.
- Nyaga, C. N. (2018). Non-Financial constraints hindering the growth of SMEs in Kenya. *International Journal of professional practice*, Vol. 9 No. 2
- Nwanko, O. & Nwanko, N. (2014). Sustainability of Financial Inclusion to Rural Dwellers in Nigeria: Problems and Way Forward. *Research Journal of Finance and Accounting*, Vol. 5(5); 24-31.

- Pyle, D. (1977). Relationship Lending theory, financial structure, and financial intermediaries, *Journal of Finance*, Vol. 32, 371–387.
- Priscilla, S., Ombongi, P., & Wei, M. (2018). Factors Affecting Financial Performance of Small and Medium Enterprises (SMEs): A Case of Manufacturing SMEs in Kenya. *International Journal of Research in Business Studies and Management*, vol. 5 (1), 37-45.
- Proença, P. (2014). Determinants of capital structure and the 2008 financial crisis: evidence from Portuguese SMEs. *Procedia-Social and Behavioral Sciences*, Vol. 150, 182-191.
- PwC. (2016). Financial Services Technology 2020 and Beyond: *Embracing disruption*, *Journal of Electronic Commerce Research*. Vol. 13(4), 379-391.
- Retap, T., Abdullah, F., & Hamali, J. (2016). Banks' Lending Relationship Quality Index (LRQI) for the Small and Medium-sized Enterprises: *A Review Procedia-Social and Behavioral Sciences*, Vol. 224, 408-415.
- Sammy, M. (2013). Contribution of Agency Banking on Financial Performance of Commercial Banks in Kenya. School of Human Resource Development, *Journal of Economics and Sustainable Development* Vol.4, No.20.
- Salome, M. (2018). Financial inclusion and stability of commercial banks in Kenya. *International journal of financial research*, Vol. 9 (3), 203-209.
- Siedek, H. (2013). *Extending Financial Services with Banking Agents*. Focus Note Consultative Group to Assist the Poor.

- Shaikh, A., Glavee-Geo, R., & Karjaluoto, H. (2017). Exploring the relationship between financial sector reforms and the emergence of digital banking culture—Evidence from a developing country. *Journal in International Business and Finance*, Vol. 42, 1030-1039.
- Scherer, R., Siddiq, F., & Teo, T. (2015). Becoming more specific: Measuring and modeling teachers' perceived usefulness of ICT in the context of teaching and learning. *Journal of Computers & Education*, Vol. 88, 202–214.
- Schepers, J., & Wetzels, M. (2007). A meta-analysis of the Technology Acceptance Model: Investigating subjective norm and moderation effects. *Information & Management*, vol. 44, 90-103.
- Shim, Y., & Shin, D. (2016). Analyzing China's Fintech Industry from the Perspective of Actor-Network Theory. *Telecommunications Policy*, Vol. 40, 168-181.
- Shittu, A. I. (2016). Financial Intermediation and Economic Growth in Nigeria. *British Journal of Arts and Social Sciences*, Vol. 4(2), 164-179.
- Scholtens, B., & Van, D. (2014). *The Theory of Financial Intermediation*. SUERF, Vienna. Vol. 40, 168-181.
- Schulz, A. J. (2002). Addressing social determinants of health through community -based participatory research: The Eastside village health worker partnership. *Health Education and Behavior*, Vol. 29(3), 326-341.
- Straub, E. T. (2017). Understanding technology adoption: *Publications of theory and future directions for informal learning*, Vol. 79(2), 625–649.
- Terzi, N. (2015), Financial inclusion in Turkey. *Academic Journal of Interdisciplinary Studies*, Vol. 4(1), 269-276.

- Tonny, K., & Timothy, M. (2014). Deepening financial inclusion through collaboration to create innovative and appropriate financial products for the poor. *KBA Centre for Research on Financial Markets and Policy, Working Paper Series 01/14*.
- Thankom, A., & Rajalaxmi, K. (2015). Financial inclusion: Policies and practices the University of Central Lancashire, UK Indian Institute of Management, Bangalore, India. <https://doi.org/10.1016/j.iimb.2015.09.004>
- Wanjohi, M. (2009). Challenging facing SMEs in Kenya. Retrieved from [Http://www puzzle. Com/ article challenge facing Management in Kenya](http://www.puzzle.com/article/challenge-facing-Management-in-Kenya), Vol. 61(3), 205–236.
- Waihenya, H. (2014). The effect of agent banking on financial inclusion in Kenya.
- Wamuyu, P., & Maharaj, M. (2014). Factors influencing successful use of mobile technologies to facilitate E-Commerce in small enterprises: The case of Kenya," *The African Journal of information system*, Vol. 3 (1), 2.
- World Bank (2017). Policy frameworks to support women's financial inclusion. *Alliance for Financial Inclusion*. Retrieved from: [https://www.afi-global.org/sites/default/files/publications/2016-08/2016-02-womenfi.1\\_0.pdf](https://www.afi-global.org/sites/default/files/publications/2016-08/2016-02-womenfi.1_0.pdf).
- World Bank. (2014). Global Financial Development Report. Rethinking the role of State Finance. *Global Financial Development Report No. 72803*.
- World Bank, (2019). Financial Literacy around the World: *An Overview of the Evidence with Practical Suggestions for the Way Forward*: Policy Research Working Paper 6107.
- Yamane, T. (1967). *Statistics, An Introductory Analysis*, 2nd Ed., New York: Harper and Row.

Yoshino, N., & Yamagami, H. (2017). Monetary Economics: Practice and Theory. Keio University Press. *A Publication of India Reserve Bank*, Vol. 2, 22-32.

## **APPENDICES**

### **APPENDIX I: INTRODUCTION LETTER**

Agelyne Kanini Muthengi

Kenyatta University

P.O BOX 43844-00100

Nairobi.

Dear Respondent,

I am a student at Kenyatta University, from the School of Business, finance department pursuing a master's degree in business administration currently conducting research entitled "*Financial technology and financial inclusion of SMEs in Kabati market Kitui county, Kenya.*" this study work contributes in accomplishment for completion of my degree. I therefore request you to take little of your time and kindly fill in the questionnaire that have provided below. I assure you that I will maintain confidentiality and use your information for academic. Your collaboration is highly treasured.

Thank you for response and return of your completely filled questionnaire.

Yours faithfully

.....

**Agelyne Kanini Muthengi**



## **APPENDIX II: RESEARCH QUESTIONNAIRE**

This questionnaire is meant for gathering data to enable researcher study on financial technology and financial inclusion of SMEs in Kabati market Kitui County, Kenya. The questionnaires are very essential in the study. The questionnaires are to be completed by Respondents and therefore requested to comment on any other material information concerning the study. The researcher will maintain Ethics and integrity by ensuring that all information collected from the respondents is handled with confidentiality and used purely for academic purpose.

### **SECTION A**

#### **Demographic Information of The Respondents**

In this section indicate by use of a tick (✓) your choice in the various categories.

##### 1. Gender

I) Male ( )

ii) Female ( )

##### 2. Age

i) Below 20 yrs. ( ) ii) 21yrs-30yrs ( ) iii) 31yrs-40yrs ( ) iv) 41yrs-50yrs ( )

v) Above 50yrs ( ).

##### 3. Level of Education

I) Primary school and below ( ) ii) Secondary school ( ) iii) Diploma ( ) iv) Degree ( )

v) Masters ( ) vi) Doctorate ( )

##### 4. Years of operation of the business

I) less than 1 year ( ) ii) 1-5yrs ( ) iii) 6-10 yrs. ( ) iv) 11-15 yrs. ( )

v) Above 16 yrs. ( )

**SECTION B**

5. In this section, use the following Likert scale to show your level of agreement as per the given statement each table: 5=strongly agree, 4=weakly agree, 3=Neutral, 2=weakly disagree, and 1=strongly disagree.

**i) AGENCY BANKING SERVICES**

Classify your opinions in respect to the use of Agency banking services in your business operation, to your employees and customer’s service.

Description	Services offered.	5	4	3	2	1
i)	After existence of Agency banking, I’m able to make daily deposits of my sales hence prevention of problem of accumulating much cash in the premises.					
ii)	I like Agency banking due to their more extended opening hours; one can make deposits at the closure of business and as well withdraw to pay suppliers.					
iii)	I can pay my employees via Agency banking.					
iv)	Cost of operation has been reducing since I started using Agency banking. Opened an account through Agency banking.					
v)	Agency banking helps businesses scale to a larger level, access to digital services, and provides a source of income for our agents.					

6. In what other ways has Agency banking services influenced financial inclusion in business?

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7. Select with a tick (✓) the type of Agency banking you use for financial services in your business.

- I) Equity Agents ( )    ii) Pesa pap Agents ( )    iii) Co-op Kwa Jirani Agents ( )  
 iv) KCB-Mtaani Agents ( )

**ii) MOBILE MONEY SERVICES**

8. Classify your opinions in regard to the use of Mobile money services in your business operation, to your employees, and customer’s service. Use the following Likert scale to show your level of agreement: (1-5), 5=strongly agree, 4=weakly agree, 3=Neutral, 2=weakly disagree, and 1=strongly disagree.

Description	5	4	3	2	1
i) I make deposits through M-Pesa for every daily sale.					
ii) I withdraw money through M-Pesa for petty cash use in case of shortages.					
iii) I make savings in my <i>M-shwari</i> account through M-Pesa to increase the chance of loan limit.					
iv) I use M-Pesa to pay my employees and suppliers.					
v) After fully adoption of lipa na M-pesa services, I rarely receive cash from my clients.					
vi) Am aware of <i>Fuliza</i> service, and it helps in emergency times.					
vii) M-Pesa has enhanced the effectiveness of the operation in doing business.					

9. a) Select with a tick (✓) the method you use through M-Pesa to finance your business.

- I) KCB-Mpesa ( )    ii) *M-Shwari* ( )    iii) *Fuliza*    iv) All ( )

b) Select with a tick (✓) the method you use through M-Pesa to make payments.

- I) Pay bill number ( )    ii) Till number ( )    iii) M-Pesa transfer    iv) All ( )

10. In what other ways has the use of Mobile money services influenced financial inclusion in your business?

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**iii) ONLINE BANKING SERVICES**

11. Classify your opinions in respect to the use of online banking services in your business operation, to your employees, and customer’s service. Use the following Likert scale to show your level of agreement: (1-5), 5=strongly agree, 4=weakly agree, 3=Neutral, 2=weakly disagree, and 1=strongly disagree.

Description		5	4	3	2	1
i)	When it comes to transaction of funds, I depend on on online banking.					
ii)	I pay my bills direct from my bank account through online banking.					
iii)	Online banking enables me to track transactions in my bank account.					
iv)	I access my account balances through online banking					
v)	There has been reduction in theft of money in premises after invention of online banking.					
vi)	When it comes to time and transaction cost, online banking is convenient.					

12. In what other ways has the use of online banking services influenced financial inclusion in your business?

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**iv) MOBILE LOAN APP SERVICES**

13. Classify your opinions in regard to the use of mobile loan app services in your business operation, to your employees, and customer’s service. Use the following Likert scale to show your level of agreement: (1-5), 5=strongly agree, 4=weakly agree, 3=Neutral, 2=weakly disagree, and 1=strongly disagree.

Description	5	4	3	2	1
i) Mobile loan app lenders have enabled me to gain enough finances to grow my business					
ii) The presence of mobile loan app relieves me the costs of opening a bank account.					
iii) Through the use of mobile loan app lenders, am able to access credit financial institutions and planning tools online.					
iv) Access to mobile loan app enables me quick response during time of emergency and in need of funds.					

14. Select with a tick (√) the type of mobile loan app lender you use or have ever used for financing in your business.

- i) Tala Loans ( )    ii) Branch Loans ( )    iii) Saida Loans ( )    iv) *Okoa Stima* ( )  
 v) *Kopaa chapaa* ( )    vii) *Stawika* ( )    viii) *Timiza* from Barclays ( )    ix) All ( )

15. In what other ways has the use of Google play store loan app lenders services influenced financial inclusion in your Business?

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**v) FINANCIAL INCLUSION**

16. Below are several statements on financial inclusion of SMEs. As far as financial inclusion of SMEs in Kabati Market is concerned, classify your opinions in the degree to which you are in agreement with each statement. Use the following Likert scale to show your level of agreement: (1-5), 5=high level of degree, 4= great level of degree, 3= moderate level of degree, 2=little level of degree, and 1=zero level of degree.

Description	5	4	3	2	1
i) The available financial technology services enable payment ability.					
ii) The available financial technology services enable savings ability					
iii) The available financial technology services have increased credit accessibility ability					
v) There is an indication of the tremendous growth of businesses in this market since the development of financial technology.					

17. In what other ways do you know the financial technology services have influenced financial inclusion of SMEs in Kabati market?

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**APPENDIX III: TOTAL POPULATION OF KABATI MARKET SMEs**

Name of Enterprise	Total Number
Agrovets shop	15
Auto spares shop	17
Beauty shops	13
Bookshops	4
Butchery	21
carpentry shops	10
Car wash area shops	5
cereals shops	13
Co-op <i>Kwa Jirani</i> Agent	3
Cybercafé shop	11
Designer shops	7
Electronic shops	11
Equity agents	9
Garage services area	3
Hardware shop	9
Health care centers	4
Hotels & restaurant	27
KCB <i>Mtaani</i> Agent	6
<i>Kinyozi</i> shops	27
Laundry	3
<i>Malimali</i> shops	11

Min supermarket	3
M-Pesa Agents	53
Pesa pap Agents	2
Petrol station	2
Pharmacy & chemistry shops	12
Phone repair shops	14
Photo studio	6
Posho mill shops	13
Retail industry shops	37
Saloon shops (Hairdressers)	43
Tailoring service shops	16
bars, clubs, and pubs	21
textile shops	14
welding services shops	17
Wholesale industry shops	11
Wines & spirit shops	9
Total number of SMEs	502

Source: Kabati market revenue office records (2019)