
# MOBILE MONEY SERVICES AND FINANCIAL GROWTH OF SMALL AND MEDIUM ENTERPRISES IN KAKAMEGA TOWN, KENYA

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# MOBILE MONEY SERVICES AND FINANCIAL GROWTH OF SMALL AND MEDIUM ENTERPRISES IN KAKAMEGA TOWN, KENYA

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**ABSTRACT**

*The purpose of this study was to examine how mobile money services affect the financial growth of SMEs in Kakamega town, Kenya. Therefore, the study examined how mobile money savings, mobile money transfers and mobile money credit affected the financial growth of SMEs in Kakamega. Descriptive survey research design was adopted. The target population included 1868 registered SMEs in Kakamega town and a sample size of 329 SMEs was selected. Purposive sampling technique was used to pick out the SMEs. Questionnaires were used to collect primary data. Statistical Package for Social Sciences (SPSS) version 24 software was used for data analysis. Data was analysed through descriptive and inferential statistics. Descriptive statistics included the means, standard deviations, frequencies and percentages while inferential statistics included correlation and regression analysis. Findings were presented in frequency tables and Pie charts. From the findings, all three mobile money services (mobile money savings services, money transfer services and mobile money credit services) had significant positive effect on the financial growth of SMEs. This suggested that increase in the utilization of mobile money services would results to significant growth of SMEs in Kakamega town. The study therefore concluded that mobile money services are significant predictor of SMEs growth in Kakamega town. The study recommended that SMEs should to invest in mobile money savings and transfers in their operations since the research has found that it has a high influence on financial growth of SMEs. Based on the research findings, for mobile money services to improve in their financial performances, they embrace effective application of new modern technologies, effective mobile money transfer Services and efficient mobile money credit Services and comply to government regulations. The government should ensure the SMEs access affordable loans from the financial institutions with low interest rates. The study would help technology providers, government agencies and development partners to understand the contribution of mobile money service technology on the financial growth of SMEs. This would help them provide better technical support and advice to their clients as well as providing new innovations.*

***Key Words:*** *Mobile Money, Savings, Transfers, Credit*

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## INTRODUCTION

Mobile money solutions affect the economic lives of billions of people globally, including the poor. According to Oluwatayo (2016), changing mobile technology has opened up opportunities and enabled nearly three billion people without bank accounts to access financial services. Lack of opportunities to access financial services by vulnerable and poor groups' motivated innovation by mobile phone operators in a variety of ways and that includes the concept of mobile money technology and subsequent impact on small and medium enterprises (SMEs).

The rapid growth of mobile money technologies in the last few years, particularly in Kenya, South Africa, and the Philippines, has proven that there is latent demand for such services and that there is a willingness to adopt and pay for the technology among low-income users (Aker 2013). At the same time, governments, banks and microfinance institutions (MFIs) have realized that extending financial services to the base of the pyramid via mobile technology can significantly lower the cost of delivery, including overhead costs for buildings and staffing branches, as well the costs to customers of accessing services (e.g., travel or queuing time, travel costs, security issues (Aker 2013). SMEs operators in Kenya have adopted the use of the mobile payments as a way of transacting their businesses because of the relative affordability of mobile phones and the mobile banking services they offer (Mbogo, 2010). "Mobile money" is money that can be accessed and used via mobile phone (Jenkins, 2018). Mobile money can be used to settle a variety of transactions conveniently and it transforms the mobile phone into a mobile wallet. It is widely agreed that one of the recent innovations in mobile telecommunication is the ever increasing use of mobile technology for the cost-effective delivery of financial services to the people without bank accounts. One of the recently emerging technologies in the microfinance industry is the use of mobile phone technology for both banking and remittance

Digital credit has expanded rapidly in both Kenya and Tanzania, yet there is limited evidence on who is using it, how it is used, and the risks customers face. Digital credit is not widely used by the most vulnerable groups characterized by irregular cash flows, such as those primarily receiving income through farming and casual work. To serve these segments, digital credit may need to be appropriately and adequately adapted, such as through more nuanced algorithms and flexible repayment structures, time frames, and pricing appropriate for their ability to repay. Alternatively, digital credit may prove unsuitable for these segments, and other solutions were needed to help them build resilience and meet liquidity needs.

The Vision 2030 proposes intensified application of science, technology and innovation to raise productivity and efficiency across its three pillars (economic, social and political) on which it is based. Mobile Money Technology is one of the innovations in the ICT sector that may enhance the efficiency of businesses if properly used. Following the launch of mobile money transaction service M-Pesa by Safaricom, in March 2007, there was quick adoption of the service by many Kenyans through subscription to M-Pesa. The growth of M-Pesa users has been rapid over the years, within eight months of its launch, M-pesa had 900, 000 subscribers (Omwansa, 2010) and by September 2009, over 8.5 million Kenyans were registered users (Safaricom, 2010).

Micro and small business enterprises sector which are considered high risk and low-profit demographic, have a crucial role to play in the country's economy. Although many banks and non-bank institutions have entered the market, only a few reached a significant market share. Despite the growth of the market, digital credit is not reaching everyone. It remains ill-suited for most of the population whose livelihoods are characterized by irregular cash-flows, such as farmers and casual workers. Reaching these segments will require a deeper understanding of their financial lives, the

key risks that they face, and the day-to-day liquidity needs (Otiso, et al. 2013).

**Statement of the Problem**

The onset of mobile money services was foreseen to be a great driver of growth among SMEs in different economies. According to the Economic Survey (2016), the sector contributed over 50 percent of new jobs created in the year 2015 in Europe. Despite their significance, past statistics indicate that three out of five businesses fail within the first few months of operation (Kenya National Bureau of Statistics, 2015). Among the inexhaustible list of factors that could enhance development of SMEs is adequate finances and good financial management among the SMEs. However, statistics reveal that the informal sector is still underserved by banks yet there is a need for financial inclusion to activate the informal sector and support livelihoods of millions of Kenyans. Stakeholders in mobile money services have been urged to increase mobile money services access to the informal sector with experts saying such a move by existing providers would go a long way in supporting underserved livelihoods like the micro and small business enterprises sector. Mobile money services continue to make a difference to the sector and believe that there still exists untapped opportunities in the informal sector (Digital Lenders Association of Kenya, 2021).

Finance and financial related services are an important prerequisite in initiation, development and growth of business enterprises. SMEs face unique challenges due to the nature of their operations. Their need for payment and transactional services has not always been served by banks. This is based on lack of capacity to qualify them to access financial services from commercial banks as they experience low capital base and lack of collateral to secure loans. SMEs also do not find it very cost effective to embrace banking services because their target customers are mostly the unbanked. Although previous studies suggest socioeconomic development using mobile technology in developing countries in a chiefly positive light, the impact of mobile money services on rural SMEs in Kenya has not been substantiated empirically. Thus, relatively little is known about how modern telecommunications services can benefit the rural SMEs. Therefore, this study sought to determine the effect of mobile money services on the growth of SMEs in Kakamega. Little research has also been demonstrated in this area with the few studies conducted showing no direct relation between mobile money services and financial growth of SMEs especially in Kakamega town thus the need for this study.

**Objectives of the Study**

The general objective of the study was to examine how mobile money services affect the financial growth of small and medium enterprises in Kakamega, Kenya. The study was guided by the following specific objectives;

- To examine how mobile money savings services affect the financial growth of SMEs in Kakamega town.
- To examine how mobile money transfer services affect the financial growth of SMEs in Kakamega town.
- To examine how mobile money credit services affect the financial growth of SMEs in Kakamega town.

The study hypothesis were;

- $H_0$1: Mobile money savings services do not significantly affect the financial growth of SMEs in Kakamega town.
- $H_0$2: Mobile money transfer services do not significantly affect the financial growth of SMEs in Kakamega town.
- $H_0$3: Mobile money credit services do not significantly affect the financial growth of SMEs in Kakamega town.

## LITERATURE REVIEW

### Theoretical Review

#### Entrepreneurship and innovation theory

The entrepreneurship and innovation theory was introduced and developed by Joseph Schumpeter

(1838-1950). This theory was employed by the study to anchor the independent variable of mobile money services. The original approach focused on the role of innovation on entrepreneurship, economy and social change. Schumpeter argued that, the economy through static lenses focused on the distribution of given resources across different roads. Schumpeter's view of economic development is seen as a process of qualitative change driven by innovation taking place in historical time. Giving examples of innovation, Schumpeter mentioned new products, new methods of production, new sources of supply, exploitation of new markets, and new ways to organize business. He defined innovation as a new combination of existing resources. Through these combinations, he labelled the entrepreneurial function. For successful innovations, Schumpeter noted the important role played by entrepreneurs. That is, the prevalence of inertia or resistance to new ways at all levels of society that entrepreneurs had to fight in order to succeed in their aims. Rafinejad, (2017) describes the Schumpeter's theory as the one that emphasizes innovation ignoring risk taking and organizing abilities of an entrepreneur.

The theory of entrepreneurship is important to this study as it describes the relationship between innovation and entrepreneurship. Innovations as seen in the theory bring about economic and social change. In the study context, mobile money services presents an opportunity for SMEs to have new ways of doing business, which are likely to bring economic and social changes within the customer fraternity. This is reflected in the way the SMEs use the services to deal with their customers and suppliers to facilitate their business.

**Technology Acceptance Model (TAM)**

Technology acceptance Model was developed by Fred David in 1989. The model is rooted in the Theory of Reasoned Action (TRA). TAM model is considered to be the most influential and commonly employed theory describing an individual acceptance information system (Lee et al., 2013). Originally, the model was made with four variables; perceived usefulness, perceived ease to use, attitude towards using and actual system uses. Later two variables where added in the model which was external variables and behavioural intention (Eramus et al., 2015). Also the theory suggests that perceived usefulness and perceived ease of use are affected by external variables (Alharbi and Drew, 2014). According to the model, perceived usefulness is a key reason to technology adoption. The model hypothesised that the attitude of ease of use is the major determinant of whether the user will use or reject the system. The user believes that the system which is easier to use is more useful to his or her job performance. Perceived ease of use determines both perceived usefulness and attitude towards using the system. According to TAM both perceived of usefulness and perceived ease of use influences the users' attitude toward a mobile money services. Hence useful and ease to use then develop a positive attitude towards services (Fethena et al., 2015). In this study usefulness of mobile money services may have influence on the growth of SMEs. The model has been used by many studies in studying adoption and diffusion of various information system technologies (Riyadh et al., 2010). The TAM indicate that perceived usefulness and perceived ease of use predict attitude toward using mobile money services, perceived usefulness also influence the users behaviour intention (BI) using mobile money services, intention to use also determine the actual of using Mobile money services.

**Bank-Led Theory**

This model is composed of a sequence of three main entities; the bank, the retail agent, and the customer. This sequence starts when banks develop their financial products and services that are delivered to clients through retail agents that interact directly with clients on behalf of the banks. Basically, the bank is mainly responsible for opening and holding the account (cash in cash out transactions). The retail agent is responsible for verifying customer's ID, performing face to face

transactions, processing applications, forming groups, disbursing small values to the bank , collecting loans and small deposits, vending insurance products, and dealing with small remittances (Chowdhury, 2010).

Customers are able to access the mix of financial and non-financial service available. To enable retail agents to facilitate the communication between the customer and the bank, the bank is responsible for installing electronic technology such as mobile phones or POS devices for the retail agent. But in some countries like Brazil the bank license management companies on its behalf to carry out its responsibilities such as outfitting retail agents with technology and monitoring their performances, albeit the bank is still accountable to the customer in the case of retail agent's fraud or negligence (Lyman,2006).

The model is also used in Pakistan, South Africa and India where Indian branchless regulating policy obliges the retail agent to show all transactions on the banks' books within 24 hours (RBI's circular ,2006). The bank led model has been credited for facilitating the interaction between financial institutions and customers living in distant places who can access financial and non-financial services by visiting the retail agent. Common risks associated with this model may mainly be related to lack of training to the retail agent staff, and the actual security of the system, which is not far too different from risks associated with conventional branch based banking.

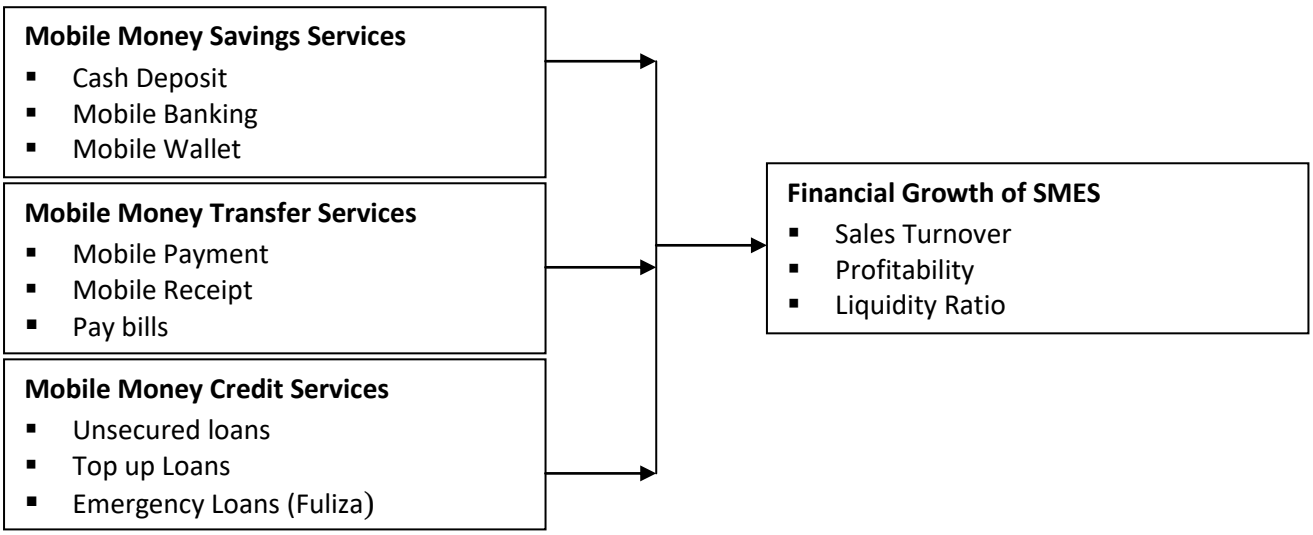


**Figure 1: Conceptual Framework**

**Review of Study Variables**

**Mobile Saving Services:** Mobile money services platforms enable users to save money in their accounts and to send money to other people (Ndung'u, 2019). Indeed, it is possible that mobile money by itself de-incentivizes savings by facilitating transfers to other people, making them more vulnerable to social pressure within their social networks. However, the way to tailor mobile money services to help SMEs to save is not obvious. Clear incentives to save, starting with interest-bearing savings accounts, are yet to be introduced in most mobile money platforms, often because regulators have limited knowledge about their potential impact. De Mel et al. (2018) found that savings were not significantly changed due to the availability of mobile money. Most studies have shown how mobile money can be tailored into promoting savings and productive investment. Jack and Habyarimana (2018) examine the impact of randomizing access to a mobile money savings account in Kenya as a way to successfully increase


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savings and access to high school. Batista et al. (2019) also facilitate access to a mobile money savings account as a tool to promote microenterprise development in Mozambique. Blumenstock et al. (2018) show how mobile salary payments can increase savings due to default enrollment in the program, even beyond its duration – highlighting the importance of behavioral constraints to saving and how these can be used to incentivize mobile savings.

**Mobile Money Transfer:** Mobile Money Transfer refers to the moving of money using mobile phone technology operated by either a mobile phone company or an independent operator. Tobbin and Kuwornu (2011) observed that mobile money transfer (MMT) has various synonyms such as mobile wallet, mobile financial service, and mobile payment and can be defined as services that allow electronic money transactions over a mobile phone and allow applications such as account access, money transfer, and mobile commerce. According to Kendall, Maurer, Machoka and Veniardv(2011), mobile payments are offered as new payment services to a retail market characterized by a multitude of competing providers such as banks and telecom operators. It is also characterized by diverse and demanding groups of adopters consumers and merchants whose critical mass in terms of adopting the system is essential for the success of the service, challenges regarding regulation and compatibility of different payment systems (Asamoah, Takieddine & Amedofu, 2020). Mobile Money Transfer services (MMT), are undergoing rapid adoption in many markets, in response to steady increase in remittances, the worldwide ubiquity of cell phones, and the need for an electronic P2P payment alternate to paper-based mechanisms like cash and checks. MMT functions in a very easy and simple method. MMT services enable customers to use their phone like a bank account and a debit card. The customer's credit their accounts at a local authorized agent and can then transfer the money to another person's phone or use for other transactions such as making loan repayment, paying bills, or redeeming it as cash (Aker, Prina & Welch, 2020).

**Mobile Credit Services:** Mobile money credit generally refers to the ability of consumers to quickly apply for and receive loans over mobile devices, avoiding the time, expense and paperwork of a traditional loan application at a bank. While no formal definition has been agreed, there are several useful descriptions. Mobile credit uses "the mobile phone to provide credit services to the underserved" (Blechman, 2016). There are three dimensions that have been effectively digitised in mobile credit products, namely evaluation of an applicant's repayment capacity, loan disbursement and loan repayment (Uduji, Okolo-Obasi & Asongu, 2019). This digitisation means that mobile credit has three key attributes, which differentiate it from traditional credit, namely that it is "instant, automated and remote" (Chen & Mazer, 2016). Instant refers to the fact that credit evaluation decisions can happen within seconds and in no longer than 24 hours; automated refers to the fact that decisions about credit worthiness and limitations, customer management and collections, are all automated, based on pre-set parameters; while remote refers to the ability to apply for loans, receive disbursements and make repayments without ever visiting a branch (Chen & Mazer, 2016). Because mobile money credit is unsecured and credit evaluation relies, at least initially, on the relevant algorithms, rather than on loan repayment history, it is considered higher risk than traditional bank loans.

**Financial Growth of SMEs:** The financial growth of an enterprise can be measured in ways such as turnover, profit, sales and number of employees. On the other hand growth of a firm is a measure of performance and it's a function of its ability to reach and maintain a certain level within its operating environment (Bongomin, Ntayi, unene & Malinga, 2017). The growth of an enterprise is reflected in increased sales ,new and improved products and increased market share (Osoro & Muturi, 2013). Growth depicts a firm's past capacity

to increase in size. Increase in a firm's size may lead to increase in profits flow generation. Increase in size leads to economies of scale, increased market value and improvement of profitability in future. Growth is regarded as the second most important goal of a firm, the most important one being firm survival. Failure to focus on growth is a key reason why most SMEs decline and eventually some die. Many other studies have been done (Khan, 2015) regarding factors affecting the growth of SMEs. Accordingly, Lim, Morse and Yu (2020) define SMEs growth as an average change in sales. However, according Nizaeva and Coskun (2019) enterprise performance and profitability is not related to growth of sales, since some companies may be able to maintain high profits, even with a declining growth rate.

**Empirical Review**

Kiplagat (2015) investigated the effect of M-Pesa utilization on the performance of Small and Medium Scale Enterprises (SMEs) in Nakuru town. The objective of the study was to determine whether M-Pesa utilization has had any impact on growth and performance of SMEs in terms of sales, savings, profitability and customer base. The selected SMEs were interviewed using personally administered questionnaires. This indicates that utilization of M-Pesa saving services significantly increased the performance of the SME businesses in terms of saving.

Iravonga and Miroga (2018) sought to establish how mobile banking has affected the financial growth of SMEs. The research was conducted as an exploratory research. The target population of study for the research comprised of the SMEs that provide financial services within the Kakamega County. The study used random sampling technique. A sample size of 373 SMEs was used. Semi-structured questionnaires were used for collecting information from SMEs entrepreneurs. The study concluded that mobile banking saving services had significant effect on the financial performance of SMEs in Kakamega County.

Otiso, et al. (2013) examined effects of sales revenue from use of mobile money transfer on the profitability of the micro and small enterprises in Bungoma County. They analysed the data using descriptive statistics and found that almost each business owned or had used a mobile phone in their business and that education level and duration of running the business had an effect on the profitability of a business. Other major findings were that Mobile Money Transfer services form the highest percentage of usage among the respondents as opposed to traditional banking hall and money transfer companies as it reduces their transport cost and risks when sending cash. Mobile Money transfer services also rated above average and assists MSEs to reduce costs. It reduces the frequency of going to the bank i.e. it saves time hence individuals get more time to run their businesses. In addition, transaction fees are lower than those charged by most banks and it's easier to use it when paying for clients and customers in their rural areas, and therefore leads to increase in sales revenues.

A case study on impact of mobile banking credit and performance of micro businesses in Tanzania's Morogoro Municipal collected data from 100 respondents using interviews (Kalio, 2013). The results showed that through the credit obtained from mobile banking, micro entrepreneurs have been able to improve businesses in terms of: increased business profit, increased employees, increased sales turnover, increased business diversification, increased business capital and assets as well as reduction of poverty among customers surveyed (Madole, 2013). Mobile banking loans plays a very crucial role to promote micro business growth (Kalio, 2013). The findings indicated that the amount of loans is significantly and positively related with performance of micro businesses.

A study on effects of mobile banking lending and micro and small enterprises performance within Kitale Municipality adopted a descriptive survey research design and a target population of 1,200 MSEs within Kitale Municipality revealed that the


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amount of mobile banking loans is significantly and positively related with performance of MSEs (Wanambisi, 2013). The study also established that loan disbursement, done through mobile phones is instant allowing users to bypass formalities in the commercial banking systems

A study on impact of mobile banking credit on poverty reduction in Ghana employed economic and social variables such as individual income, household growth, access to education, housing and participation in social and religious activities as benchmarks for measuring the impact. Questionnaires were administered to 60 customers and beneficiaries of mobile banking products (Boateng, 2015). The study found a positive relationship between mobile banking credit and the benchmark variables and recommended training for beneficiaries to ensure efficient use of funds and creation of sound political and economic environments so that micro enterprises can thrive. The study also found that Micro-entrepreneurs and individual borrowers are moving more towards mobile bank lending platforms as tighter credit rules lock them out of conventional borrowing.

## METHODOLOGY

This study employed descriptive research design. The study design was chosen because it helped the study to systematically collect data using questionnaires, code the data, analyse it and present it for interpretation. This study targeted 1868 small businesses in Kakamega town. The study's sampling frame included agent shops, boutique and saloon shops, electronic and spare shops, hardware shops, bookshops, restaurant and hotels, chemists' shops, groceries, butcheries, wholesale and retail shops. The study's sample size of 329 was determined using Taro Yamane's proportional sampling technique formula.

Data was collected by use of questionnaires. The questionnaires was developed from the objectives of the study and administered by the researcher to the respondents. The collected data was analyzed by both descriptive and inferential statistics with the aid of the Statistical Package for Social Sciences (SPSS) version 24. The following regression model was adopted.

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

Where:

Y represents Financial Growth of SMEs

$\beta_0$ represents Beta Constant

$X_1$ represents Mobile Money Savings

$X_2$ represents Mobile Money Transfer

$X_3$ represents Mobile Money Credit

ε represents Error Term

β1, β2, β3 represent Regression coefficients of Independent variables

## RESULTS AND DISCUSSION

### Descriptive statistics

The general objective of the study was to examine how mobile money services affect the financial growth of small and medium enterprises in Kakamega, Kenya. The specific objectives were; to examine how mobile money savings services affect the financial growth of SMEs in Kakamega town, to examine how mobile money transfer services affect the financial growth of SMEs in Kakamega town and to examine how mobile money credit services affect the financial growth of SMEs in Kakamega town. The statements were anchored on a five point Likert-type scale ranging from 1=Strongly Agree to 5= Strongly Disagree and respondents were asked to indicate the extent to which they agreed to the questionnaire statements during data collection. Descriptive statistics included percentage, frequency, mean and standard deviation. Mean is a measure of central tendency used to describe the most typical value in a set of values. Standard deviation shows how far the distribution is from the mean.

**Mobile Money Saving Services**

**Table 1: Pertinent results on Mobile Money Savings Services**

| Mobile Money Savings Services | 5 | 4 | 3 | 2 | 1 | Mean | Std Dev |
|---|---|---|---|---|---|---|---|
| Mobile phones are used by SMEs to save money for business | 53.5 (139) | 4.6 (12) | 9.2 (24) | 23.5 (61) | 9.2 (24) | 3.6962 | 1.52077 |
| Fixed savings plan are available in the mobile money saving services | 64.6 (168) | 1.5 (4) | 5.8 (15) | 22.7 (59) | 5.4 (14) | 3.9731 | 1.45035 |
| Saving money through mobile savings has helped SMEs to build capital base | 60.8 (158) | 2.3 (6) | 4.2 (11) | 23.5 (61) | 9.2 (24) | 3.8192 | 1.54783 |
| Mobile savings have enhanced the efficiency of doing business | 54.6 (142) | 1.5 (4) | 5.8 (15) | 24.2 (63) | 13.8 (36) | 3.5885 | 1.63098 |
| Saving money through mobile savings is safe and easy | 63.5 (165) | 2.3 (6) | 3.1 (8) | 21.5 (56) | 9.6 (25) | 3.8846 | 1.54537 |
| Mobile savings is convenient in terms of time and cost of transaction | 57.7 (150) | 3.1 (8) | 5.0 (13) | 30.4 (79) | 3.8 (10) | 3.8038 | 1.46911 |
| **Overall** | | | | | | **3.794** | |

From Table 1, respondents were asked to state their observation on whether they use their mobile phones to save money for their business. As tabulated in Table 1 results were as follows: 9.2% (24) strongly disagreed, 23.5% (61) disagreed, 9.2% (24) were undecided, 4.6% (12) agreed and 53.5% (139) strongly agreed. Therefore, above average 58.1% (151) of the respondents agreed that they use their mobile phones to save money for their business. Their mean and SD were 3.6962 and 1.52077 respectively. The study also sought to investigate whether they have fixed savings plan for their mobile money saving services. It was realized that 5.4% (14) strongly disagreed, 22.7% (59) disagreed, 5.8% (15) were undecided, 1.5% (4) agreed and 64.6% (168) strongly agreed. As indicated by the high percentage 66.1% (172), majority of the respondents agreed that they have fixed savings plan for their mobile money saving services. The mean and SD were 3.9731 and 1.45035 respectively. The third item under this theme was to establish whether respondents saving money through mobile savings have helped them built their capital base. It was established that 9.2% (24) strongly disagreed, 23.5% (61) disagreed, 4.2% (11) were undecided, 2.3% (6) agreed and 60.8% (158) strongly agreed. As indicated by the high percentage 63.1% (164), majority of respondents agreed that they saving money through mobile savings have helped them built their capital base. This had a mean of 3.8192 and SD of 1.54783.

The fourth item under this theme was to establish whether saving money through mobile savings is safe and easy. It was found that 13.8% (36) strongly disagreed, 24.2% (63) disagreed, 5.8% (15) were undecided, 1.5% (4) agreed and 54.6% (142) strongly agreed. General, it was evident that 56.1% (146) of respondents agreed that saving money through mobile savings was safe and easy. This had a mean of 3.8846 and SD of 1.54537. The study sought to establish whether mobile savings is convenient in terms of time and cost of transaction. The responses were as follows: 3.8(10) strongly disagreed, 30.4% (79) disagreed, 5.0% (13) were undecided, 3.1% (8) agreed and 57.7% (150) strongly agreed. Therefore, all respondents 60.8% (158) generally agreed that mobile savings is convenient in terms of time and cost of transaction. The mean and SD were 3.8038 and 1.46911 respectively.

**Mobile Money Transfer Services**

**Table 2: Mobile Money Transfer Services and Financial growth of SMEs**

| Mobile Money Transfer Services | 1 | 2 | 3 | 4 | 5 | Mean | Std. Dev |
|---|---|---|---|---|---|---|---|
| Mobile money transfer has enabled SME owners to access enough finances to grow their business. | 1.5 (4) | 4.6 (12) | 10.8 (28) | 35.4 (92) | 47.7 (124) | 4.1269 | 1.37379 |
| Through mobile money transfer, SMEs are able to save money from business proceedings. | 0.0 (0) | 23.1 (60) | 0.00 (0) | 33.8 (88) | 43.0 (112) | 3.7885 | 1.46697 |
| Mobile money transfer has prevented theft of money that arises out of keeping a lot of money in the business premise. | 0.0 (0) | 6.2 (16) | 7.7 (20) | 29.2 (76) | 56.9 (37148) | 3.8808 | 1.43764 |
| Access to mobile money transfer enables SMEs' quick response to customers' needs | 4.6 (12) | 4.6 (12) | 7.7 (20) | 30.8 (80) | 52.3 (136) | 4.1808 | 1.34208 |
| SMEs also transfer money through Mpesa to other businesses | 3.1 (8) | 1.5 (4) | 12.3 (32) | 35.4 (92) | 47.7 (124) | 4.1077 | 1.41828 |
| **Overall** | | | | | | **4.0169** | |

From Table 2, 124(47.7%) of the respondents strongly agreed that mobile money transfer has enabled them access enough finances to grow their business while 92(35.4%) agreed on the same. A mean of 4.1269 and standard deviation of 1.37379 suggested that there is a great deviation from the mean.

In regard to whether through mobile money transfer, respondents are able to save money from my business proceedings, the findings none strongly disagreed, 60(23.1%) disagreed, none was neutral, 88(33.8%) agreed and 112(43.0%) strongly agreed. Majority of the respondents 200(76.8%) agreed that through mobile money transfer, they were able to save money from my business proceedings. An overall mean of 3.7885 and standard deviation of 1.46697 implied that there was great dispersion from the mean.

The results also revealed that 76(29.2%) and 148(56.9%) of the respondents agreed and strongly agreed respectively that mobile money transfer has prevented theft of money that arises out of keeping a lot of money in the business premise with a mean of 3.8808 and standard deviation of 1.43764. This implied that there was great deviation from mean; the views by the respondents were varied on this item. Majority of the respondents 224(86.1%) agreed that Mobile money transfer had prevented theft of money that arises out of keeping a lot of money in the business premises.

The findings showed that 80(30.8%) of the respondents agreed that access to mobile money transfer enables their quick response to customers' needs and additional 136(52.3%) strongly agreed. A mean of 4.1808 and standard deviation of 1.34208 implied that there were some deviations from the mean. Majority of the respondents 224(86.1%) agreed that access to mobile money transfer enables their quick response to customers' needs.

From the findings, 124(47.7%) of the respondents strongly agreed that they also transfer money through M-pesa to their colleagues in business


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while 92(35.4%) agreed on the same. A mean of 4.1077 and standard deviation of 1.41828 suggested that there was a great deviation from the mean. Majority of the respondents 216(83.1%) agreed that they also transfer money through M-pesa to their colleagues in business.

**Mobile Money Credit Services**

**Table 3: Mobile Money Credit Services and Financial growth of SMEs**

| Mobile Money Credit services | 1 | 2 | 3 | 4 | 5 | Mean | Std. Dev |
|---|---|---|---|---|---|---|---|
| SMEs are able to access loan through mobile phone | 25.4 (66) | 13.1 (34) | 4.6 (12) | 7 (2.7) | 53.8 (140) | 3.4672 | 1.77020 |
| SMEs make direct payment of their loans through mobile banking | 12.7 (33) | 12.7 (22) | 6.5 (17) | 2.7 (7) | 69.6 (181) | 4.0808 | 1.49814 |
| Through use of mobile banking, SMEs are able to obtain credit from financial institutions | 20.8 (54) | 12.3 (32) | 3.8 (10) | 1.5 (4) | 61.5 (160) | 3.7077 | 1.71501 |
| Mobile banking enables SMEs owners to track progress of my loan | 17.7 (48) | 14.2 (37) | 3.5 (9) | 2.3 (6) | 62.3 (162) | 3.7731 | 1.66686 |
| The presence of mobile banking relieves SMEs owners the problem of having to apply for a loan online | 8.1 (21) | 11.2 (29) | 3.1 (8) | 0.8 (2) | 76.5 (199) | 4.3346 | 1.72634 |
| **Overall** | | | | | | **3.873** | |

From Table 3, 140(53.8%) of the respondents strongly agreed that they were able to access loans through their phone while 7(2.7%) agreed. A mean of 3.4672 and standard deviation of 1.77020 implied that there is great deviation from the mean. An average of 147(56.5%) of the respondents agreed that they were able to access loans through their phone.

181(69.6%) of the respondent strongly agreed that they make direct payment of their loans through mobile banking while 7(2.7%) agreed. A mean of 4.0808 and standard deviation of 1.49814 suggested that there is great deviation from the mean. Majority 188(72.3%) of the respondents agreed that they made direct payment of their loans through mobile banking.

In establishing whether through use of mobile banking, respondents were able to obtain credit from financial institutions, 4(1.5%) agreed while 160(61.5%) strongly agreed. A mean of 3.7077 and standard deviation of 1.71501 indicated that there was great deviation from the mean. Therefore, most of the respondents 164(63%) agreed that through use of mobile banking, they were able to obtain credit from financial institutions.

On whether mobile banking enabled respondents track progress of their loan 162(62.3%) of the respondents strongly agreed while 6(2.3%) agreed that mobile banking enabled respondents track progress of their loan with a mean of 3.7731 and standard deviation of 1.66686. This implied that there is great deviation from the mean. Majority of the respondents thus 168(64.6) agreed that mobile banking enabled them track progress of their loan.

From the findings on whether the presence of mobile banking relieves them from the problem of having to apply for a loan online, 199(76.5%) respondents strongly agreed while 2(0.8%) agreed. A mean of 4.3346 and standard deviation of 1.72634 implied that there was great deviation from the mean. Majority 201(77.3%) of the respondents agreed that the presence of mobile banking relieved them from the problem of having to apply for a loan online.

**Financial growth of SMEs**

Respondents were given statements on financial growth of SMEs and were required to state their level of agreement. The pertinent results are presented in Table 4.


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**Table 4: Descriptive Results of Financial growth of SMEs**

| Financial growth of SMEs | 5 | 4 | 3 | 2 | 1 | Mean | Std Dev |
|---|---|---|---|---|---|---|---|
| Use of mobile money services has been a great help in the financial growth of my business | 5.4 (14) | 21.9 (57) | 9.2 (24) | 5.0 (13) | 152 (58.5) | 3.8923 | 1.42643 |
| Ability of gaining credit facilities through mobile money has enabled me to gain enough capital to grow my business | 3.5 (9) | 18.5 (48) | 5.0 (13) | 1.9 (5) | 71.2 (185) | 4.1885 | 1.33524 |
| I have seen tremendous growth in profitability since the time I started using mobile money service in my business. | 5.8 (15) | 19.2 (50) | 3.1 (8) | 2.3 (6) | 69.6 (181) | 4.1077 | 1.41828 |
| Mobile money services provided alternative source of credit from banks which were difficult to obtain. | 30.4 (53) | 9.2 (24) | 1.5 (4) | 1.2 (3) | 67.7 (176) | 3.8649 | 1.70302 |
| The use of mobile money services has brought about sales growth of many SMEs in this town | 7.3 (19) | 5.0 (13) | 2.7 (7) | 0.8 (2) | 84.2 (219) | 4.4962 | 1.21921 |
| **Overall** | | | | | | **4.1099** | |

From Table 4, 152(58.5%) of the respondents strongly agreed that use of mobile money services has been a great help in the financial growth of their business while 13(5%) agreed with a mean of 3.8923 and standard deviation of 1.42643 implying that there was great deviation from the mean. Majority of the respondents agreed 165(63.5%) that use of mobile money services had been a great help in the financial growth of their business.

Further, 185(71.2%) of the respondents strongly agreed that the ability of gaining credit facilities through mobile money had enabled them to gain enough capital to grow their business while 5(1.9%) strongly agreed on the same with a mean of 4.1885 and standard deviation of 1.33524. Therefore, most of the respondents 190(73.1%) agreed that ability of gaining credit facilities through mobile money had enabled them to gain enough capital to grow their business.

Respondents said that they had seen tremendous growth in profitability since the time they started using mobile money service in their business as revealed by 181(69.6%) of the respondents who strongly agreed and 6(2.3%) who agreed with a mean of 4.1077 and standard deviation of 1.41828. The majority of the respondents 187(71.9%) agreed that they had seen tremendous growth in profitability since the time they started using mobile money service in their business.

176(67.7%) of the respondents strongly agreed that mobile money services provided alternative sources of credit from banks which were difficult to obtain and 3(1.2%) of the respondents agree with a mean of 3.8649 and standard deviation of 1.70302. Majority of the respondents 179(68.9%) agreed that mobile money services provided alternative sources of credit from banks which were difficult to obtain.

219(84.2%) of the respondents strongly agreed that the use of mobile money services had brought about sales growth of many SMEs in this town while 2(0.8%) agreed with a mean of 4.4962 and standard deviation of 1.21921 implying that there was great deviation from the mean. Majority of the respondents agreed 221(85%) that the use of mobile money services had brought about sales growth of many SMEs in this town.

**Inferential Analysis**

In this study, inferential analysis consists of Pearson Correlation analysis, Simple linear regression and multiple linear regressions. Before conducting inferential analysis, assumptions of linear regressions were conducted.

**Table 5: Pearson Correlation Analysis**

| | | Mobile money savings services | Mobile money transfer services | Mobile money credit services |
|---|---|---|---|---|
| Mobile money savings services | Pearson Correlation | 1 | | |
| | Sig. (2-tailed) | | | |
| | N | 260 | | |
| Mobile money transfer services | Pearson Correlation | .756** | 1 | |
| | Sig. (2-tailed) | .000 | | |
| | N | 260 | 260 | |
| Mobile money credit services | Pearson Correlation | .028 | .085 | 1 |
| | Sig. (2-tailed) | .650 | .170 | |
| | N | 260 | 260 | 260 |
| Financial growth of SMEs | Pearson Correlation | .729** | .814** | .428** |
| | Sig. (2-tailed) | .000 | .000 | .000 |
| | N | 260 | 260 | 260 |

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

Linearity of the variables was tested using Pearson's product moment correlation coefficient. Correlation analysis in Table 5 below shows that all the four independent variables (that is, mobile money savings services, r =0.729; mobile money transfer services, r = 0.841; mobile money credit services, r = 0.428 in the study were linear and significant at $p<0.05$ level, hence the test for the linear relationship was established.

**Test for Independence**

Test of independence was done by the use of Durbin-Watson. It tests that the residuals from a linear regression or multiple regression are independent. When Durbin-Watson factors are between (1) and (3) there is no autocorrelation problem (Alsaeed, 2005) from Table 6 the Durbin Watson values were between 1.763 and 1.875 for all the study variables hence there was no problem of autocorrelation.

**Table 6: Test of Independence**

| Variable | Durbin Watson |
|---|---|
| Mobile money savings services | 1.875 |
| Mobile money transfer Services | 1.777 |
| Mobile money credit Services | 1.763 |

**Test for Multicollinearity**

This is measured by variance inflation factor (VIF) or using tolerance. Variance inflation factor refers to a situation where two or more independent variables are highly correlated value > 0.9 (or effect of precision of independent variables) hence leading to multicollinearity. Multicollinearity problem can cause ability to define any variable to diminish owing to their interrelationship. According to Besley 1980 as sighted in (Jingyu li, 2003), VIF= 10 is used as critical value rule of thumb to determine whether there is too much correlation. The VIF (variance inflation factor) values in Table 7 were less than five and tolerance above 0.2; implying that there was no Multicollinearity (Tabachnick and Fidell, 2001).

**Table 7: Test for Multi-Collinearity**

| | Collinearity Statistics | |
|---|---|---|
| Variable | Tolerance | VIF |
| Mobile money savings services | 0.212 | 4.726 |
| Mobile money transfer services | 0.420 | 2.383 |
| Mobile money credit services | 0.513 | 1.949 |


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**Overall Regression Results between Mobile Money Services and Financial Growth of SMEs**

This aimed at establishing the overall results of mobile money services on the financial Growth of SMEs. This was acheived when the constructs of mobile money services were regressed against inancial Growth of SMEs in Kakamega town. The results of multiple linear regression analysis were presented in Table 8 which contained model summary (R, $R^2$, Adj $R^2$) results, Table 8 which contained ANOVA (goodness of fit; F Ratio, Sig Value) while Table 8 contained regression coefficient (Unstandardized & standardized), t-value and Sig. value results.

The study sought to determine the model summary findings in order to determine the overall percentage change in the financial growth of SMEs that was explained by all the metric of the mobile money services by use of $R^2$. The results in Table 8 present R, $R^2$, Adj $R^{2,}$ F ratio and Sig. value.

**Table 8: Model Summary**

| Model | R | R Square | Adjusted R Square | Std. Error of the Estimate |
|---|---|---|---|---|
| 1 | .763[a] | .582 | .570 | .09987 |

a. Predictors: (Constant), Mobile money Credit, Saving, Transfer services

The results from the model summary in Table 9 give us information on the overall summary of the model. Looking at the R square column, we can deduce that mobile money services account for 58.2% significant variance in growth of SMEs (R square =.582, P=0.000) implying that 41.8% of the variance in growth of SMEs is accounted for by other variables not captured in this model. From the findings, also adjusted R square value is obtained, which is a corrected R square value to provide a useful estimate of true study population. The difference between $R^2$ and adjusted $R^2$ is obtained by subtracting the later from the former (.582-.570=0.012) a value when multiplied by 100% results in 1.2 percent. This reduction implies that should the model originated from the entire population instead of a sample, it would explain about 1.2% less variation in the study outcome.

**Table 9: Model of Fit (ANOVA Table)**

| Model | | Sum of Squares | Df | Mean Square | F | Sig. |
|---|---|---|---|---|---|---|
| 1 | Regression | 1.888 | 3 | .472 | 47.332 | .000[b] |
| | Residual | 1.356 | 256 | .010 | | |
| | Total | 3.245 | 259 | | | |

a. Dependent Variable: Financial growth of SMEs

b. Predictors: (Constant), Mobile money Credit, Saving, Transfer services

In order to assess the significance of the model, simply whether the study model is a better significant predictor of the financial growth rather than using mean score which is considered as a guess, the study resorted to F Ratio. The F value from study findings indicates the proportion of the improvement in predicting the results from fitting the model relative to the inaccuracy or errors that still prevails in the study model. From the findings, the F value is more than one, as indicated by a value of 47.332, which means that enhancement as a result of model fitting is much larger than the model errors/inaccuracies that were not used in the model (F (3,259) = 47.332, P=0.000). The large F value is very unlikely to exist by chance (99.0%), thus implying that the final study model has significant improvement in it is prediction ability of financial growth of SMEs in Kakamega town.

The presented in Table 10 showed unstandardized coefficients, standardized coefficients, t statistic and significant values. The study has an option of either using Unstandardized Coefficients or Standardized Coefficients depending on the type of


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data. The study used unstandardized coefficient column because we want to compare mobile money services effect across same measures (Likert Scale 1 through 5).

**Table 10**: **Regression Coefficients**

| Model | Unstandardized Coefficients | | Standardized Coefficients | T | Sig. |
|---|---|---|---|---|---|
| | B | Std. Error | Beta | | |
| (Constant) | .170 | .383 | | .444 | .658 |
| Mobile money Saving | .206 | .051 | .288 | 3.997 | .000 |
| Mobile money Transfer | .357 | .083 | .266 | 4.325 | .000 |
| Mobile money Credit | .239 | .075 | .210 | 3.187 | .002 |

a. Dependent Variable: Financial growth

A regression of the three predictor variables against financial growth of SMEs established the multiple linear regression model as below as indicated in Table 10:

**Financial growth of SMEs (Y) =0.170 + $0.206X_1+0.357X_2+0.239X_3$**

$X_1$ represents Mobile Money Savings
$X_2$ represents Mobile Money Transfer
$X_3$ represents Mobile Money Credit

From the findings, we looked at the model results and scan down through the unstandardized coefficients B column. All mobile money services constructs had significant effect on the financial growth of SMEs. If mobile money services are held at zero or it is absent, the financial growth of SMEs in Kakamega Town would be .170, p=0.658. Though be positive but insignificant. It was revealed that mobile money saving services had unique significant contribution to the model with B=.206, p=.000 suggesting that controlling of other variables (mobile money transfer services and Mobile money credit services) in the model, a unit change in mobile money saving services would result to significant change in financial growth of SMEs by 0.206 in the same direction.

The first null hypothesis was rejected implying that mobile money savings services do significantly affect the financial growth of SMEs in Kakamega town. Therefore, increase in the utilization of mobile money services would results to significant financial growth of SMEs. These results agree with Kiplagat (2015) who indicated that utilization of M-Pesa saving services significantly increased the performance of the SME businesses in terms of saving. Similarly, Iravonga and Miroga (2018) concluded that mobile banking saving services had significant effect on the financial performance of SMEs in Kakamega County. Masocha and Dzomonda (2018) investigated the drivers of the adoption of mobile money services and the subsequent performance of Small and Medium Enterprises (SMEs) in Zimbabwe. The study established that subsequent adoption of mobile money saving services has an influence on the performance of SMEs.

The coefficient of mobile money transfer services was 0.357, which was significant (p=.000) and also positive. When the variance explained by all other variables (mobile money saving services and Mobile money credit services) in the model is controlled, a unit change in mobile money saving services would result to change in financial growth of SMEs by 0.357 units in the same direction. The second null hypothesis was rejected implying that mobile money transfer services do significantly affect the financial growth of SMEs in Kakamega town. Therefore, increase in the utilization of mobile money transfer services would results to significant financial growth of SMEs. Otiso, et al. (2013) indicated that mobile money transfer services also rated above average and assists MSEs to reduce costs. It reduces the frequency of going to the bank i.e. it saves time hence individuals get more time to run their businesses. Ibrahim (2019) revealed that there was a relationship between mobile money


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transfer and financial performance of small and medium enterprises. On the basis of the findings of this study, it was concluded that mobile money transfer had positive effect on financial performance of small and medium enterprises. Talom and Tengeh (2020) indicated that the mobile money payment and receipt services contributed of the order of 73% of the total variance in the turnover of the SMEs in Douala after they had begun to use the technology.

Lastly, mobile money credit services had also unique significant contribution to the model with B=-0.239, p=.002 implying that when other variables in the model are controlled (mobile money saving services and mobile money transfer services), a unit change in mobile money credit services would result to significant change in financial growth of SMEs by 0.239 units in the same direction. The third null hypothesis was rejected implying that mobile money credit services do significantly affect the financial growth of SMEs in Kakamega town. Therefore, increase in the utilization of mobile money credit services would results to significant financial growth of SMEs. The results are in agreement with Boateng (2015) who found that Micro-entrepreneurs and individual borrowers are moving more towards mobile bank lending platforms as tighter credit rules lock them out of conventional borrowing. Njiru (2017) indicated a positive connection between the interest payable in the year by SMEs because of advances acquired by SMEs over time, loan outstanding from financial institutions, the age of business dairy SMEs, their sizes and the estimations of loans acquired from financial organizations by business dairy SMEs to the financial performance.

**CONCLUSIONS AND RECOMMENDATIONS**

The study concluded that mobile money savings services were useful predictors of financial growth of SMEs since the relationship between mobile money savings services and financial growth of SMEs in Kakamega town was found positive and significant. This postulates that increase in the utilization of mobile money saving services would results to significant growth in the SMEs. Results implied that using mobile phones to save money for business would be easy, convenient and safe to boost business operations.

Results further indicated that money transfer services were found to be useful contributors of financial growth of SMEs. The relationship between mobile money transfer services and financial growth of SMEs was found positive and significant. The findings meant that if money transfer services like M-Pesa, M-shwari and mobile banking were enhance, these would boost financial growth of SMEs in Kakamega town since these would enable quick response to customers' needs and allow one to save money from the business proceedings and these methods are safe and convenient.

Findings on the mobile money credit services illustrated that mobile money credit Services were found vital in contributing to financial growth of SMEs in Kakamega town. Therefore, the study concluded that mobile money credit services have significant positive effect on the growth of SMEs in Kakamega Town. Therefore, operators of SMEs had access to loans from financial institutions, made transactions through mobile banking; tracked progress of their loans for planning purposes so that they do not default, then these would translate to improved financial growth of SMEs.

Based on the study findings the following recommendations were made; the owners and senior managers of the micro and small-scale enterprises in Kakamega County should invest more resources in enhancing the mobile phone saving facilities and mobile phone internet facilities so as to significantly drive growth of their firms. Further, to encourage utilization of mobile money saving services, mobile money companies should come up with various saving products and services and at the same time offer competitive interest rates so as SMEs owners can substantial income from their mobile money savings.

The study recommended companies offering mobile money services to reconsider the cost

associated with use of mobile money transfer services. This is because the study established that pay bill was the least utilized in regard to mobile money transfer due to high charges of operating a pay bill number in comparison with other alternatives. Mobile money companies should therefore revise the pay bill charges to avoid losing business clients

The cost of credit by mobile money services is considered to be very high which increases expenses among micro and small businesses enterprises. The study recommends that the government should control the cost of credit offered by the mobile phone lending institutions so as not to create borrowing cycle. This is a major source of funding for the SMEs as they have difficulty in meeting the many documentation s from the main stream financial institutions. The government should ensure the SMEs access affordable loans from the financial institutions with low interest rates.

The study also recommended that SMEs should adopt mobile money services in their businesses as this has been shown to serve as an instrument of growth in business. The use of mobile money services has been shown to have many potential benefits including shielding the traders from theft as a result of having so much cash at hand. SMEs is a large and growing sector that employs a large number of our population, and the use of mobile money services aids in achieving both immediate and long-term goals.

**Suggestions for Further Research**

This study sought to establish influence of Mobile money services on financial growth of SMEs. The study was limited to SMEs in Kakamega town hence limited in its generalizability of the findings; there is need for further studies of the same nature to consider other sectors and towns in other counties in Kenya for the sake of generalizing the results of the study.

This research study included only four variables, future researches, therefore, should consider more factors like mobile money trading services and government policies as independent variables. Moreover, including other moderator factors like business culture and looking forward to direct or indirect relationship towards organizational performance can also be made in the research models of the new research by other scholars in future.

**REFERENCES**


Adeya, N., (2013). Potential Uses of ICTs by Small and Micro Enterprises in Ghana and Kenya. UNU/INTECH.

Aker, J. C., Prina, S., & Welch, C. J. (2020). Migration, money transfers, and mobile money: Evidence from Niger. In *AEA Papers and Proceedings* (Vol. 110, pp. 589-93).

Ala, M. O., & Ngugi, P. K. (2013). Influence of mobile banking on growth of Micro Finance Institutions in Kenya. *International Journal of Social Science and Entrepreneurship*, *1*(2), 132-151.

Alharbi, S., & Drew, S., (2014).Using the Technology Acceptance Model in Understanding Academic Behavioural Intention to Use Learning Management System. *International Journal of Advanced Computer Science and Application*, 5(1), 143-155.

Amyx, C., (2015). The Perception Problem: Size Doesn't Matter. *Hington Business Journal*, 1,

Andiva, B. (2015). Mobile financial services and regulation in Kenya. In *1st Annual Competition and Economic Regulation (ACER) Conference*.

Anurag, M., &Tyagi, T., (2010). Will Lower Mobile Money Fees in Kenya, Tanzania be enough to stimulate micropayments? [http://blogpost.aspx? blogid=2743] site visited on 2/4/2012.

Asamoah, D., Takieddine, S., & Amedofu, M. (2020). Examining the effect of mobile money transfer (MMT) capabilities on business growth and development impact. *Information Technology for Development*, *26*(1), 146-161.

Atieno, R., (2010). Linkages, access to Finance and the Performance of Small-scale enterprises in Kenya. Research Paper No.2009/06.United Nations University.

Bångens, L., &Söderberg, B., (2011). Mobile Money Transfers and usage among micro- and Small businesses in Tanzania. Implications for policy and practice, April, 2011. Retrieved January 23, 2012, from www.gsma.com/mobilefordevelopment.

BenardNgaraya, Mary Bosire, Simon M. Kamau, (2014). Effects of Mobile Money Transaction on financial performance of small and medium Enterprises in Nakuru Central Business District. ISSN 2222(Paper) ISSN 2222-2847(online)

Berisha, G., & Pula, J. S. (2015). Defining Small and Medium Enterprises: a critical review. *Academic Journal of Business, Administration, Law and Social Sciences*, *1*(1), 17-28.

Blechman, J. G. (2016). Mobile credit in Kenya and Tanzania: Emerging regulatory challenges in consumer protection, credit reporting and use of customer transactional data. *The African Journal of Information and Communication*, *2016*(17), 61-61.

Blumenstock, J., Callen, M., & Ghani, T. (2018). Why do defaults affect behavior? Experimental evidence from Afghanistan. *American Economic Review*, *108*(10), 2868-2901.

Boateng, I. (2011). Factors affecting Malaysian mobile banking adoption: An empirical analysis. *International Journal of Network and Mobile Technologies*, *2*(3), 149-160.

Bongomin, G. O. C., Ntayi, J. M., Munene, J. C., & Malinga, C. A. (2017). The relationship between access to finance and growth of SMEs in developing economies: Financial literacy as a moderator. *Review of International Business and strategy*.

Booster, L., &Soderberg, B., (2018).Mobile Banking-Financial Services for the Unbanked. KISTA, The Swedish Program for ICT in Developing Regions.

Bowen, N., & Grove, K., (2010). 3rd ed. Understanding Nursing Research. Philadelphia: Saunders.

Brains, N., & Manheim, S., (2011). The practice of nursing research: conduct, critique and utilization. Philadelphia, Pennsylvania: W.B. Saunders.

Bunyasi, G. N. W., Bwisa, H., & Namusonge, G. (2014). Effect of access to business information on the growth of small and medium enterprises in Kenya. *International Journal of Business and Social Science*, *5*(10).

Catherine NanjalaSimiyu, MargeratOloko Mobile Money Transfer and the Growth of Small and Medium Sized enterprises in Kisumu City Kenya (May 2015) http//ijecm.co.uk.

Chale, P. R., & Mbamba, U. (2014). The role of mobile money services on growth of small and medium enterprises in Tanzania: Evidence from Kinondoni district in Dar es Salaam region. *Business Management Review*, *17*, 81-96.

Chen, G., & Mazer, R. (2016). Instant, automated, remote: The key attributes of digital credit. *CGAP Blog, February*, *8*, 2016.

Chew, E., Ilavarasan, V., & Levy, M., (2013). When there's a will, there might be a way: The economic impact of mobile phones and entrepreneurial motivation on female-owned microenterprises. Sixth *International Conference on Information and Communication Technologies and Development* (pp. 196-204). New York: ACM.

ChogiMwangi, (2016) Effect of security and accessibility of Mobile Money Transfer Services on Transactional Lead time of small and medium scale enterprises (SMEs) in Eldoret, Kenya. (2016). https://ijem.co.uk

Chullur, Y., (2010), Overview of the Technology Acceptance Model: Origins, Developments and Future Directions, Indiana University, USA, Sprouts: Working Papers on Information Systems.

Communications Commission of Kenya (CCK). (2013). Annual Report 2012-2013,

Congress 2009.Retrieved March 20, 2014 from http://www.strathmore.edu/pdf/innovgsma- omwansa.pdf.

Cooper, D., & Schindler, P., (2013). Business Research Methods. New Delhi: Tata McGraw- Hill Publishing Company.

Dahlberg, T., &Mallat, N., &Ondrus, J., &Zmijewska A., (2011). Past, present and future of mobile payments research: A literature review. Electronic Commerce Research and Applications 7 (2011) 165–181

De Mel, S., McIntosh, C., Sheth, K., & Woodruff, C. (2020). Can Mobile-Linked Bank Accounts Bolster Savings? Evidence from a Randomized Controlled Trial in Sri Lanka. *The Review of Economics and Statistics*, 1-45.

Donner, (2017). The use of mobile phones by micro entrepreneurs in Kigali, Rwanda: Changes to social and business networks Information Technologies and International Development 3 (2):3-19

Donner, J., (2015). Micro Entrepreneurs and Mobiles: An Exploration of the Uses of Mobile Phones by Small Business Owners in Rwanda. Information Technologies for International Development, 2(1), 1-21.

Eramus, E., Fernardo, B. & Gloria, G., (2015). "A structural re Model of technology accountancy. *SA Journal of Industrial Psychology*, 41(1), 1 – 12.

Fethena.M, Reuben, G. & Sara, R., (2015). "Expanding the Technology Acceptance Model (TAM) to Examine Faculty Use of Learning Management System (LMSs) in Higher Education Institutions. *MERLOT Journal of Online Learning and Teaching* 11(2), 210232.

Gartner M. (2012).Access to financial services in Tanzania. Dar es Salaam: Financial Sector Deepening Trust. Gartner (2012). Market trends: Mobile payments worldwide 2011. New York, USA: Gartner Research. GSMA (2012). Mobile money for the unbanked: Annual Report 2012. Retrieved from http://www.gsmworld.com/documents/mmu_2012_annual_report.pdf

GSM Association (2017), *State of the Industry Report on Mobile Money*, Decade Edition 2006-2016.

Higgins, D., & Kendall, J., & Lyon, B., (2012). Mobile Money Usage Patterns of Kenyan Small and Medium Enterprises. *Innovation, Technology, Governance and Globalization*, 7, 6781.

Hughes, N., &Lonie, S., (2017).M-PESA: Mobile Money for the "Unbanked" Turning Cellphones into 24-Hour Tellers in Kenya. Innovations. Winter/Spring 2007, Vol. 2, No. 1-2,

Ibrahim, H. (2019). *Examining Challenges Impacting Mobile Money Penetration Levels in Somalia: The Case of Zaad in Mogadishu* (Doctoral dissertation, University of East London).

Ibrahim, H. (2019). *Examining Challenges Impacting Mobile Money Penetration Levels in Somalia: The Case of Zaad in Mogadishu* (Doctoral dissertation, University of East London).

International Financial Corporation (IFC).(2010). M-Money Channel Distribution Case – Kenya,

Ishengoma, R., (2011). Analysis of mobile banking for financial inclusion in Tanzania: Case of Kibaha District Council. Retrieved on 23rdSept 2014 from www.econrsa.org/system/files/.../papers/.../ishengomamobile-banking.

ITU-T Statistics.(2014). Mobile-cellular subscriptions.Time Series by Country. Retrieved http://www.itu.int/en/ITUD/Statistics/Documents/statistics/2014/Mobile_cellular_200 02013.xls.

Jack, W., & Habyarimana, J. (2018). *High hopes: Experimental evidence on saving and the transition to high school in Kenya*, Georgetown University, mimeograph;

Jagun, A., Heeks, R., &Whalley, J., (2018). The impact of mobile telephony on developing country microenterprise: A Nigerian case study. *Information Technologies & International Development*, (4):47–65.

Jenkins, B., (2008). Developing mobile money ecosystems.hington, DC: IFC and the Harvard Kennedy School.

Kalei, A., Wambugu, W. H., & Muturi, G. P. (2016). Acceptance of M-Pesa Service and its Effect on Performance of Small and Micro-Businesses in Kenya.

Kalei, A., Wambugu, W. H., & Muturi, G. P. (2016). Acceptance of M-Pesa Service and its Effect on Performance of Small and Micro-Businesses in Kenya.

Kalio, C. (2011). Mobile money transfer services: the next phase in the evolution of person-to-person payments. *Journal of Payments Strategy & Systems*, *5*(2), 143-160.

Kendall, J., Maurer, B., Machoka, P., & Veniard, C. (2011). An emerging platform: From money transfer system to mobile money ecosystem. *Innovations: Technology, Governance, Globalization*, *6*(4), 49-64.

Khan, S. (2015). Impact of sources of finance on the growth of SMEs: evidence from Pakistan. *Decision*, *42*(1), 3-10.

Kiogothe, M. W. (2018). *Factors influencing adoption of mobile banking in Kenya: a case of commercial banks' customers in Nairobi County* (Doctoral dissertation, Strathmore University)

Kiplagat, j. J. (2015). *Utilization of m-pesa and performance of small and medium scale businesses in nakuru town* (doctoral dissertation, kabarak university).

Kirui, R. K. (2016). *Effect of mobile money services on sales of micro and small enterprises in Nakuru Town, Kenya* (Doctoral dissertation, Egerton University).

Kithaka, E. D. W. I. N. (2014). *The effect of mobile banking on financial performance of commercial banks in Kenya* (Doctoral dissertation, University of Narobi).

Kwabena, G. Y., Mei, Q., Ghumro, T. H., Li, W., & Erusalkina, D. (2021). Effects of a Technological-Organizational-Environmental Factor on the Adoption of the Mobile Payment System. *The Journal of Asian Finance, Economics, and Business*, *8*(2), 329-338.

Kwakwa, A., (2012). Mobile phone usage by micro and small scale enterprises in Semi-Rural Ghana. International Review of Management and Marketing 2(3): 156-164. Kothari, C., (2008). Research methodology: methods and techniques (2nd Ed.).New Delhi. New age International limited Publishers.

Lee, Y., Kozar, A., &Lorsen, T., (2003). "The Technology Acceptance Model: Past, Present and future. *Communications of the Association of Information System* 12(50), 751 – 781.

Legg, S. J., Olsen, K. B., Laird, I. S., & Hasle, P. (2015). Managing safety in small and medium enterprises.

Lennart, B., &Björn S (2011).Mobile Money Transfers and Usage among Micro and Small Businesses in Tanzania. *Implications for Practice*, 1-29.

Lim, D. S., Morse, E. A., & Yu, N. (2020). The impact of the global crisis on the growth of SMEs: A resource system perspective. *International Small Business Journal*, *38*(6), 492-503.

Litondo, K., &Ntale, J., (2013) Determinants of Mobile Phone Usage for E-Commerce among Micro and Small Enterprises in the Informal Sector of Kenya. International Journal of Applied Science and Technology, 3(6): 16-21.

Madila, S. S., & Msamba, E. (2016). To Assess the Effectiveness of Mobile Money Application in the Development of SMEs. *International Journal of Engineering Research & Technology* 5 Issue 01, January-2016

Makena, K. J., & Gekara, G. (2014). Factors influencing adoption of mobile money services among institutions of higher learning in Kenya. *The Strategic Business and Change Journal of Management*, *2*(20), 381-401.

Makin, P., & Hyperion, C. (2010). Regulatory issues around mobile banking. *The Development Dimension ICTs for Development Improving Policy Coherence: Improving Policy Coherence*, *139*.

Mallat, J., (2017). The Hype Cycle and Mobile Banking, 2009. Retrieved June 27, 2009, from CGAP: http://technology.cgap.org/

Mararo, M. W. (2018). *Influence of mobile money services on the growth of SME in Nakuru Town Kenya* (Doctoral dissertation, JKUAT).

Mary Mararo, (2017) Influence of mobile money services on the growth of SMEs in Nakuru Town, Kenya,

Mas, I., &Ng'weno, A., (2010). Three keys to M-PESA's success: Branding, channel management and pricing. Bill & Melinda Gates Foundation.

Masocha, R., & Dzomonda, O. (2018). Adoption of mobile money services and the performance of small and medium enterprises in Zimbabwe. *Academy of Accounting and Financial Studies Journal*, *22*(3), 1-11.

Mbiti, I., & Weil, D., (2011). Mobile Banking: The Impact of M-Pesain Kenya. Nber Working Paper Series, Working Paper 17129. Retrieved March 19, 2014 from http://www.nber.org/papers/w17129.

Mbogo, M. (2010). The impact of mobile payments on the success and growth of micro-business: The case of M-Pesa in Kenya. *Journal of Language, Technology & Entrepreneurship in Africa*, *2*(1), 182-203.

MdTaimurAhad, exploring the usage of the Mobile phone by SMEs in the Achievement of vision 2020 Goals. (2016). https//www.ibimapublishing.com/journals/jmtk/jmtks.html.

Michaels, J., & Hammond, M., (2018).A Review of Evidence on Mobile use by Small and Micro Enterprises in Developing Countries. Journal of International Development, 22, 641-658

Moibi, M. G. (2019). Evaluating the Adequacy of the Legal and Regulatory Framework of Mobile Money Transactions in Kenya.

Muchiri, J. W. (2018). Effect of mobile banking adoption on the performance of small and medium enterprises in Nairobi County. *International Journal of Economics, Business and Management*, *2*(4), 445-486.

Muchiri, J. W. (2018). Effect of mobile banking adoption on the performance of small and medium enterprises in Nairobi County. *International Journal of Economics, Business and Management*, *2*(4), 445-486.

Mugenda, O., &Mugenda A., (2013).Research Methods: Quantitative and qualitative approaches. (2nd Ed.) Nairobi: ACTS Press.

Muiruri, A. (2014). "Facilitating Cross-Border Mobile Banking in Southern Africa", Economic Premise, No. 26, World Bank.

Muriuki, E.T. (2011). *M-Pesa Utility, Operation and Entrepreneurial Innovations by Small Enterprises in Kenya*. Unpublished doctoral thesis. Nairobi: Jomo Kenyatta University of Agriculture and Technology.

Mutio, F. M. (2019). *Influence of Mobile money services on Performance of Micro Businesses in the Informal Sector in Kenya: A Case Study of Jua Kali Artisans in Nairobi County* (Doctoral dissertation, United States International University-Africa).

Mutisya, R. (2016). *The Role of Mobile Banking on the Growth of Micro and Small Enterprises in Kitui County* (Doctoral dissertation, University of Nairobi).

Mutisya, R. (2016). *The Role of Mobile Banking on the Growth of Micro and Small Enterprises in Kitui County* (Doctoral dissertation, University of Nairobi).

Mwega, F. M. (2016). *Financial regulation in Kenya: Balancing inclusive growth with financial stability* (pp. 99-122). Routledge.

Nakityo, M. (2019). *Mobile Money Services and Growth of Small and Medium Enterprises in Mukono Municipality* (Doctoral dissertation, Uganda Christian University).

Narteh, B., Mahmoud, M. A., & Amoh, S. (2017). Customer behavioural intentions towards mobile money services adoption in Ghana. *The Service Industries Journal*, *37*(7-8), 426-447.

Ndung'u, N. (2019). Digital technology and state capacity in Kenya. *Washington, DC*.

Ngaruiya, B., Bosire, M., &Kamau, S., (2014).Effect of mobile money transactions on financial performance of small and medium enterprises in Nakuru Central Business District. Research Journal of Finance and Accounting, 5 (12): 53-58.

Ngaruiya, B., Bosire, M., and Kamau, S. (2014). Effect of mobile money transactions on financial performance of small and medium enterprises in Nakuru Central Business District. *Research Journal of Finance and Accounting, 5 (12): 53-58.*

Nizaeva, M., & Coskun, A. (2019). Investigating the relationship between financial constraint and growth of SMEs in South Eastern Europe. *SAGE Open*, *9*(3), 2158244019876269.

Njenga, A., (2009). Mobile phone banking: Usage experiences in Kenya, unpublished MBA thesis of Catholic University of Eastern Africa.

Nyagah, K.M. (2013). *The Impact of Mobile Money services on the Performance of Small and Medium Enterprises in an urban town in Kenya*. Unpublished MBA thesis. Nairobi: KCA University.

Nyangori, D., (2012) "Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology," MIS Quarterly 13(3), 319-339

Oluwatayo P. (2016) Non-Financial Services in SMEs Banking

Omwansa, T., (2009), M-PESA: Progress and Prospects. Innovations / Mobile World

Ondiege, P. O. (2015). Regulatory Impact on Mobile Money and Financial Inclusion in African Countries-Kenya. *Nigeria, Tanzania and Uganda, Paper Prepared for March*.

Onyango, R., Ongus, I.W. R, Awuor, M. F., and Nyamboga, C. (2014). Impact of adoption and use of mobile phone technology on the performance of micro and small enterprises in Kisii Municipality Kenya. *World Journal of Computer Application and Technology, 2(2): 34-42.*

Kenya. World Journal of Computer Application and Technology, 2(2): 3442.

Osoro, K., & Muturi, W. (2013). The role of micro financial institutions on the growth of SMEs in Kenya: A case study of micro financial institutions in Kisi Town. *IOSR Journal of Humanities and Social Science (IOSR-JHSS)*, *16*(1), 2279-0837.

Otiso, K., Simiyu, C., and Odhiambo, V. (2013). Effects of sales revenue by use of mobile phone money transfer on the profitability of the micro and small enterprises in Bungoma County. *International Review of Management and Business Research, 2 (3):854-860.*

Otiso, N., Simiyu, N., & Wepukhulu, R., (2013). Effects of Cost Reduction by Use of Mobile Phone Money Transfer System on the Profitability of Micro and Small Enterprises in Bungoma County. *European Journal of Business and Management,* 5(26), 125–131. Retrieved from: http://www.iiste.org/Journals/index.php/EJBM/article/view/8070

Ouma, D. and Rambo, H. (2013). Mobile Money Transfers and Usage among Micro and Small Businesses in Tanzania. Implications for Practice, 1-29.

Ouma, D. and Rambo, H. (2013). Mobile Money Transfers and Usage among Micro and Small Businesses in Tanzania. Implications for Practice, 1-29.

Owen, K., (2018). "Conditions for acceptance and usage of mobile payment procedures". MPRA Paper 2912.

Pagani, I., (2014).CGAP Focus Note No.46. The early experience with branchless banking. Pages 63-81. DOI:10.1162/itgg.2007.2.1-2.63

Paul, W., & Henry, M., (2013). Influence of Mobile Money Transfer Services on the Performance of Micro Enterprises in Kitale Municipality.

Porteous, D., (2006).The enabling environment for mobile banking in Africa. London: DFID.

Rafinejad, D., (2017). Innovation, Product Development and Commercialization. USA: Daurish. Rajivlal and IshanSachdev, Mobile Money Services, Design and Development for Financial Inclusion. Working Paper (July 2015).

Riyadh. A., Akter, S., &Nayeema, I., (2010).The Adoption of E-banking in Developing Countries: A Theoretical Model for SMEs. International Review of Business Research Paper, 5(6), 212-230 .

Sadana, G., Sjöblom, E. &Pulver, C., (2011).What Makes a Successful Mobile Money Implementation? Leanings from M-PESA in Kenya and Tanzania. Mobile money for the Unbanked, GSMA, UK. 22.

Safaricom, (2010). Financial Year 2008/2009; Annual Results Presentation and Investor update.

Saleem, Z., & Rashid, K., (2011). Customer satisfaction in mobile banking industry of Pakistan. Karachi: Lambert Academic Publishing.

Senso, C., &Venkatakrishana, V., (2013).Challenges of Mobile – Phone Money Transfer Service Market Penetration and Expansion in Singida District, Tanzania. *International Journal of research in management and Technology* (IJRMT), 3(6), 205-2015

Shon, K. &Swatman, J., (2018).Arthur D. little Globa l M-Payment Report, Vienna, Austria.

Skogqvist, J. M. (2019). The effect of mobile money on savings behaviors of the financially excluded.

Skogqvist, J. M. (2019). The effect of mobile money on savings behaviors of the financially excluded.

Talom, F. S. G., & Tengeh, R. K. (2020). The impact of mobile money on the financial performance of the SMEs in Douala, Cameroon. *Sustainability*, *12*(1), 183.

Tobbin, P., & Kuwornu, J. K. (2011). Adoption of mobile money transfer technology: structural equation modeling approach. *European Journal of Business and Management*, *3*(7), 59-77.

Uduji, J. I., Okolo-Obasi, E. N., & Asongu, S. A. (2019). Electronic wallet technology and the enabling environment of smallholder farmers in Nigeria. *Agricultural Finance Review*.

United Nations. Economic and Social Commission for Asia and the Pacific: Trade Finance Infrastructure Development Handbook for Economies in Transition,. Thailand: United Nations Publications.

Vaughn, H., (2010). The Impact of Mobile Devices on SMEs in Auckland, New Zealand. Unpublished Masters in Computing Project, Unic New Zealand.

Venkatesh, V., & Davis F., (2010).A theoretical extension of the Technology Acceptance Model. Management Science, 46, 186-204.

Wambari J, (2010) Impact of Mobile Banking on financial performance of unguka microfinance Bank Ltd, Rwanda (2010). (https://ISSN:2249-4588)

Wanambisi, D. (2013). *Regulating transformational branchless banking: Mobile phones and other technology to increase access to finance* (No. 42703, pp. 1-24). The World Bank.

Wanyonyi, P., & Bwisa, H., (2013). Influence of mobile money transfer services on the performance of micro enterprises in Kitale Municipality. *International Journal of Academic Research in Business and Social Sciences*, 3 (5):500-517.

World Bank. (2012). Information and Communications for Development 2012: Maximizing Mobile. hington, DC: World Bank. DOI: 10.1596/978-0-8213-8991-1. Retrieved June 18, 2014 from http://www.worldbank.org/ict/IC4D2012.