THE IMPACT OF MOBILE MONEY SERVICES ON THE PERFORMANCE OF SMALL AND MEDIUM ENTERPRISES IN AN URBAN TOWN IN KENYA

BY

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A DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION (CORPORATE MANAGEMENT) IN THE SCHOOL OF BUSINESS AND PUBLIC MANAGEMENT AT KCA UNIVERSITY

NOVEMBER, 2013

DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted anywhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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ABSTRACT

Since the launch of mobile money services in Kenya in 2007, the number of subscriptions has grown to approximately 48% of entire the Kenyan population. This overwhelming uptake has been attributed to the affordability and accessibility of the service, especially among low income earners. The main challenges of mobile money technology include; the requirement of cash tellers or agents at convenient locations to allow easy access to cash when needed, the rising number of fraudulent cases through the service and the lack of interest earned on money deposited in mobile money services frameworks. Mobile phone operators seem to be doing their best to address these challenges. Amidst these challenges it is useful to know how mobile money services influence or impact SMEs industry in urban towns in Kenya. The objectives of this study are; to investigate current awareness and uptake of various mobile money services, to determine if mobile money services uptake has any impact on SMEs growth through increased sales or savings and loan accessibility, establish if mobile money service qualities of low cost, convenience and accessibility result in increased SMEs performance and establish if mobile money services are considered efficient and reliable by SMEs in Naivasha Town. The study found that mobile money has made a significant contribution to the SME sector. Majority of the traders rely on it as opposed to the formal banking sector for their day to day transactions. Secondly, it is evident that all the respondents in this study had a clear understanding of the basic functions of mobile money services. Mobile money services have a positive impact on sales. Efficiency and reliability contribute more to mobile money utility and SMEs growth. It is worth noting that majority of the respondents had reservations on the convenience and cost of the service as a result of problems associated with the functionality of the service. Delays were a major concern of the respondents but only a few people had experienced it. Thirdly, many of the players in the SME sector do not use the service for savings, to access loans or have bank accounts hence creating a major potential for mobile money. From the findings, it is evident that, mobile money users are not conversant with mobile-bank transactions on loan applications and repayment and prefer the normal banking system to mobile banking when it comes to loans and advances.

Key words: Mobile Money, SMEs, SME Performance

ACKNOWLEDGEMENT

I would like to express my sincere gratitude to my supervisor Dr. Brigitte Okonga, for her guidance towards the completion of this project. I would also like to thank the KCA University academic faculty who guided me through my coursework and taught me the research knowledge and skills to undertake and complete this project on this topic "The Impact of Mobile Money Services on SMEs Performance in Naivasha Town". The skills I have acquired will help me in doing further research in different areas and varied topics.

I am particularly grateful to all academic and support staffs have provided exceptional support in various ways including but not limited to; proposal and thesis format and writing, seminars on relevant topics, and follow-ups to ensure positive progress. The assistance provided by my colleagues and friends who helped, especially in data collection and analyses which took a considerable amount of their time, is greatly appreciated.

DEDICATION

I would like to dedicate this paper to my parents (Janis, Julia and Gerald). You all believed and invested so much in me even when you owned so little of your own. For what I claim as my achievements, you have achieved much more through your dedication to excellence and the opportunities you provided for me. I miss you and cherish the memories we had together, especially my mother Julia. Be blessed.

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ACRONYMS AND ABBREVIATIONS

ATMs	Automated Teller Machines
CCK	Communications Commission of Kenya
MFIs	Micro-Finance Institutions
SMEs	Small and Medium Enterprises
SPSS	Statistical Packages for the Social Sciences

TERMS AND DEFINITIONS

Commercial banks: used according to the common usage of banks to mean institutions in Naivasha that provides financial services, such as accepting deposits, giving business loans, mortgage lending, and basic investment products like savings accounts as defined in the Banking Act of Kenya Chapter 488 (2009).

Mobile Money: refers to use of mobile phones (mobile phone money services) to conduct financial transactions such as sending and receiving money, paying for goods or services, purchasing airtime, remittances, accessing bank accounts to make deposits or withdrawals, viewing financial statements for bank accounts and/or mobile money and any other closely related service. It is therefore related to a combination of mobile telephones and financial services as adopted by World Bank (2010) to conduct financial transactions as outlined above.

Mobile Commerce (m-Commerce): is limited to the use of mobile money functions available to purchase or sell goods in SMEs business transactions. This concept has been applied according to the definition by Must & Ludewig (2010).

Small and Medium Enterprises (SMEs): are defined according to their staff headcount - often taken to be less than 100 members -) since that information is readily available. This, therefore, refers to the literal definition of SMEs according Waweru (2007) that incorporates micro, small and medium enterprises.

SMEs Performance: In this study, SMEs performance will be used to refer to sales, business transactional activities that reflect on sales like purchases through mobile money services, and accessibility of financial services like savings and micro-credits (loans). These performance measures are based on Rahmat, Megananda and Maulana (2006) study findings.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Mobile money, also referred to as mobile payment, mobile money transfer, and mobile wallet, generally refers to services operated and performed from a mobile device such as mobile phone, credit or debit cards. It is further clarified as the intersection of both banking and telecommunications services (World Bank, 2010). It involves a diverse set of stakeholders from both mobile phone operators and financial service institutions.

Mobile money services have been defined as electronic money accounts that can be accessed via mobile phone (Zutt, 2010). Mobile money services offers secure and convenient means for banked and unbanked people to send and receive money with mobile phones at home and abroad; anywhere at any time. It contains features such as mobile wallet, mobile transfer, airtime transfers and mobile banking. Mobile wallet enables the subscriber to receive, store, send or pay money anywhere any time. Money transfer options means that one can send money from their mobile money account to a different subscriber anywhere anytime, which is similar to airtime transfer, where one can purchase and send airtime to another subscriber within the same network. Mobile banking works closely with banks to provide banking services to subscribers of mobile money.

Use of mobile phone for financial transaction started with introduction of prepaid mobile phone services that targeted low income earners who desired more anonymity than post-paid phone subscribers. Unlike post-paid mobile phone services, prepaid subscribers could simply walk to a shop, purchase small denomination airtime, key in the details and make their desired call. This segment of mobile phone users soon became large enough to be a target for micro-payment features since majority had little or absolutely no interaction with banks. The main reason this segment came into focus and the need to develop financial

services that target them was outlined by Wishart (2006) as part of the drive towards a cashless transaction environment that presents advantages such as: reduction of fraud, reduction of untraceable criminal activities, reduction of cash handling costs, and less reliance on cash-in-hand when a need arose.

Must and Ludewig (2010) trace the rise of mobile money to the rapid and worldwide penetration of mobile phones back to 1999. However, mobile phone enabled commerce (m-commerce) or services may have started as early as 1997 when mobile phone enabled Coco Cola vending machines and mobile phone banking services were introduced in Finland. Earlier documented mobile commercial services include a Philippine mobile operator's launch of SMART money in 1999. By the year 2000, mobile money technology had started to spread to include several other countries. Later GLOBE Telecom launched G-cash in 2004 (Wishart, 2006). Bharti Airtel launched their mobile money transfer pilot project in India in 2007 (Bosi, Celly and Joshi, 2011).

Wishart (2006) outlined African networks that provided mobile enabled commerce (m-Commerce) which included MTM banking, CelPay, Fundamo and M-Pesa but the list has grown significantly since then. MTM banking was a collaboration between South Africa Standard Bank and mobile operator MTM. CelPay was a system developed by Celtel and First Rand Bank of South Africa. Fundamo was an m-Commerce software provider in South Africa. M-Pesa from Safaricom was in the pilot phase in only Kenya at the time.

A decade ago, mobile money for the unbanked did not exist in Africa. In fact, mobile phones had only started their penetration into the region. Remarkably, however, by 2011 over 60 million customers had availed themselves for mobile money subscription (Davidson and Penicaud, 2011), a picture of outstanding growth compared to other technologies and their adoption. The work of Davidson and Penicaud (2011) is one example of research on mobile money services conducted globally. Wishart (2006) and the work of Jenny and Isaac

(2010) concentrated on Africa and they explored the history of mobile money services in different countries. Jack and Suri (2011) researched on the effect of reduced transaction costs and effect on household consumption in Kenya complementing the earlier research findings from Hughes and Lonie (2007). This data revealed that research on mobile money globally, regionally and locally is recent due to novelty of this technology.

In Kenya, the first mobile money service was launched by the now defunct KenCell and was called Sokotele. The service was poorly marketed and did not get significant traction. In March 2007 M-Pesa was launched by the biggest mobile operator, Safaricom and soon took over the market. In the initial stages of mobile money in Kenya, the service enabled subscribers to send or receive money to and from other mobile phone users. Over time more features have been added while other mobile phone operators have included mobile money as a service. Since the broad acceptance of mobile money in Kenya through Safaricom's M-Pesa platform, the service has been rolled out by other mobile operators (Appendix 1).

The current mobile money providers in Kenya are Safaricom's M-Pesa, which was introduced in March 2007; Zain's Zap which was introduced in January 2010 but later rebranded to Airtel Money following the takeover of Zain by Airtel, YU-Cash started in December 2009 by Essar while Orange Money's Iko Pesa was launched in November 2010 by Telkom Kenya. M-Pesa is by far the largest accounting for more than 90% of mobile money subscriptions.

Since 2007, mobile money usage has grown rapidly. By December of 2010 the estimated value of person-to-person transactions alone exceeded Kenya shillings 38 billion per month, which is more than 20 per cent of Gross Domestic Product (GDP). The number of mobile money customers exceeding 13 million by mid-2010 (Zutt, 2010).

Communications Commission of Kenya (CCK) 2011/2012 report indicates that Kenya has a total of 26.49 million mobile phone subscribers with 18.4 million of them subscribing to mobile money services. The total number enrolled in mobile money services accounts for approximately 48% of the entire Kenyan population, or 69.5% of the total mobile phone subscriptions.

While initially mobile money services were publicized as money transfer service, Hughes and Lonie (2007) proposed that services such as bill payment, salary payment and local and international remittances could be included in mobile money. When literature was reviewed in 2012, all these services had been realized and surpassed. These added features and services are viewed by financial analyst as providing banking services to the unbanked.

Through the pay bill features available through mobile money services it is now possible to pay for electricity and water, digital television, parking fees and several other services. This is a rising trend among many consumers especially those in urban settings. The use of mobile money to pay bills is chiefly among wealthier, urban customers (Zutt, 2010). Data is not adequate to demonstrate how much mobile money is used for other consumer transactions such as market purchases. For small businesses, mobile money has the benefits of convenience, support, cost, satisfaction and security.

The types of financial services provided through mobile money have been grouped by World Bank (2012) into mobile finance, mobile banking and mobile payments. Mobile finance includes credit, insurance and savings services. Mobile banking can be transactional or informational. Mobile payments range from payment made from person-to-person, government-to-person, and business-to-business. These types of financial services have traditionally belonged to commercial banks or microfinance institutions. The report by CCK indicates that by September 2012, a total of 56.7 billion Kenya shillings were deposited through mobile money services, which would have not been transacted, or would have

followed mainstream financial institutions. This overwhelming uptake might be attributed to subscriber preference for mobile money transfer because it is affordable and accessible to low income earners who form the bulk of the population. Such services can be used by Small and Medium Enterprises (SMEs) in their business operations, since some of them may not be able to afford financial services through banks.

Although the definition of SME seems to differ significantly across countries or publications, in most cases, the definition commonly uses the number of employees, value of assets, value of sales and size of initial capital and turnover. SMEs are, therefore, defined as "Businesses with six to 50 employees or with annual revenues less than 50 million Kenyan shillings" (FSD Kenya, 2008). It is important to note, however, that there is no standard definition of SMEs in Kenya.

SMEs have been clearly identified and appreciated as drivers of economic activity in Africa and the world (FSD Kenya, 2008). Their growth generates increased employment opportunities, wages, goods and services and increased resources that contribute to increased tax revenues. It is generally recognized that SMEs face various challenges which affect their growth and profitability and hence, diminish their ability to contribute effectively to sustainable business growth. Some of these challenges include but are not limited to lack of managerial skills, highly competitive environment, poor debt collection (Bowen, Morara & Mureithi 2009), technological changes, regulatory challenges, lack of affordable credit and financial services to facilitate business transactions and business growth. For example, customer and market paired with resources and finance played an important role in ensuring the SMEs business success according to the study findings by Islam, Keauchana, and Yusuf (2010). Equipping entrepreneurs with technical and business skills, friendly investment climate and implementation of sound SMEs policies are some of the areas that can be advocated for to support SMEs in Kenya.

Mobile money services can be used to address some of these challenges. As outlined by World Bank (2012), mobile money services are often linked to financial inclusion and therefore applications extend financial services to the unbanked or those preferring cheaper financial services. For example a service like M-Pesa is considered one third to one half as expensive as alternative systems (World Bank 2012).

The range of services the SMEs could benefit from using mobile money technology include mobile money transfers, mobile ATMs, mobile ticketing, mobile vouchers, loyalties and coupons, content purchases and deliveries, information services, mobile banking, mobile purchases, and mobile marketing and advertising. More recent examples include the M-Kesho product, a partnership between Safaricom and Equity Bank to provide micro-savings accounts, credits and insurance.

1.2 Mobile Money Variables Attractive to SMEs

The existing variables from research conducted by other scholars include increased accessibility, low cost, convenience, security, satisfaction and support (Mbogo, 2010) efficiency and reliability. Increased accessibility has been shown from data provided and discussed in the preceding section. With mobile money services achieving critical mass, it is likely that non-users are being encouraged by those already in the system to adopt it.

The transaction cost is considered lower than any other alternative. As outlined by Zutt (2010), the clearest direct benefits of mobile money is greater convenience, faster speed, and lower cost of transferring funds. This becomes apparent when a comparison is made with traditional methods of sending and receiving money such as; through public transport, through friends, or through Posta Pay Services. All these traditional methods outlined have far more risks compared to mobile money systems which are generally cheaper than these alternatives and both the sender and the receiver are given instant information regarding the transaction.

The uptake of mobile money services benefits SMEs in various ways primarily by moving toward cashless communities as outline above (Wishart, 2006). Mobile money is particularly attractive to SMEs because the services are considered far cheaper than the current alternatives such as Western Union when transferring money from one person to another (Omwansa, 2009). This benefit can be extended to the transfer of money from the buyer to the seller during routine business transactions. This can be achieved in real time since mobile money services are almost instantaneous; similar to cash transactions. Therefore, transaction time is not affected while increasing convenience of not dealing with cash and maintaining almost liquid value of cash within the mobile money service. World Bank (2012) declares that mobile money is considered liquid enough to allow for easy, fast conversion. This is aided by convenient access to agents in various locations to aid in transactions.

The speed and safety of mobile money services has enabled quick and easy transfer of money. This has sparked the growth of various economic activities, especially in the rural areas, through increased money circulation boosting local consumption (Zutt 2010). It is likely that reduced costs and increased efficiently and reliability of the systems have enabled more people to send money to the rural areas increasing economic activities in those places. For example, it is possible for a farmer to receive money to purchase seeds without unnecessary travel during planting season. However, current data is lacking to support such flow. Data is, however, available to confirm an increase in movement of money from the rich to the poor when schools reopen, which is an indication of money being made available for school fees (Zutt, 2010).

The extensive coverage of mobile service providers as outlined above has not only resulted to high rates of convenience, but has made the service effective and reliable as a form to send money with the interface between agents and customers functioning with

minimal complaints from customers. This is even so witnessed as the number of agents continues to increase as more sophisticated banking services are added to the mobile money platform such as M-Kesho, M-Shwari and others. However, these added features will continue to require that the agents have some equipment's and literacy levels to continue support of these functions.

With increased uptake of mobile phone services, more Kenyans have enrolled into a mobile money service. It can, therefore, be argued that most transactions can be performed using mobile money instead of cash. Mobile money provides a service that allows the sender and receiver to obtain information of each transaction making the service transparent. The consistent performance of this service makes transaction data very reliable and most problems arise from input errors from the customer. This feature results in SMEs streamlining their operations to increase efficiency and boost business growth has outlined by Omwansa (2009).

1.3 Challenges associated with use of Mobile Money Services to SMEs

The combination of these benefits makes mobile money attractive to SMEs by leading to higher sales and more profits while reducing personal costs and overheads. There are, however, challenges of using mobile money technology that SMEs have to be aware of. Mobile money is a combination of telecommunication services and financial services; therefore money deposited into mobile money does not accrue interest since the service has not been developed to provide interest on savings. The second challenge is that existing infrastructure to support mobile money technology is still limited in some ways. Mobile money is virtual money (World Bank 2010), and requires interface with cash tellers, agents or ATMs to access actual cash. Thirdly, the perception of safety may make some people opt out of the service. The fear of losing money when one loses a mobile phone could lead to fewer

subscribers to mobile money and therefore limit the number that could benefit from the service.

An important consideration is the trend towards regulation of both mobile phones and mobile money services by the CCK and the move by the government to introduce Excise Duty on mobile money services. These measures have an impact on subscription rates or the benefits that could be realized by SMEs. Additionally, the competitive environments in which both the mobile money networks and SMEs operate dictate the rate at which SMEs enrol into various products. For example, the preference for liquid cash over cashless transaction relates mainly to market conditions such as preference for cash to carry on transaction of the time and the benefits of cash such as the ease perceived in either of conducting transaction anytime without losing value in the conversion from cashless form to cash.

Even with these challenges, mobile money is a potential useful tool in poverty eradication through provision of a secure, inexpensive way to transact (Must & Ludewig, 2010), well suited for SMEs that might have less access to financial services.

Evaluating the impact of mobile money service to SMEs will provide information related to how this service has benefited them and ways it can continue to create options of future business transactions. With the difficulties in measuring performance amongst SMEs simple, visible and measurable tools can be used. Impact can look at enrolment rates into the service for business activities, sales and purchases through mobile money, and access to financial services like loans and savings through mobile money services.

Mbogo (2010) conducted a study in the Nairobi, Kenya where she revealed several valuable findings relating to use of mobile money services and SMEs. This study hopes to find out if similar findings can be described in another urban town in Kenya.

1.4 Statement of the Problem

Mobile money service, designed to help microfinance institutions streamline their operations (Omwansa 2009), has received overwhelming uptake in Kenya since its introduction in 2007. This success is attributed to the service being affordable and accessible (Mbogo 2010) including low income earners. The technological invention is considered easy to use yet efficient and reliable with the potential to extend financial services to the unbanked or those preferring cheaper financial services. It is an appropriate technological invention for SMEs that continue to face challenges related to limited affordable and accessible financial services to support business operations.

SMEs needs for payment and transactional services are not always well served by conventional banks since they do not always find it easy or cost effective to adopt a full-feature package for banking services (Higgins, Kendall & Lyon, 2012). Mobile Money can be used to raise efficiency and boost business growth through cheap, efficient and reliable money service support systems that reduce the need for cash transaction and the risks associated.

Literature reveals that the mobile money is faster, cheaper, more reliable, and safer (Jack & Suri 2011). The benefits of cashless transaction including less opportunity for fraudulent and criminal activities, and mobile money technology (Wishart 2006) have increased adoption rates among SMEs in the capital city (Mbogo 2010). The main literature gaps exist in revealing whether mobile money technology has contributed to SMEs performance through increased sales, increased profits, loans accessibility and savings and if this is limited in geography.

SMEs however have to contend with current mobile money challenges which include inability to offer interests on savings, possibility of fraud and need for accessible cash tellers or agents. Additionally, SMEs might not be comfortable with mobile money security

features due to cell phones being prone to theft. Despite these challenges, overwhelming uptake of the service is at 48% according to CCK 2011/2012 Report.

1.5 General and Specific Objectives of the Study

The general objective of the study was to determine the impact of mobile money services on SMEs in an urban town in Kenya in supporting business operations like sales, purchases, savings and accessing loans.

The specific objectives are:

1. To investigate current awareness and uptake of various mobile money services amongst SMEs in Naivasha Town.
2. To determine if mobile money services uptake had any impact on SMEs growth through increased sales, savings and loan accessibility in Naivasha Town.
3. To establish if mobile money service qualities of low cost, convenience and accessibility resulted to increased SMEs performance in Naivasha Town.
4. To establish if mobile money services are considered efficient and reliable by SMEs in Naivasha Town.

1.6 Research Questions

1. Which types of mobile money services are SMEs currently aware of and make use of for business transactions in Naivasha Town?
2. How have mobile money services contributed to the SMEs sales, savings and loan accessibility in Naivasha Town?
3. How have mobile money services attributes of low cost, convenience and accessibility resulted in increased SMEs performance in Naivasha Town?
4. How do SMEs in Naivasha town rate mobile money service efficiency and reliability in support of their businesses transactions?

1.7 Significance of the Study

It is important to explore usage rates of mobile money services, the nature of transactions, and their contribution to the SME industry in Kenya. SMEs are responsible for approximately 80% of employment according to the Economic Survey (2011). The need to focus on affordable financial inclusion methods that contribute positively to business performance in areas like increased sales, increased use of mobile money services to purchase business products and supplies, and savings and loan accessibility is very significant.

The results of this study will present valuable information to mobile phone companies that could develop or augment available products with special focus on SMEs. The SMEs operators or owners will benefit from knowledge of financial services available through mobile money and how they can use them to positively impact their business.

SMEs interest managers from different levels including regulatory bodies. Since SMEs in Kenya and many other countries are the main source of employment, economic growth and activities which affect day-to-day functions of a manager, this subject is relevant to students undertaking business administration programs at higher education levels who need to acquire skills on how various financing models and financial services impact on business. Appropriate regulatory bodies could use the findings to enhance service delivery and ensure that the SME sector continues to benefit from innovations such as mobile money technology.

1.8 Scope and Limitations of the Study

This study will employ scientific means to arrive at the study conclusion, but the findings will reflect findings Naivasha Municipal Town in Kenya. The findings from this study may, therefore, not be open to generalization unless similarities can be identified in other regions.

CHAPTER TWO

LITERATURE REVIEW

2.1 The Impact of Mobile Money

Global research on mobile money has focused on the impact in developing countries revealing that access to financial services through mobile money leads to poverty reduction and financial inclusiveness (Must & Ludewig, 2010). Some of these studies reveal that mobile money has proved to be a scalable method to provide financial services in developing countries, with data from several African countries including the work of Must and Ludewig (2010) verifying this argument. Several reasons have contributed to this state including easier and more affordable ways to send remittances, increasing the reach and affordability of micro-loans, decreasing costs of savings among other services that are required by SMEs.

According to World Bank, (2012), increased mobile phone penetration in developing countries is correlated with a 0.8% increase in economic growth. Mobile money penetration has, therefore, had its own contribution especially in relation to financial inclusiveness. Considering there are over 100 deployments of mobile money systems in developing countries, with around half in Africa alone the service has a clear target population.

Mobile money has developed a wide range of services that can be used to benefit users in different ways. The services offered through mobile money in Kenya allow users to benefit from a variety of financial services and transactions. According to InterMedia (2010) a majority of subscribers (99%) only use mobile money service to send or receive money; the remaining 1% using it for additional services including arranging for loans or credit. M-banking in particular is a service available through mobile money that has been the potential to bring basic banking and electronic services to unbanked consumers (Anderson, 2010).

TABLE 1
Summary of Mobile Money Services Available in Most Networks in Kenya

Mobile Money Services	**Available with**
Send (transfer) money	All
Buy Airtime	All
Buy Goods and make payments	M-Pesa and Airtel Money
Corporate solutions	M-Pesa
Pay bills	All
Bulk/Batch payment	M-Pesa and Airtel Money
Bank transactions including statement requests	All
Fees Payment services	M-Pesa
Deposit cash to your account	All
Withdraw cash	All
Balance inquiry	All
Transaction History	All
Mobile money and bank joint packages	All
Mobile money and debit card services	M-Pesa, Orange money
Request for full statements	Orange Money

Details available in Appendix 1

Mobile money still impacts on individuals and households in various ways. Donovan (2011) looked at M-Pesa in Kenya in an attempting to find the impact it had on human freedom. He concluded that a relationship of networks of social interactions, the need and desire to coordinate financially with friends, relatives and businesses, and progressive desertion of other alternatives like banks and Western Money Union lead to a form of power that acts on all Kenyans both users and non-users of M-Pesa. In addition, mobile money significantly impacts on the ability of a household to spread risks as a result of reduced transaction costs compared to households without mobile money who are likely to suffer a drop in consumption when hit by a negative income shock (Jack and Suri, 2011).

Mobile phones can serve as a tool for economic development. They can improve consumer and producer welfare and larger economic development in developing countries, but the impact of m-money systems on microeconomics and macroeconomics outcomes is a rich area of research (Jenny and Isaac, 2010).

2.2 Small and Medium Enterprises in Kenya

Small and Medium Enterprises (SMEs) have economic significance in Kenya, and requires attention from policy makers. According to the economic survey of 2006, the sector contributed to over 50% of new jobs created in the year 2005. In 2011, the informal sector created approximately 80.6% of the total jobs during this period according to the economic survey (KNBS, 2011). SMEs constitute a significant portion of the private sector, in that they participate in overall investment, production of goods and services, taking risks, perceiving and utilizing new economic opportunities and developing business in the economy (Renny, 2011).

SMEs in Kenya are faced with various challenges among them: lack of credit facilities, working capital (Bowen, Morara & Mureithi 2009) and other financial services. Factors that contribute to the success of SMEs could help entrepreneurs in ensuring they employ the right mix of such factors from the onset of the enterprise and these need to be looked into. For example, Chittithaworn, Islam, Keawchana & Yusuf (2010) found that among other factors; availability of resources and financial support are significant determinants of the business success of SMEs in Thailand. Access to financing is directly related to SME success. Other factors include strong entrepreneurial skills, access to loans and being change agents through microfinance services (Siringi, 2011).

The reason why a major segment of population and SMEs fail to have sustained access to finance include the physical distance to financial service providers such as banks, or failure to understand, interpret, select and use financial contracts including the cost of

banking services (Balkenhol, 2007). Similarly, lack of tangible marketable securities of the credit seeking SME owners and individuals contribute most to inaccessibility of SMEs to financing through banks.

The financing sector is one of the main determinants in increasing business performance for SMEs as seen in any other business. However, accessibility to financial services remains a big hindrance to those who need financing due to lack of collateral, and the high cost of servicing loans and credit facilities. Long-term relationships with clients, including loans on savings are options used by Microfinance Institutions (MFIs) to develop loan products that are more affordable. Both these services may not be options for the unbanked.

Amongst the various interventions to support SMEs, few areas have received as much attention from researchers as the impact of MFIs on SMEs. MFIs mostly provide services geared toward addressing the challenges of affordable financial services and systems to support SMEs. Rahmat, Megananda & Maulana (2006) explored the impact of MFIs on SMEs performance and found that MFIs have a positive impact on SMEs performance as indicated by sales, even though regional characteristics of the SMEs also played a role in determining its business scale.

With respect to performance measures for SMEs, this section continues to be a rich area of research. Among published studies, financing through loans is aimed at increasing performance (Rahmat et al, 2006), and loan accessibility is one method the studies can use to determine business growth and performance. Since mobile money services provide accessible means for savings through collaboration with mainstream banking institutions, this can be used as an indication of potential collateral and relationship building towards loans accessibility. The resulting performance indicator can be assessed using sales and profits.

2.3 Mobile Money Services and SMEs

This area has only started receiving attention from researchers. Surveys done in less urban areas of Ghana on business related calls and expenses related to such calls was conducted by Frempong (2009) showing that mobile phone ownership increased access to markets, contributed to efficiency in conducting business. However, this study revealed limited capacity to operate other financial services that are possible through the system and related to mobile money services such as sending and receiving money. The author made note of lower mobile money service uptake even in the commercial and metropolitan areas of the Ghana and therefore such findings may not be extrapolated to a country like Kenya.

M-Pesa from Safaricom has been studied in detail by Mbiti & Weil (2011) who observed certain patterns of usage. Even though the M-Pesa is not used for money storage, it has this potential even though the primary purpose has been to send and receive money. Access and use of more sophisticated financial services through mobile money services like savings, credit, and insurance could prove more beneficial (Donovan, 2011) even to SMEs.

Mobile money services can also be viewed as a variation of branchless banking with the potential for delivery of financial services outside conventional banking. This observation made by Wambari & Mwaura (2009) can have a number of useful benefits to SMEs which include access to financial services like making deposits and savings, accessing the formal banking sector through mobile money services and many others.

Closer to home, the work of Mbogo (2010) set out to investigate success factors attributable to the use of mobile payments by micro business operators. Mbogo (2010) tested different variables including accessibility of mobile payment services, transaction costs, convenience and security, perceived support from mobile payment operators, satisfaction with mobile payment services, and actual usage of mobile payment and business performance. The study results revealed positive correlation with the behavioural intention to

use the mobile payment services and associated actual usage but low correlation between perceived support and actual usage.

2.4 Mobile Money Services and Alternatives

To subscribe to mobile money services a phone Subscriber Identity Module (SIM) card must be purchased and activated in a mobile device. This is followed by creating or registering a mobile money account with the mobile money provider of choice which allows the client to make a cash deposit from mobile money provider agents or receive deposit from other subscribers. The cash deposited creates electronic money credit in the customer's account. Once a deposit is made, the subscriber can send money electronically to another person registered in the same or different network, or withdraw the deposit from a mobile money network provider agent.

Additional features in the mobile phones allows the customer to use the electronic credits for other transactions like paying bills, purchasing goods at shops, supermarkets and virtual stores, purchase airtime, purchase mobile phone services like ring tones and songs amongst other uses. The customers receive a text message on the phone regarding the transaction made, the recipient information for the purchase and the account balance.

It is currently possible to make direct electronic transfers to mobile money accounts from certain banks that have established systems to do so. Network providers charge a fee for transaction which include; a fee from the sender who is initiating the transaction and a fee charged from the recipient when withdrawing or subsequently sending the money to another person.

The growth of mobile money services in Kenya has been particularly dramatic because it has overtaken the banking network in a very short time. This has been made possible through the expansion of financial agents who enabled growth to exceed the traditional banking outlets by a wide margin. For example, by August 2010, M-Pesa had

enlisted 12.6 million customers and nearly 20,000 agents countrywide compared to only 1510 ATMs and 1,030 banks and bank branches (Zutt, 2010). The great number of mobile money agents located in almost all parts of the country has increased the convenience of the service which is one of the attributes that has resulted in increased number of subscribers.

Mobile money has achieved penetration across all age groups which is a phenomenal achievement of new technology unlike others which often focuses on a certain age group. Despite this, older customers are more likely to use the service only to receive money. The usage is highest in subscribers between the ages of 25 to 29 and reduces thereafter. But even amongst the oldest Kenyan (above 65 years), half use mobile money (Zutt, 2010). On the other hand, women are less likely than men to use mobile money, and are more likely to only receive and not send funds, a finding by Zutt (2010). He further notes that in 2009, mobile money was initially concentrated among the wealthy in Kenya but has since grown rapidly to include the poor. Other demographic information related to mobile money usage indicates that it is highest among urban Kenyans, but with substantial penetration among rural residents. As of August 2009, 47% of rural Kenyan adults and 69% of urban Kenyan adults had used mobile money (Zutt, 2010).

The most common use of mobile money has remained receiving money followed by sending money. Other uses slowly gaining pace include purchase of airtime, save money, purchase during traveling, make donations, receive payments, purchase of goods and services, ATM withdrawals, pay bills, and receive or pay salaries/wages. These other uses have gained momentum over time, but do not as yet compared to receiving or sending money. The recent trends are usage of mobile money more to pay school fees, to remit electricity and other monthly bills and recently as means of payment in supermarkets.

Mobile money is quickly taking the place of alternatives methods of sending money previously used. By 2009 for example, mobile money transfer had almost entirely displaced

transfers via the post office and via bus or minibus, which were previously popular methods (Zutt, 2010). The percentage using alternatives like bank transfers, Western Union money transfer, Money Gram and friends has been decreasing significantly and has almost been completely replaced by mobile money services.

Savings money through mobile money is another feature currently being explored. The low number of people willing to save money via mobile money has been due to the lack of interest earned compared to other forms of savings. Thus, the chief advantage of keeping savings in mobile money rather than in cash has been the increased security associated with having the funds in mobile money (Zutt, 2010). Savings via mobile money are expected to grow especially since most mobile networks are increasing mobile phone and bank collaborations that will enable mobile phone savers to earn certain benefits like interests and loans on savings. A good example is the Safaricom and Equity Bank introduction of a form of account called M-Kesho that can be accessed via M-Pesa and pays an interest on savings. Similar products include M-Shwari with is a product between M-Pesa and Commercial Bank of Africa (CBA).

2.5 Mobile Money potential for Financial Accessibility

Accessibility to finances is considered a key determinant to business success. One challenge posed by SMEs is the lack of securities to act as collateral to access finances especially from mainstream financial institutions such as the banking sector. Bank charges that are considerably higher are among the factors that have contributed to low enrolment rates amongst SMEs. Lack of an account with the bank to make savings is a contributory factor limiting the capability to access finances. All the factors have already been discussed elsewhere in the preceding topics.

Is it possible for mobile money services to provide potential financial services to SMEs? Since mobile money allows any subscriber to add credit to his or her mobile account

and store it for later use, some of the features like storage, payments and transfers makes it possible to build additional financial services within the mobile phone technology. Evidence shows that expanding access among the poor to financial services is effective in reducing poverty (Must & Ludewig, (2010). Poor individuals without access to banking services are forced to rely on the informal cash economy like borrowing and family savings, making them more susceptible to risks and lacking means to efficiently save or borrow money.

Mobile money services allow small retailers identified as mobile networks agents who operates from various places like small shops, kiosks or agent shop to act as bank branches by charging a small fee for each transaction. These mobile money fees are significantly less than fees charged by traditional services such as the bank and Western Union. It is actual fact that many people who previously did not have access to financial services may gain access to those services through mobile money as they receive or send money for the first time.

Mobile money services provide the benefits of financial accessibility through various ways. In addition to providing an inexpensive way to transfer funds, mobile money can improve access to savings mechanism, and facilitate the purchase of insurance (Must & Ludewig, (2010) among other uses. When savings are made to a bank via mobile money, it provides a further mechanism to borrow funds based on savings. Users can deposit funds in their mobile money accounts, save them for later use, and withdraw or transfer them via an agent or an ATM (Must & Ludewig, 2010). Insurance on the other hand can help SMEs owners access various benefits previously unavailable to them like retirement benefits such as the National Social Security Fund (NSSF), health insurance like the National Health Insurance Fund (NHIF), business insurance and many others already seen in Kenya.

Access to small loans could enable people to pursue activities that would not only sustain their livelihood but also bring their families out of poverty. The concepts that relate to the functioning of microfinance institution can also relate to SME through use of mobile

money services. Savings is the complement to credit; both enable people to accumulate capital and smooth their consumption during times of need such as unemployment or drought (Must and Ludewig, (2010). With credit, SMEs can acquire loans on savings and spread their loan repayments over time. It should be noted that savings is a form of capital accumulation which over time allows SMEs to expand their business potential and capacity.

2.6 Summary and Literature gaps

Literature has shown that mobile money may overcome the challenge of long distance payments and storage of money, but still pose challenges related to withdrawal charges and possibility that money is not invested in projects and businesses. The main gaps exist in systematic assessment of the impact of mobile money especially on SMEs in Kenya. Even though current research suggests that mobile phone coverage and adoption has a positive impact on risk reduction, market improvement, coordination amongst firms and labour market (Jenny and Mbiti, 2010), empirical evidence is still limited.

Variables that make mobile money services very attractive leading to increased uptake include low transactional cost compared to alternatives (Zutt, 2010 and Omwansa, 2009), increased accessibility following increasing number of agents and subscribers countrywide (Zutt, 2010), has provided the services reliably over time, and has the potential to provide financial services to SME (Must &Ludewig, 2010). It has built in features to provide financial services instantaneously making it a possible tool for real time transactions (Zutt, 2010), adding to the efficient and reliability of mobile money service including the messaging system that allows the sender and receiver to obtain transaction information immediately after the transaction with only few errors reported during transactions mostly arising from the customer as they input transaction information.

Challenges affecting SMEs have been outlined even though the information relied on is often anecdotal. Most studies have concentrated at demonstrating the impact of MFIs on

SMEs as previous discussed. Mobile money, which can be viewed as a form of branchless banking, has the potential to provide a system to increase business savings and access business loan products through mobile money systems and the banking sector; M-Shwari and other similar products could have positive influence on SMEs performance. With regard to actual business transactions, mobile money services can support increased sales directly through payment service functions built into the system, purchase of business supplies and increased ability to make loan remittances. These features have not been looked at in study settings, but business product functions from mobile service providers have alluded to their possible inclusion.

This study therefore aims to address some of the existing gaps in previous studies. The study postulated that services provided through mobile money have an impact on the day to day business transactions as outlined above and possibly leads to increased business activity through sales and profits. The adoption of mobile phone technology and mobile money has been confirmed in previous studies even though information on adoption rates amongst SMEs is lacking. The aim is, therefore, to find out if mobile money has influenced business activities through savings, loan accessibility, increased sales and possible increased profits.

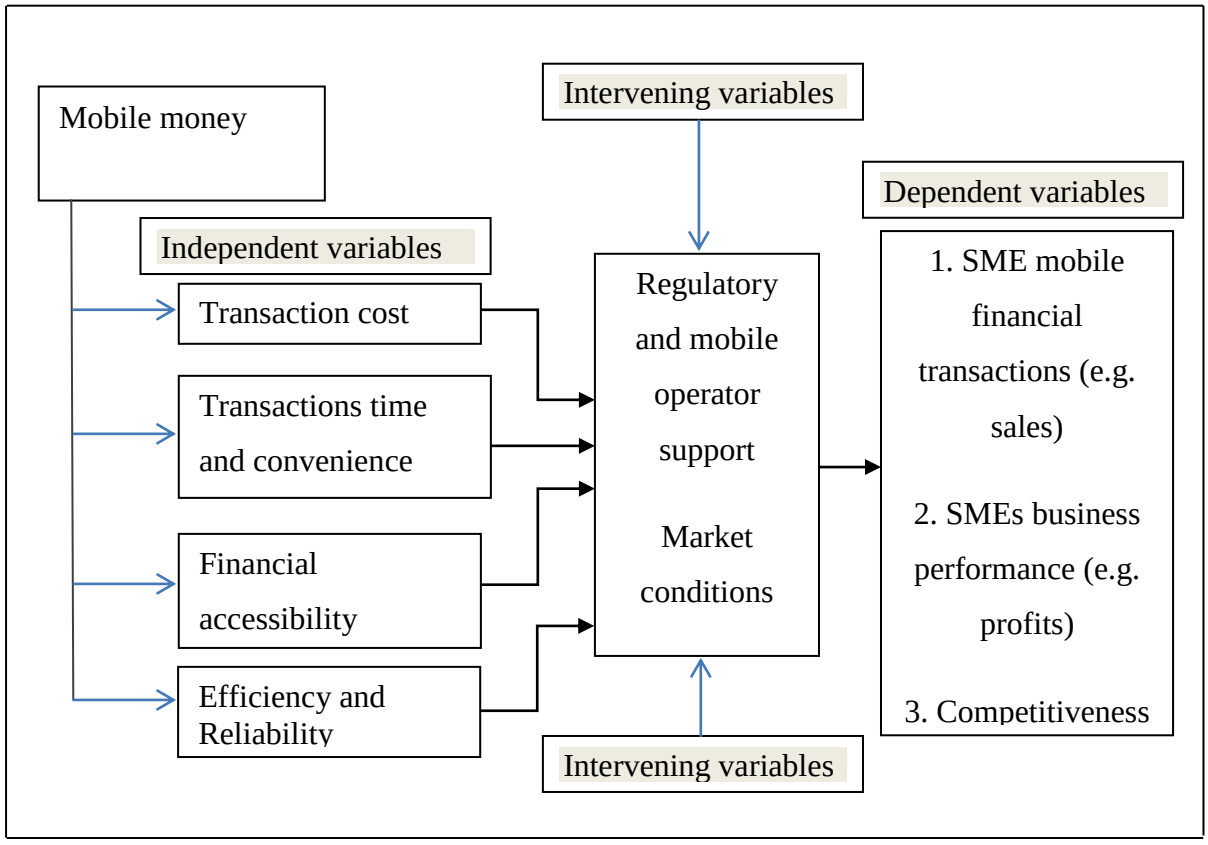
2.7 Theoretical and Conceptual Framework

The impact of mobile money technology is presented in the conceptual framework below. The usage behaviour adopted in this study includes the range of services preferred by SMEs and the reason why they prefer those services. The conceptual framework model adapted for this study, as depicted in the figure below, highlights that mobile money services will influence some important pillars of business financial operations due to reduced transactional costs, reduced time to complete transactions, increased financial accessibility, and increased efficiency of mobile money services.

Transaction costs, transaction time, and financial accessibility and efficiency are products of the different categorization of mobile money financial services according to World Bank (2010) which will increase the attractiveness of mobile money services to SMEs resulting in increased enrolment rates, increased transactions through mobile money platforms and the resulting benefits like increased micro-credit accessibility, increased sales and increased profits.

Since mobile money presents a cheaper option for various essential services like banking, financial and payment services, this model presents the argument that increased transactions arising from mobile money lead to increased business activities which eventually leads to improved SMEs performance and competitiveness.

FIGURE 1
Mobile Money Impact Model Conceptual Framework



This figure demonstrates the relationship between independent variables and dependent variables within market and mobile operator regulatory environment as the intervening variables.

2.7.1 Independent variables in the conceptual framework

The independent variables used in this study include transaction costs, transaction time and convenience, financial accessibility efficiency and reliability. These variables are discussed further as follows:

Transaction costs

Mobile money services are considerably much cheaper than other money transfer options such as Western Money Union (Omwansa, 2009). Mobile money is considered up to 19% cheaper than banks by international standards (World Bank, 2012), with low transaction costs favouring formal and informal money transfer. When transfer cost is low, the saving is either passed on to the customers, or translates to money that can be kept by SMEs and contribute to profits.

This research attempted to ascertain if lowered transaction costs contributed to the impact of mobile money transfers on businesses, and in particular, if it contributed to increased use of mobile money services amongst SMEs in Naivasha Town.

Transactions time and convenience

Mobile money is considered liquid enough to allow for easy or fast conversion with minimal loss on value compared to other assets that SMEs might own (World Bank 2012). This proves to be an important element in time of crises, when money stored in mobile money can easily be converted to actual cash or used for business transaction directly without converting into cash. Additionally mobile money can be transacted anywhere anytime without the need to travel to an agent, unless the need to withdraw or deposit cash arises. Even so, mobile money agents, especially M-Pesa are conveniently located in many towns.

The study therefore attempted to verify if reduced transaction time is a factor that lead to increased mobile money subscription and if it contributed to increased SME mobile money transactions.

Financial accessibility

Mobile money increases financial accessibility for both the banked and the unbanked. By early 2007, 38% of Kenyans had no access to any form of financial services (Omwansa, 2009). This might have contributed to rapid mobile money penetration in Kenya. The lack of financial services means that the poor cannot efficiently save or borrow money (Erickson, 2010). This access allows SMEs to save which translates into poverty reduction or increased business performance. Increased savings, even via mobile money services increases the potential for the SMEs to secure financing that contributes to business growth.

Mobile money has significantly increased the accessibility of financial services to the poor in Kenya. It was interesting to find out if this was true for SMEs in Naivasha, and if increased accessibility to financial services contributed to increased SMEs mobile money transactions.

2.5.1.4 Efficiency and reliability

Omwansa (2009) states that mobile money was originally designed to help microfinance institutions streamline their operations, raising efficiency and boosting business growth. Mobile payment platforms allow for the sender to immediately receive confirmation data of the recipient as the receiver is getting the payment. This information is stored within the phone short message service (SMS) storage option allowing for future retrieval and tracking if the need arises. Additional information services that can be made through mobile money include requests for and viewing of bank statements, requesting for bank balances and many more.

The study therefore explored if increased efficiency from using mobile money services is an important factor, and if it had any impact on SME mobile transactions in Naivasha town.

2.7.2 Dependent variable

This study argued that reduced transaction costs, reduced time to transact, increased financial accessibility and increased efficiency ultimately led to increase SMEs financial transactions through mobile money. These variables operate within the framework of regulatory institutions and market conditions.

Available data from World Bank indicates that increased penetration of mobile money especially M-Pesa has made Kenya financial transactions up to 20% of National GDP (World Bank, 2010). This effect can be replicated in the SME industry. With increased financial transactions, more money is spent on business transactions, giving SMEs increased accessibility to financial services for savings and micro-credits. These services have a net effect of improved SMEs business performance and competitiveness.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter outlines the method that was used to undertake this study. This chapter will present the research design, time and place of the study, sampling procedures, sources of data, sample size, analytical procedures and the questionnaire to be used in data collection.

3.1 Research Design

The study is exploratory in nature, attempting to understand how SMEs have made use of mobile money services and impact accruing from such uses. This research attempted to answer the research questions as they occur in their natural environmental conditions.

A five-point Likert Scale survey questionnaire was used to obtain the data. The intention was to determine public opinions about mobile money, and discover how those aspects impacted on the SMEs industry (Cooper & Schindler, 2008).

3.2 Time and Place of the Study

This study period was proposed to begin in January 2013 or after the proposal was accepted by the school Business and Public Management. The study period was one month from the time of inception.

Data was collected in Naivasha Municipality; a market town in Rift Valley Province of Kenya. The town is not considered a city in Kenya, but classified as an urban or municipal town. The selection of Naivasha Municipal Town was identified through purposive sampling for convenience from 24 towns and 31 municipal towns in Kenya. The 3 cities (Nairobi, Mombasa and Kisumu) and provincial headquarters were not considered for this study.

3.3 Sampling Procedure and Sources of Data

Study population consisted of randomly selected SME owners or managers in Naivasha Town and the unit of analyses was the SMEs in Naivasha town. The sampling frame was the list of businesses registered in Naivasha Municipal Council. SMEs were stratified into small, medium, large and others; a categorization adopted by the municipal council of Naivasha. The sample size was calculated using Fishers Formula for sample size less than 10,000. Proportionate sample sizes were obtained from each category except large businesses.

A list of registered SMEs was obtained from the Municipal Council of Naivasha to constitute the sampling frame. The sampling frame was records obtained from Naivasha municipal council licensing office and were composed of those businesses that have renewed their licenses in 2012. The sampling frame was drawn by the municipal council and consisted of the businesses within the central business unit on Chotara Road and Biashara Street where most of the SMEs were located and information available from the Municipal Council of Naivasha.

Using the search engine from the Naivasha Municipal Council computer database, the researcher identified 263 businesses located in the central business areas, and the main streets. Using online calculator adapted from creative research systems 2012, the sample size contained 113 respondents distributed as follows;

TABLE 2
Sample Size

Type of Businesses	Population	Proportion	Sample
Medium	120	0.46	55
Small	87	0.46	40
Others	40	0.46	18
Total	247	0.46	113

The categorization of businesses in Naivasha as medium, small and others was according to municipal council categorization. The random sample was generated using computerized (excel spread sheet) random sampling features available in Office 2007 software and applied to the categories above.

3.4 Data Collection Procedure

The study utilized data collected in the field. Secondary data was used in literature review to clarify gaps existing in literature. Primary data was collected by researcher to fill in identified gaps. Survey method was used to collect data from respondents using questionnaires. The questionnaire had guidelines on how to respond to each question and administered by trained data collection officers to ensure errors were eliminated in the field and increase response rate.

On acceptance of the proposal, the study questions were converted into research data collection tools i.e. questionnaires. Trained data collection officers were contracted to collect data from the field using the sample codes. The purpose of using data collection officers was to explain any question that seemed difficult to the respondents since it was primarily explorative in nature. The aim was to collect 10-15 responses from the field per day. The estimated period to collect data from 113 respondents was, therefore, 10 days. Regular working hours (8a.m. to 5p.m.) from Monday to Friday were preferred for administering the questionnaire to capture the maximum number of business owners.

The questionnaire contained background information including respondent demographics, details related to mobile money, information about SMEs and how these SMEs utilize, and rate mobile money services. A sample data collection tool was attached to an introductory letter and the explanations on how to respond to each question.

Data was collected from sampled respondents and stored safely in research folders, which were only accessible to the researcher for the purposes of this study. As a requirement all data is stored in a secure location to preserve confidentiality.

3.5 Analytical Procedures

Primarily quantitative techniques were used to analyse the data collected. These methods included both descriptive methods and inferential statistics. Data collected was first edited to detect and eliminate errors and omissions. This process was done at the same time as data collection in the field. It was then coded according to categorization for entry into computers for data analyses and entered into the computer.

For the analysis, Statistical Packages for the Social Sciences (SPSS) and Microsoft Excel statistical packages were used. A data analyst was requested to develop the SPSS data entry templates supervised by the researcher. Once the questionnaires were checked for completeness and correct recording, it was then entered into the developed database for subsequent analyses. The researcher validated entries through regular checks to ensure data was recorded accurately. Data cleaning was then done after all the entries.

To demonstrate how variables related to data collected, coefficient of correlation will be used to find out whether dependent variables of transaction cost, transaction time and convenience, financial accessibility and efficiency and reliability are correlated with SMEs performance. Multiple regression analyses will be used to determine whether the four independent variables have any significant effect on SMEs performance.

The coefficient of determination, (r^2) is the square of the sample correlation coefficient between outcomes and predicted values. As such it explains the extent to which changes in the dependent variable can be explained by the change in the independent variables or the percentage of variation in the dependent variable (growth of SME's) that is explained by all the four independent variables.

Qualitative analysis formed a lesser method that was used to analyse the challenges experienced while using mobile money service.

3.6 Data Presentation

Findings from this study were be summarized using descriptive means like percentages, means and averages for most of the findings and presented in tables and graphs. Coefficient of correlation and multiple regression analyses results were presented using model tables, formulas and interpretation of the findings. Study findings were further discussed in detail to provide the basis for the conclusions and study recommendations.

3.7 The Questionnaire

The questionnaires were administered to those SME owners or managers possessing a mobile phone and were already registered for mobile money services.

Section A composed of the respondent demographics like age, gender and position in the business. The name of the respondent was optional. This section was aimed at describing respondent characteristics in relation to ownership of business. This included gender in relation to ownership, the age of those responding and if any of these factors had any relationship to subscriptions to mobile money services and the type of services preferred.

In Section B, the study investigated the business characteristics including the type of business, type of business ownership and the size of the business in terms of turnover, number of branches, number of employees, and growth. The questions in this area were designed to explore the differences between the type of business and possible use of certain services. Ownership was characterized by the three accepted categories i.e. sole proprietorship, partnership of company, in order to explore if certain forms of businesses preferred to use mobile money services compared to others. The size of business with respect to the number of employees and the annual turnover was another factor that could have contributed to certain preferences and was, therefore, explored in this study. This information

was also used to validate study findings to ensure information was only analyzed for SMEs according to the definitions provided earlier.

Section C looked at the knowledge of the respondent with regard to mobile money services available in Naivasha like purchase of airtime and goods, payment of bills, withdrawals from mobile money services, receiving money, checking account balances, and statement of recent transactions. This section was used to explore the knowledge of mobile money services available through mobile money providers and to link these findings to Section D which looked into the usage of those services.

In Section D, respondents were requested to indicate how often they used mobile money services listed above. This was followed by inquiry into the frequency of use of those services and their rating on the importance of those services commonly used to their business. This section intended to relate knowledge and use, frequency of use and the business type, and reasons why they preferred those particular services for their businesses. Additionally, information related to how SMEs interfaced with the banking sector in use of mobile money services was explored.

Section E explored the frequency of using mobile money services by the respondents. Various mobile money attributes that led to use of available services were explored including the opinion of the users with regard to how those variables contributed to use of the mobile money service and business performance. The variables explored included reliability, cost and frequency of use of mobile money service.

Section F looked at how mobile money services contributed to business growth. Respondents were queried on whether they were able to save, access loans services including repayment of loans, pay rent and salaries through mobile money options and if they thought those services were important to their business. We inquired if SMEs thought that mobile

money services has had any impact on the growth of the business especially as reflected through savings, increased sales, increased savings and remittances.

Lastly, section G explored the including the challenges that SMEs were facing in making use of mobile money services, and how they had been dealing with those challenges.

3.8 Pilot Study

For the purpose of the study, the data collection instruments were piloted using ten SMEs in a different town. The pilot results were analysed and information obtained used to adjust data in the final collection instruments. The pilot and analyses of the information obtained was to ensure validity of the study instruments and the study results in address the study objectives.

CHAPTER FOUR

STUDY FINDINGS AND DISCUSSIONS

4.1 Introduction

This study is exploratory in nature and therefore the collected data was analysed using Correlation Coefficient to measure how variables are related to each other in accordance with the conceptual framework. The data collected was analysed according to the categorization and groupings of SMEs in Naivasha. Demographics of the respondents are presented first, followed by the types of business found in Naivasha Town.

The actual mobile money transactions used by SMEs in Naivasha are discussed, including frequency and reasons they prefer the use of these services over other financial services available in Naivasha Town. This is followed by the results on financial accessibility and lastly, the perceived reliability of financial providers.

After the results is a short discussion of the findings and the context from which the results were taken is given. The study provides recommendations based on the study findings.

4.2 Background Information of the Respondents

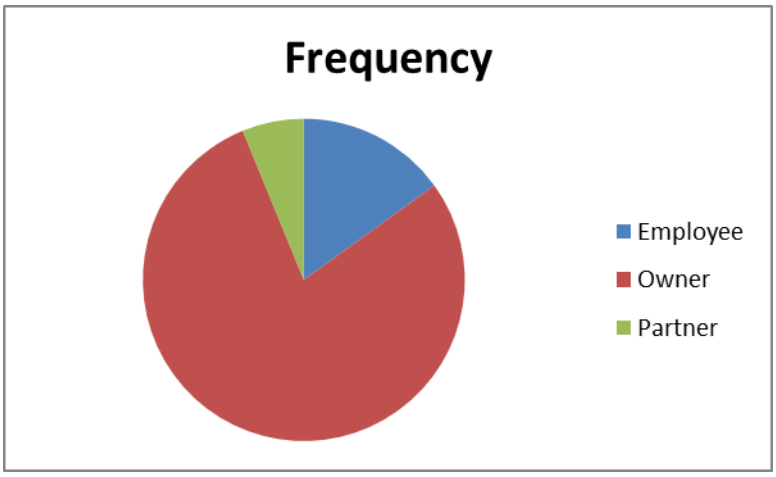
Background information was collected during the study and this section seeks to present the demographics of the respondents relevant to this study. The types of business, the length of time it has been in operation in years and the size of business in respect of the estimated annual turnover and number of employees of those surveyed are also presented here. The aim is to provide a clear understanding of what criteria was used to assign to or exclude business from the characterization as SMEs.

4.2.1 Respondents Demographics

There were more female respondents to this survey (67%) compared to male respondents (33%). The study sought to know the position of the respondent in the business

and found that a significant 79% of the respondents were the business owners. The target for this study was to have more owners as opposed to employees responding to the questionnaire, and this was achieved. However, 15% of the respondents were employees whereas 7% were business partners. The figure below displays the distribution of the findings.

FIGURE 2
Position held in the Business



4.2.2 Type of Business

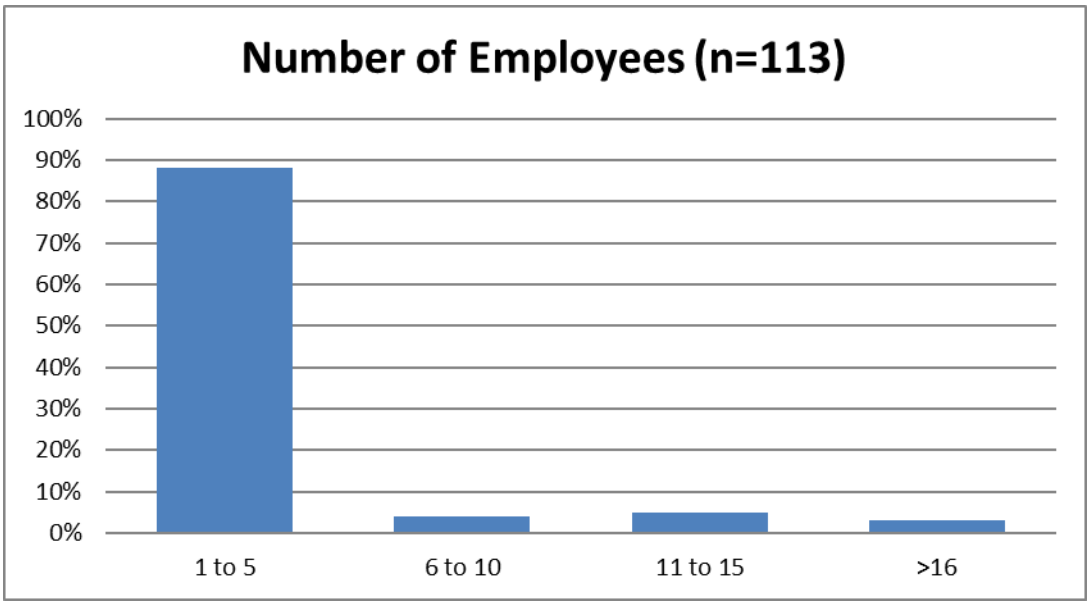
The study sought to find out the form of businesses operated by SMEs within the locality and it was found out that only one business had been registered as a company. It was further found that 16% of the businesses surveyed were partnerships while majority of the businesses were sole proprietorships topping the list at 85% of the sample. This shows that majority of the businesses in the area of study were sole proprietorships.

TABLE 3
Type of Business

	Frequency	Percentage
Company	1	1
Partnership	16	14
Sole proprietorship	96	85
Totals	113	100

Majority of the businesses sampled (98%) had 1-5 employees and an average of one branch. The findings are presented in Figure 3 below.

FIGURE 3
Number of Employees



4.2.3 Business Operations

In order to obtain a more detailed understanding of the SME sector in the locality, the study looked at specific aspects of each business. It was found that that 88% of the businesses have been in operation for between 1 – 5 years with only 12% having exceeded 5 years of business operations. The survey further established that 30% had more than one business while 70% were single branch operations concentrating on a single business line. Further querying of those who owned more than one business established that 83% of the respondents ran 1-3 businesses, 26% ran 4-6 closely related businesses and 4% running more than seven businesses. The greater the number of businesses run by one person, the more diverse the business lines. The data is presented in Table 4 below

TABLE 4
Analysis of the Operations of the Sample Group

Years of Operation	Percentage	Number of Businesses	Percentage	More Than 1 Business	Frequency
1-5 Years	88%	1-3	73%	No	70%
6-10 Years	4%	4-6	23%	Yes	30%
11-15 Years	5%	Above 7	4%		
Above 15 Years	3%				
Total	100%		100%		100%

4.2.4 Annual Sales

The estimated annual sales were used to ascertain the size of the businesses. The study found out that 51% of the businesses had an annual turnover of between 101,000 to 350,000 while 34% had an annual turnover of less than 100,000. Of the businesses surveyed for the study 12% had an annual turnover of up to 900,000 with only 6% of the respondents recording an annual turnover of over one million. Table 5 is a summary of this information.

TABLE 5
Estimated SME Annual Turnover

Range (Kshs)	Frequency	Percentage
10,000-100,000	34	30%
101,000 – 350,000	58	51%
351,000- 990,000	14	12%
Above 1,000,000	7	6%
Total	113	100%

4.3 Knowledge of Mobile Money Services

In this session, the results related to respondent awareness of various mobile money services explored at the time this survey was undertaken are presented.

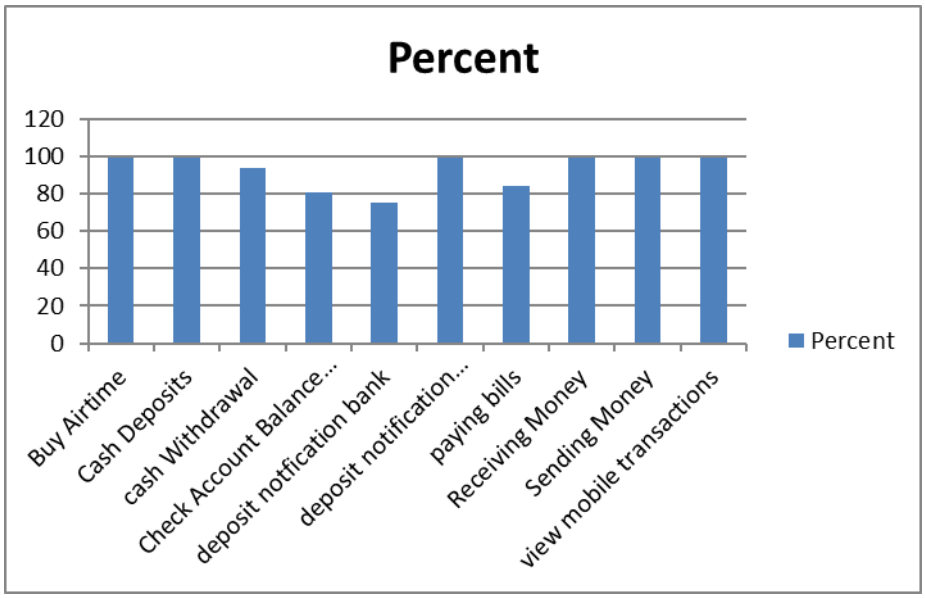
The study evaluated the level of awareness of the respondents regarding mobile money services. All the responses were positive; an indication of widespread knowledge of mobile money services in the locality. On further enquiry into mobile service provider, it was established that Safaricom M-Pesa service is most widely used followed by Airtel Money. Surprising, only a few respondents were aware the existence of Orange Money and YU–Cash. Table 6 below shows the respondents experience of use of the two most popular money transfer systems in the area of study.

TABLE 6
Number of Years Using Mobile Money

	M-Pesa	**Airtel Money**
1- 5 Years	104	2
6-10 Years	9	0
Total	113	2

In order to establish the validity of the above findings, the study sought to find out how the various respondents used mobile money products. It was established that 99% of the respondents had the correct information on buying airtime, sending money, receiving money, viewing mobile transactions, depositing cash and understanding deposit notifications. In contrast, 84% of the respondents had detailed understanding of how to pay bills, 81% were able to check bank balances while only 75% could understand a bank deposit notification. Figure 4 below shows this information.

FIGURE 4
Knowledge of Mobile Money Products



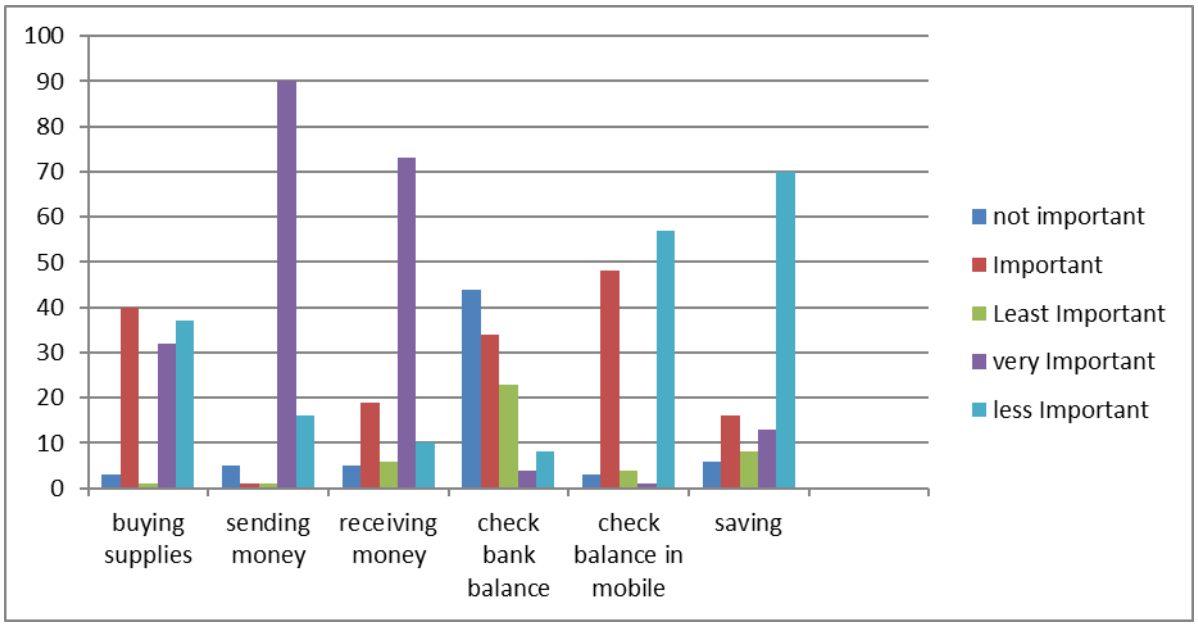
4.4 Importance of Mobile Money Services to SMEs

The relationship between mobile money services and their significance to the businesses surveyed is presented in this session. The services are presented according to their importance, then compared to those businesses that have used the service and their views on the importance of that service to SMEs. Finally, the role of banks in support of mobile money services is presented.

4.4.1 Mobile Money Services and Significance to SMEs

The study analysed the importance of mobile money services to those businesses surveyed. Mobile money was less important for purchasing airtime (57%) and check balances on mobile money (57%) while traders felt mobile money was important when buying supplies (40%) and checking bank balances. However, a significant 90% and 73% respectively asserted that mobile money was very important for sending and receiving money respectively. Figure 5 illustrates these findings.

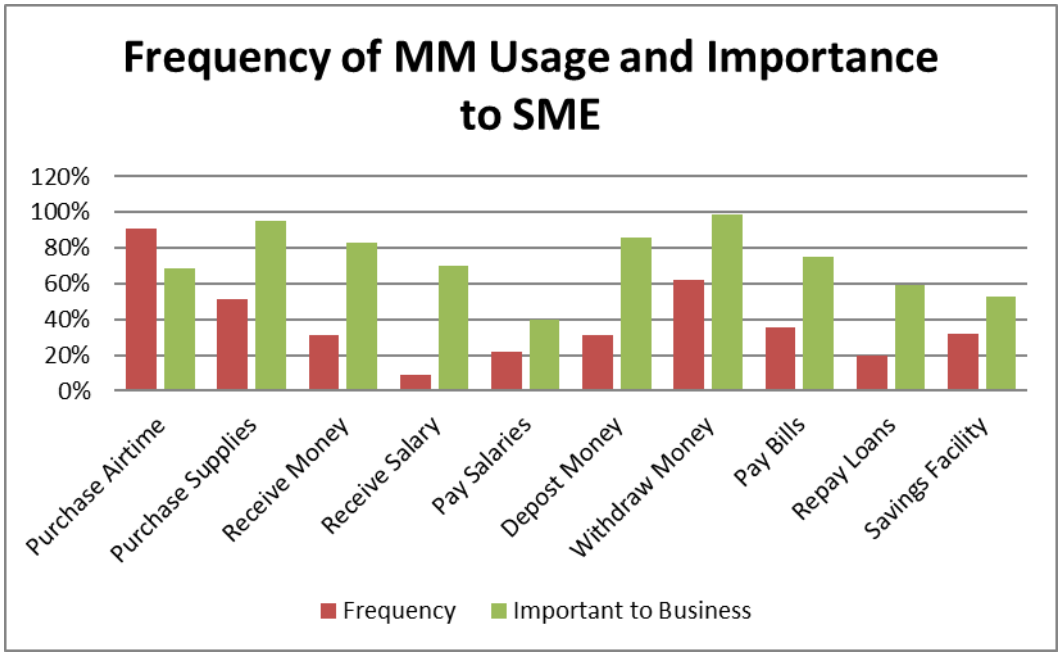
FIGURE 5
Importance of Mobile Money



4.4.2 Importance of Commonly Utilized Mobile Money Services to SMEs

We further conducted analyses on the responses of those that utilized mobile money services and their rating on the importance of the various services they were using in their business. Figure 6 and Table 7 below summarizes these findings.

FIGURE 6
Mobile Money Usages in Relation to Importance



The figure demonstrates that those who used a particular mobile money service were more likely to rate the service as important to their business. For example, 65% of those surveyed were using mobile money service to purchase business supplies and out of those, 95% rated that service as important to the business.

TABLE 7
Mobile Money Service and Importance to SME

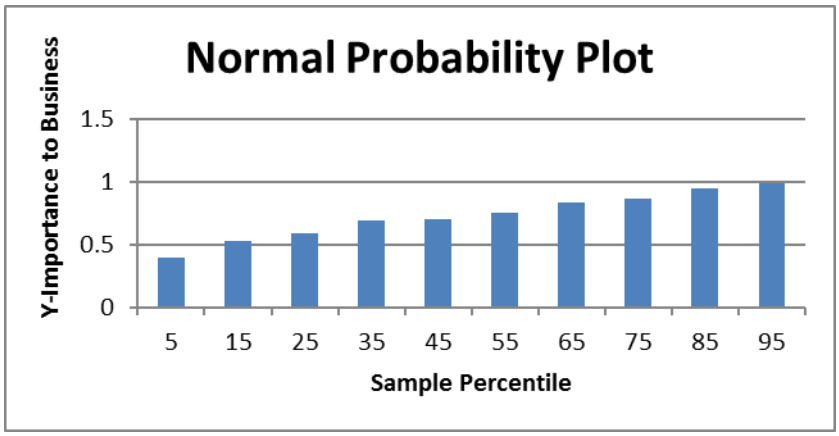
	Usage Frequency	**Respondents Frequency**	**Important to Business**
Purchase Airtime	Daily and Weekly	91%	69%
Purchase Supplies	Monthly or Weekly	51%	95%
Receive Money	Daily and Weekly	31%	83%
Receive Salary	Monthly	9%	70%
Pay Salaries	Monthly or Weekly	22%	40%
Deposit Money	Daily and Weekly	31%	86%
Withdraw Money	Daily and Weekly	62%	99%
Pay Bills	Monthly or Weekly	35%	75%
Repay Loans	Monthly	19%	59%
Savings Facility	Monthly or Weekly	32%	53%

To further evaluate how these two variables were related, a regression analyses on these results was done. With 'y' representing the importance to the business and x" representing the respondents' frequency of use, regression analyses was used to discover how these variables related to each other (see Appendix III for the detailed analyses) and found the results presented in Table 8 and Figure 7 below.

TABLE 8
Regression Relationship Analysis on Mobile Money Service and Importance to SME

PROBABILITY OUTPUT	
Percentile	*Y= Importance to Business*
5	0.4
15	0.53
25	0.59
35	0.69
45	0.7
55	0.75
65	0.83
75	0.86
85	0.95
95	0.99

FIGURE 7
Probability Output Graph on Relationship of variables

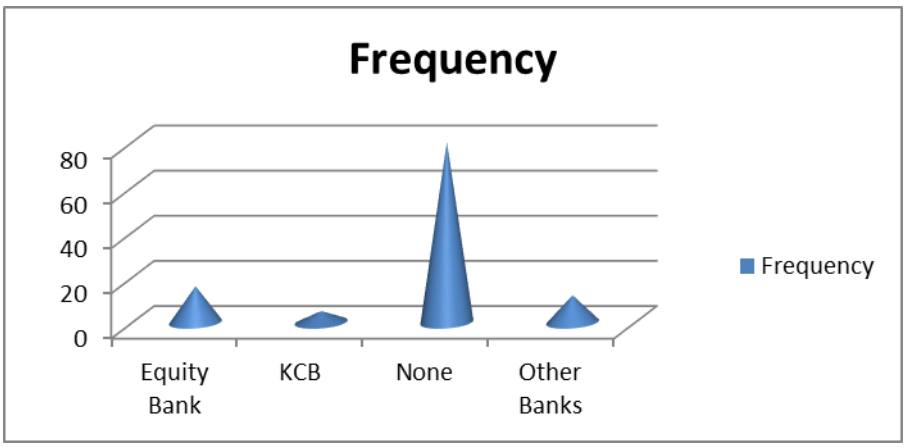


The results obtained confirmed that there was a positive relationship between the use of specific mobile money services (x) and the perceived importance of that service to their business (y). This means that as the frequency of use of a particular mobile money service increases, the importance attributed to that service to the business also increases.

4.4.3 Preferred Bankers

For the purpose of this study, the preferred bankers among the study respondents was determined as part of the survey questionnaire. The study showed that 71% of the businesses had no bank account, 16% had at least one account with Equity Bank and 4% banked with Kenya Commercial Bank. The remaining 9% had accounts in other banks not included in the survey. The figure below shows the distribution of bank accounts of the study group.

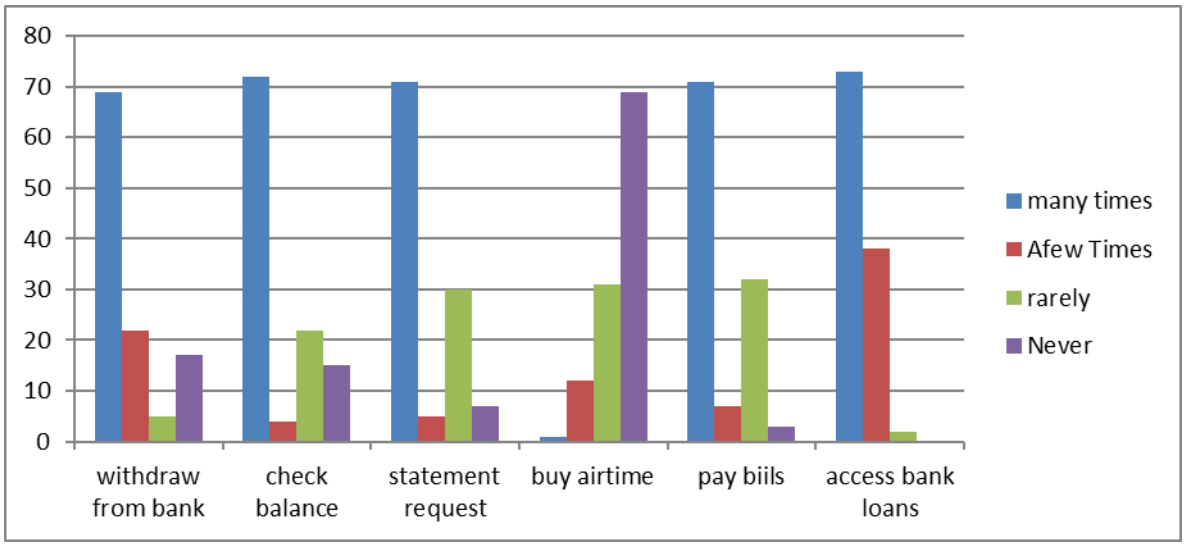
FIGURE 8
Preferred Bankers



4.4.4 Frequency of Use of Bank Mobile Money Services

The study further enquired on the frequency of use of mobile money to facilitate traditional banking services among the respondents. The study results indicate that, accessing bank loans was at the top of the list with 73% of frequent users, checking balances was at 72%), statement request at 71%and bank withdrawals ranking at a 69% frequency. Buying airtime was the least used service at 1%. Figure 8 and 9 shows the frequency of use of bank mobile money services.

FIGURE 9
Frequency of Use of Bank Mobile Money Services



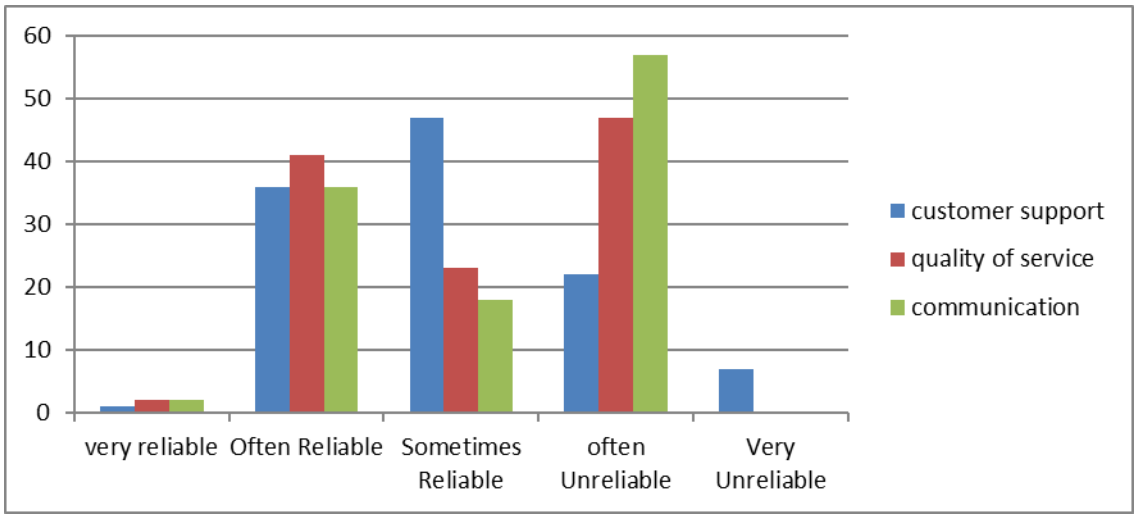
4.5 Mobile Money Services Frequency of Use and Reliability

The views on reliability and convenience of mobile money services is presented in this section. The respondent feedback on challenges experienced while using mobile money services and how they reacted to those challenges is also explored.

4.5.1 Reliability Cost and Convenience of Mobile Money

The study wanted to establish the perceived reliability of the mobile money transfer services in business. A diverse view on the issue was obtained. This is because, majority of the respondents have a moderate to negative view about the reliability of the system. However, even with most of the respondents of the opinion that the service is not very reliable, they are still confident about using it. The research findings are represented by Figure 10 below.

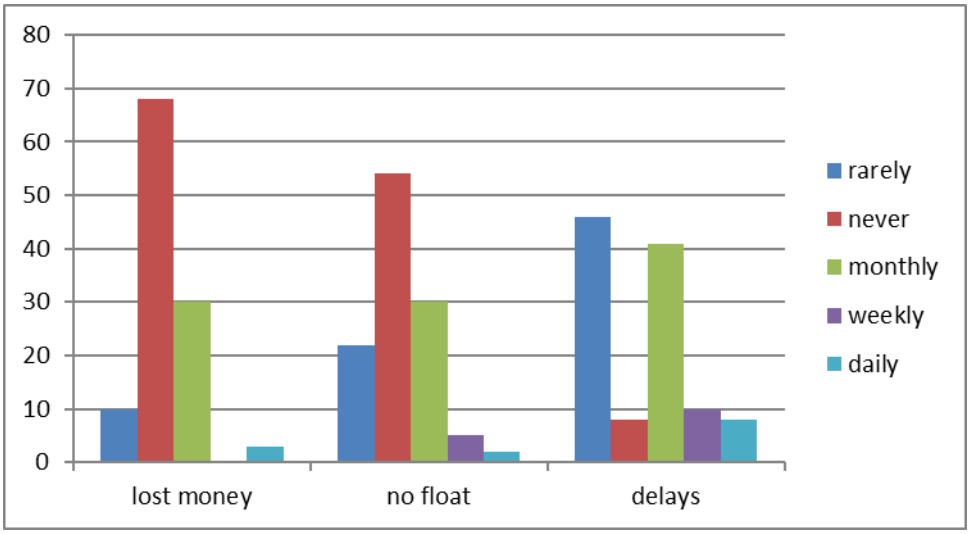
FIGURE 10
Reliability of Mobile Money



4.5.2 Inconveniences with Mobile Money Services

The study noted that majority of the respondents expressed reservations about the reliability of the mobile money system. In an attempt to find out the cause of these inconveniencies, it was discovered that there are three major causes. These are; delays, (66%) no float (22%) and loss of money (18%).

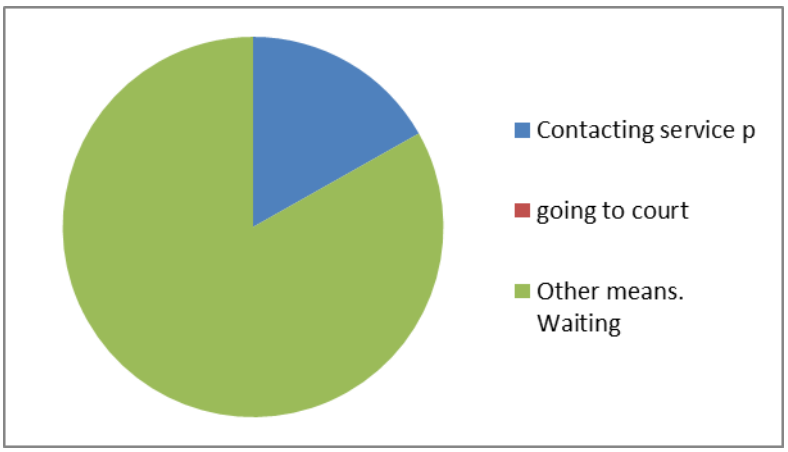
FIGURE 11
Causes of Inconveniences with Mobile Money Services



To get a detailed understanding of the problem, we sought information on the frequency of these problems and found that delays were the most frequent, occurring on

almost a daily bases with 46% of those surveyed considering it a significant problem. Other problems, in comparison, were less significant with 34% sighting lack of float and 20% who considered loss of money a problem. It is worth noting that 60% of the respondents had never experienced money loss, 47% had never experienced lack of float whereas only 8% had never experienced a delay in mobile money services. The Figure 12 below shows these responses in a simplified manner.

FIGURE 12
Solutions to Mobile Money Problems

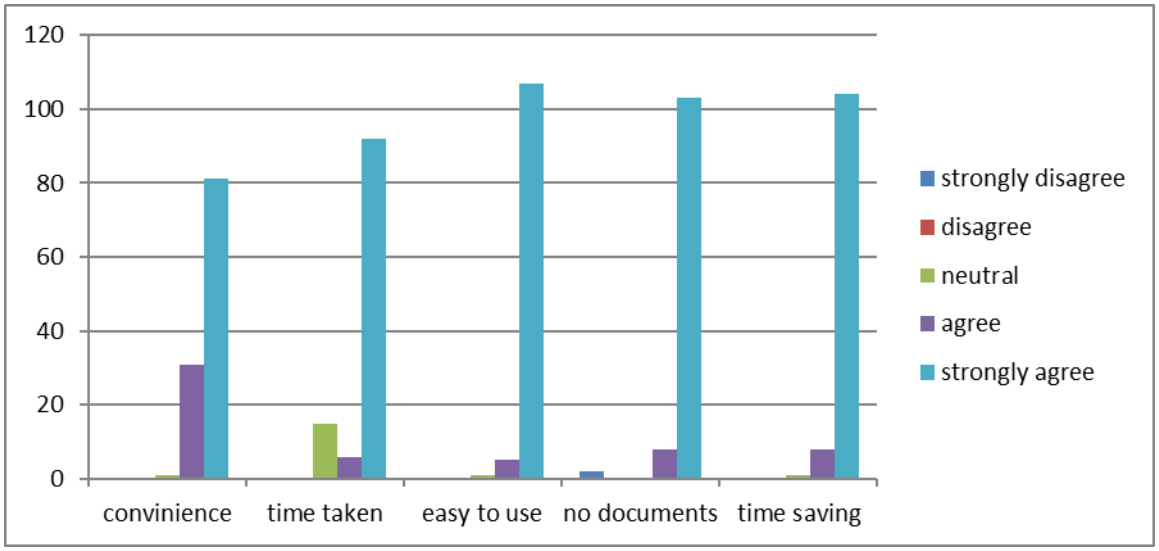


4.5.3 Ways Respondents Dealt with Mobile Money Problems

Since a majority of the respondents experienced challenges while using mobile money, the study sought to establish how customers tried to mitigate the effects of such problems. It was revealed that, 83% preferred to wait for the problem to resolve itself while only 17% called the service provider to enquire about such problems. However it was interesting to note that none of the respondents had gone to court regarding a problem relating to mobile money.

Further to this, the research sought to find out the perception of the respondents of the convenience of mobile money use. Most of them indicated that they strongly agreed that mobile money is convenient for various transactions as shown in Figure 13 below.

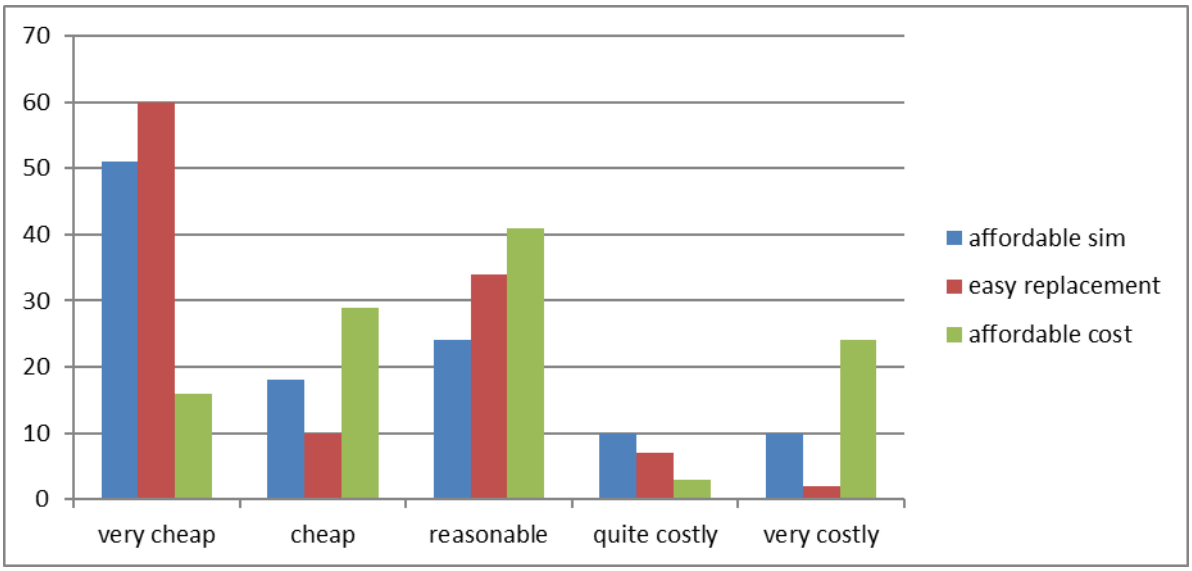
FIGURE 13
Mobile Money Conveniences



4.5.4 Cost Related to Mobile Money Services

The study noted that cost was not a major concern for the businesses surveyed. Many perceived the service as cheap and did not mind the cost involved in using it. To show this the study established that 51% praised the service for having an affordable SIM card, 60% indicated that the service providers easily replaced a lost SIM cards and a significant percentage were of the opinion that the transactional cost was reasonable. Figure 14 below shows the perception of the respondents concerning the cost of mobile banking.

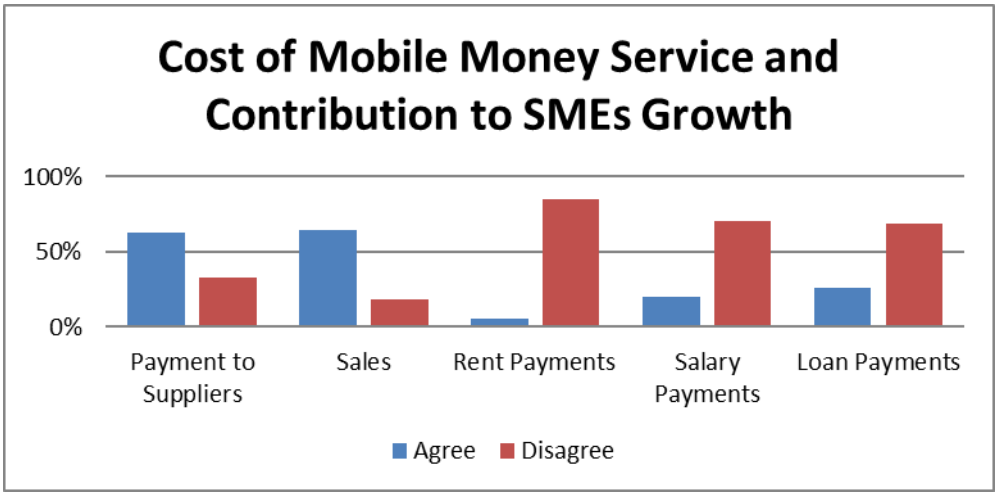
FIGURE 14
Cost of Mobile Money Services



4.5.5 Cost of Mobile Money Services and Impact on SMEs Growth

Mobile Money services were generally not considered costly. To determine if cost had a significant had on SMEs, further analysis was conducted on 48% of respondents who initially viewed the service as costly. The findings were such that: those that thought mobile money transactions were expensive, were still more likely to think that mobile money services contributed to business growth through payment to suppliers and in sales. This is summarised in the Figure 15 below.

FIGURE 15
Mobile Money Cost and Impact on Business Growth



Further analysis of the responses of those using a particular mobile money service and their opinion on mobile money transactional cost compared to business growth was carried out. It was found that majority of the respondents using a particular mobile money service were likely to rate the transactional cost as expensive. On the other hand, those not using the service were more likely to rate the service as cheap and affordable. Despite rating mobile money service transactional cost as expensive, they were still likely to positively rate the contribution of mobile money to their business growth through increased sales. This data is summarised as percentages in the Table 9 presented below.

TABLE 9
Mobile Money Service Users and Their Opinion on Cost and Impact on Business

		Mobile Money Service			Positively Contribute to Business growth
	Frequency	Expensive	Reasonable	Cheap	
Purchase of Supplies	51%	53%	36%	9%	79%
Receive Money (payments)	43%	55%	35%	10%	71%
Pay Salaries/Wages	30%	56%	29%	12%	38%
Pay Bills	50%	55%	30%	13%	
Loan Payments	27%	57%	40%	10%	57%
Withdraw Money	88%	44%	38%	14%	
Savings	36%	39%	44%	17%	
Deposit Money	85%	48%	35%	11%	

We conducted further statistical analysis using regression statistics to determine the relationship between cost of mobile money service and its contribution to business growth. In this case, we took ‘y’ to represent the frequency of total respondents using the mobile service, ‘x1’ to represent the response of those who viewed this service as expensive, ‘x2’ to represent those who thought the service cost was reasonable and ‘x3’ to represent those who thought that the service was cheap. A detailed presentation of the calculation can be found in

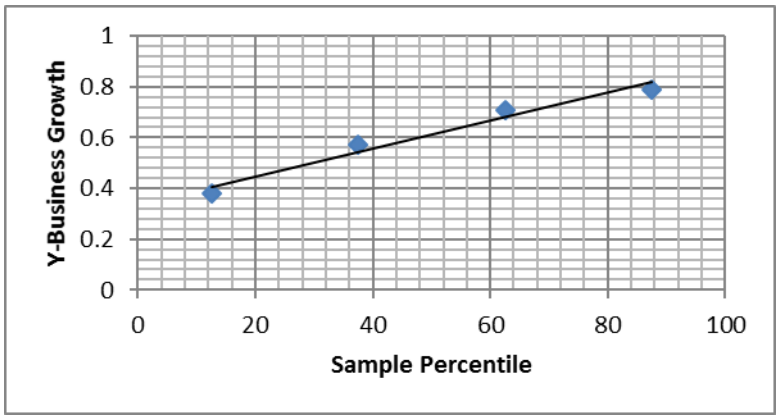
the Appendix IV. The findings are presented in the Table 10 below and Figure 16 that follows.

TABLE 10
Cost Relationship to Perceived Importance of the Service to the Business

PROBABILITY OUTPUT	
Percentile	*Y=Business Growth*
12.5	0.38
37.5	0.57
62.5	0.71
87.5	0.79

NB: For this regression, values were obtained from all data collected to allow for a statistically significant comparison. The full data information is summarised in the percentage Table 10 above and Figure 16 below.

FIGURE 16
Cost Relationship to Perceived Importance of the Service to the Business



These results reveal that as the number of people using mobile money services increases, the importance of the services to business growth also increases. We also noted a positive relationship between frequency of mobile money users and their view on costs of mobile money. This means that regardless of the perception that mobile money transactional costs were expensive for those using a particular service; respondents were still likely to use this service.

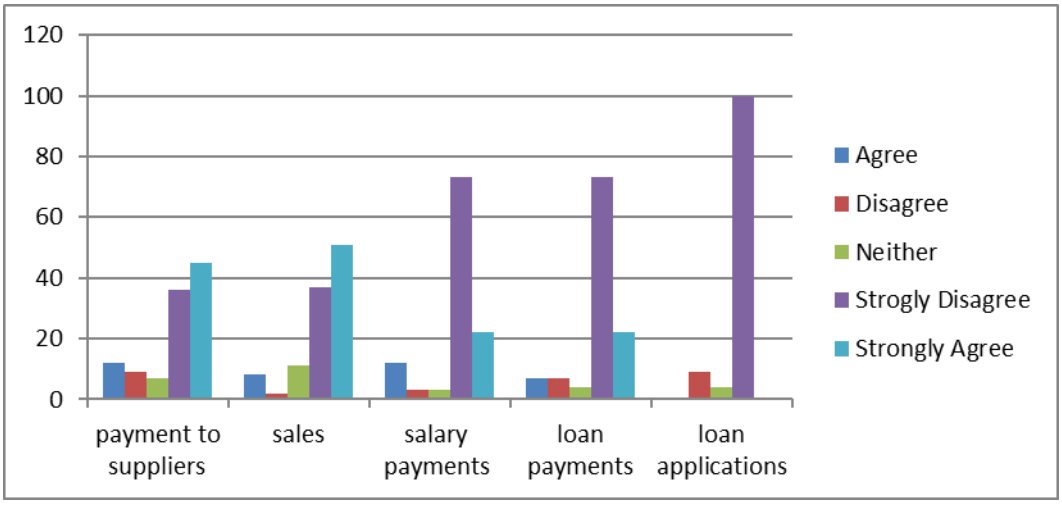
4.6 Mobile Money Services and Business Growth

The study findings on impact of mobile money on SMEs growth and performance are summarized in this session. The respondent feedback is presented in figures and narrative explanation, followed by inferential statistics on the same. This is in attempt to describe how mobile money contributed to business performance in Naivasha Town, if at all.

4.6.1 Impact of Mobile Money on SMEs

The study enquired about the extent to which mobile money was perceived to have had an impacted on the businesses. It was established that a 100% of the respondents strongly disagreed that mobile money has made loan applications easier while 73% of the respondents strongly disagreed that mobile money has made salary payment and loan repayment more convenient. However 51% strongly agreed that mobile money has had a positive impact on their sales. There was significant variation in the responses to whether mobile money had any impact on payment to suppliers with most businesses strongly agreeing to its positive impact.

FIGURE 17
Impact of Mobile Money to Business

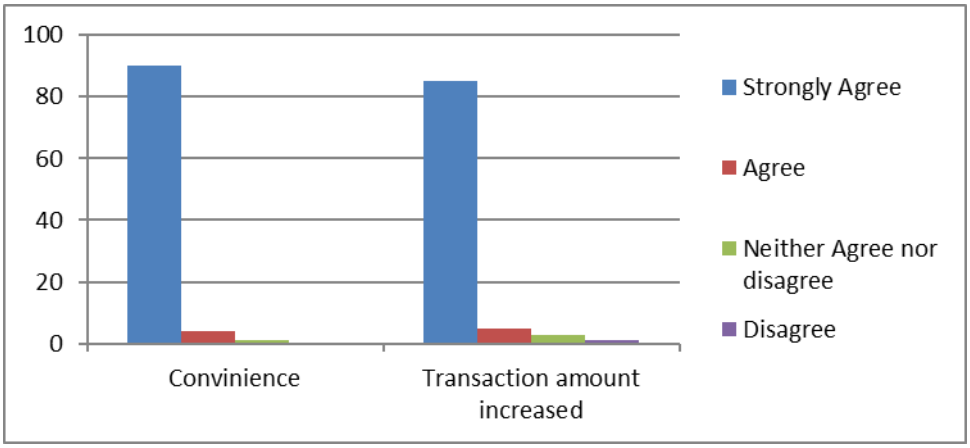


Considering most of the small and medium enterprises sampled are actually small businesses, majority of the transactions are in cash. The concept of mobile money in business transactions does not seem to have penetrated the market. Of the respondents

surveyed, 37% strongly disagreeing with the idea of mobile money as a mode of payment and 36% were against the use of mobile money as a model for paying suppliers. Figure 17 above shows the comparison of the perceptions regarding the impact of mobile money with relation to the various products offered.

It was noted that SMEs in Naivasha Town recognized that mobile money had contributed to business growth. Of those surveyed 90% of stating that mobile money services were convenient and as a result they had increased the amount of money transacted in their businesses when mobile money services were added to the conventional methods of transacting business. These findings are summarised in the Figure 18 below.

FIGURE 18
How Mobile Money Contributed to Business Growth



4.7 Independent Variables and Relation to SMEs Growth

Finally, using data collected from the field, statistical analyses was conducted to see how study independent variables related to business performance. Statistical models and findings are summarised as follows.

4.7.1 Correlation Analyses

From the findings, as summarised in Table 11 below, there was a positive correlation between SME performance and efficiency & reliability with a correlation factor of 0.435. A positive correlation between the SME performance and financial accessibility as shown by a

correlation figure of 0.242 is also apparent. There is a positive correlation between the SME performance and transactions time and convenience with a correlation figure of 0.103 and a positive correlation between SME performance and transaction cost with a value of 0.119.

TABLE 11
Coefficient of Correlation between Variables

	SME Performance	Transaction cost	Transactions time & convenience	Financial accessibility	Efficiency & reliability
SME Performance	1				
Sig. (p-Values)					
Transaction cost	.119	1			
Sig. (p-Values)	.365				
Transactions time and convenience	.103	.097	1		
Sig. (p-Values)	.435	.461			
Financial accessibility	.242	.362	.213	1	
Sig. (p-Values)	.063	.004	.102		
Efficiency and Reliability	.435	.461	.213	.335	1
Sig. (p-Values)	.103	0.097	.102	.009	

This table shows that there was positive correlation between SME performance with transaction cost, transactions time & convenience, financial accessibility and efficiency & reliability even though this is a weak relation.

4.7.1 Multiple Regression Analyses

To establish the relationship between the independent variables and the dependent variable of the study inferential analysis was conducted. It involved a coefficient of determination and a multiple regression analysis.

The coefficient of determination was carried out to measure how well the statistical model was likely to predict future outcomes. As such it explains the percentage variation in the dependent variable (growth of SME's) that is explained by all four independent variables (transactions time and convenience, leadership, financial accessibility and efficiency & reliability).

TABLE 12
Coefficient of Determination Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.285(a)	.08	.028	.78022

As shown by the model summary above, R squared is .08 (8%). This shows a moderately weak fit of the data in the model. Thus, the mobile money services weakly predicts the growth of SME's in Naivasha. The study therefore concludes that there is no significant relationship between mobile money services and the growth of SME's in Naivasha. This implies that the growth of SME's does not depend upon the mobile money services and thus there are other factors that affect the growth of SME's. This can be attributed to the fact that the services have not been internalised as business aids or the absence of a measure of business convenience attributed exclusively to mobile money services. Another reasonable explanation is the absence of business records prior to the usage of the mobile money services which would aid in a comparative study thus calling for an experimental study in this regard.

TABLE 13
Multiple Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	**Std. Error**	**Beta**		
1	(Constant)	.525	.223		2.349	.025
	Transaction cost	.004	.094	.006	.039	.036
	Transactions time and convenience	.278	.098	.425	2.846	.007
	Financial accessibility	.031	.070	.062	.449	.026
	Efficiency and Reliability	.410	.082	.566	4.983	.000

Dependent Variable: Strategy implementation

The regression equation, $Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \alpha)$ become:

$$Y = 0.525 + 0.004X_1 + 0.278X_2 + 0.031X_3 + 0.410X_4$$

Where Y was the dependent variable (SME growth and performance)

X1 is the transaction cost independent variable

X2 is the transactions time and convenience independent variable,

X3 is financial accessibility independent variable, and

X4 is efficiency and reliability.

From the regression equation established, taking into consideration all the factors (transactions time and convenience, transaction cost, financial accessibility and efficiency & reliability) constant at zero, the SME growth and performance would be 0.525. Further, if all the other variables are kept constant, a unit increase in efficiency and reliability will lead to a 0.410 SME growth and performance. A unit increase in transactions time and convenience will lead to a 0.278 SME growth and performance, while a unit increase in financial

accessibility will lead to a 0.031 SME growth and performance. A single unit increase in transaction cost will lead to a 0.004 SME growth and performance.

These results imply that efficiency and reliability contributes the most mobile money use followed by transactions time and convenience, followed by financial accessibility, while transaction cost contributes the least to mobile money utilization and SME growth in Naivasha.

4.8 Summary of Findings and Discussion

This is a summary of the findings of this study with regard to how mobile money services available have influenced SME activities, supported business operations and contributed to business growth and performance. Conclusions to answer the research objectives, recommendations based on findings and suggestions for further research are presented below.

4.8.1 Summaries of the Findings

This study had 100% response rates as a result of a well chose interview methodology used. There were more female respondents compared to male respondents. Majority of the respondents were the business owners which was desirable for this study. Most of the businesses were sole proprietorships accounting for 85% of the sample. Of those businesses sampled 98% had 1-5 employees and an average of one branch. Moreover, the study established that a significant 88% of the businesses have been in operation for between 1-5 years with only 12% of them having exceeded 5 years of business operations. Even though 30% of business surveyed had more than one business, 70% had one business line.

All the responses regarding knowledge of currently available mobile money services were positive; an indication of a widespread knowledge of mobile money services available in the locality. The study established that 99% of the respondents had correct information on buying airtime, sending money, receiving money, viewing mobile transactions, depositing

cash and understanding deposit notifications. All respondents had enrolled for mobile money services for their business. However, only 84% of the respondents had a detailed understanding of how to pay bills using mobile money, 81% were able to check bank balances on phone while only 75% could understand a bank deposit notification.

M-Pesa service was the most widely used service followed by Airtel money. The very low penetration rates of other mobile money services providers like YU-Cash and Orange Money was a unique finding amongst this group.

The study established that a majority 71% of the businesses had no bank account where as 16% had accounts with Equity Bank and 4% banked with Kenya Commercial Bank. However, 9% had accounts in other banks not included in the survey. Of interest was the finding that all the respondents (100%) strongly disagreed that that mobile money had made loan applications easier while 73% of the respondents strongly disagreed that mobile money has made salary payment and loan repayment more convenient.

A simple majority of 51% strongly agreed that mobile money has had a positive impact on their sales. Considering most of the SMEs are small businesses, majority of the transactions are in cash. Mobile money is new and has not penetrated the market which account for 37% of the respondents strongly disagreeing with the concept of mobile money as a mode of payment and 36% being against the idea of mobile money as a model for paying suppliers.

This study demonstrated increased use of mobile money services for various financial transactions in Naivasha town. For those using a particular mobile money service, respondents were likely to rate the transaction cost as expensive. However, those using any mobile money service were more likely than those not using the service to rate it as important to the business. Inferential statistics failed to prove that mobile money had a positive impact to business growth.

Thus, the study concludes that there is no significant relationship between mobile money services and the growth of SME's in Naivasha. This implies that the growth of SME's does not depend upon the mobile money services and there are, therefore, other factors that affect the growth of SME's.

The study evaluated the common challenges experienced by those using mobile money services and the results were delays (66%), no float (22%), and loss of money (18%). No other additional information was obtained in this section. To get a detailed understanding of the problem, the study sought information on the frequency of the problems and found that delays were more frequent, occurring on almost a daily bases at a significant 46%. This was followed by lack of float at 34% and loss of money at 20%. It is worth noting that, 60% of the respondents had never experienced money loss, 47% had never experienced lack of float whereas 8% indicated that they had never experienced a delay in mobile money services.

4.8.2 Discussion of Results

The primary aim of this study was to determine the impact of mobile money services on SMEs in Naivasha Municipality which is an urban town in Kenya. This aim to a larger extent was accomplished and is summarized below.

To explore the awareness levels of mobile money services in Naivasha town among SMEs, the study found that respondents had a widespread knowledge of mobile money services in the locality ranging from 99% in respect of sending and receiving money, purchase of airtime, viewing transactions and depositing cash, to 75% in services related to banking services through mobile money such as viewing bank statements or receiving notifications of transactions. The high rate of enrolment to mobile money services in this region is much higher than the 75% penetration reported by Communications Commission of Kenya in 2011/2012. It is necessary to not that the report was a reflection of the general population of Kenya and not specific to any region.

Mobile money services were primarily provided through the M-Pesa platform from Safaricom as opposed to other mobile money services available in the same locality. It is noteworthy that we did not to assess the number of businesses that has a dedicated mobile money phone/line for the business. Such a survey was undertaken by Financial Sector Deepening (FSD) Insights (2012), who found that few businesses have a dedicated mobile money account for conducting financial transactions resulting in an overlap between personal and business related transactions.

The second study objective was to determine if mobile money service uptake had any impact on SMEs growth through increased sales, savings, and loan accessibility in Naivasha Town. The study findings revealed that few respondents were using the service as a savings facility or to access loans even though these services are made available through partnership with the banking sector and mobile money service providers e.g. the M-Shwari product from Safaricom and Commercial Bank of Africa. Some were using mobile money services for business related transactions like to pay bills, pay salaries, deposit or withdraw money from their banks, and to buy or sell business related goods.

Majority of SMEs were utilizing this service for traditional functions like sending and receiving money, a study finding consistent with Njenga (2010) who also found that mobile money services were mostly used for sending and receiving money. However, those using a particular mobile money services were more likely to rate that service as important to the business. For example, 65% of respondents were using mobile money services to purchase business supplies out of which 58% rated this service as either very important or important to the business. These results disagreed with the findings of Mbogo (2010) who found that behavioural intention to use mobile money services was significantly correlated to actual usage. However, it is important to note that this study setting was different from that of Mbogo (2010).

SMEs in this region do not seemed to interact with the banking sector for other or supportive banking services. Linkage to the banking sector from this study was only 29%. This could be because respondents viewed mobile money service as a variation of branchless banking with delivery of financial services outside conventional banking. This conclusion made by Wambari and Mwaura (2009) and supported by some of the findings of this study, may warrant further investigation to see if enrolment into mainstream banking has been affected by the introduction of mobile money services.

The third study objective was to establish if qualities of mobile money services such as low cost or convenience and accessibility resulted in increased SMEs performance in Naivasha Town. We found out that 51% of respondents strongly agreed that mobile money had a positive impact on their sales. The biggest reason for this the convenience of the mobile money services, echoed by 90% of respondents. Those who used mobile money services were more likely to give more informed feedback on the importance of the service to their business compared to those that did not. The importance of mobile money service, therefore, seemed to increase as the number of those using the service increased.

A finding unique to this study was the positive relationship between the mobile money transactional cost and usage. Those who were more likely to use the service were also more likely to rate the transactional cost as expensive in comparison to those who did not use the service who were more likely to rate the service as cheap or reasonable. This finding could have resulted from many of the mobile money subscribers being on the M-Pesa platform which had recently increased their transaction costs. Those not using the service may not have been aware of the true cost of using the service after these changes. Mbogo (2010) had determined that low cost positively correlated to the behavioural intention to use mobile money services, but our findings revealed that the perception of transaction cost as

expensive amongst actual users of the service had no effect on their use since customers continued to use the service despite this perception.

This finding needs further investigation to determine how this applies against price elasticity of demand. It will also be important to evaluate if other towns would note similar findings as this region. Equally, considering that M-Pesa was by far the biggest provider of service in this region, it will be useful to evaluate how they have managed to achieve high uptake despite other cheaper providers like Airtel Money.

It is important to note that inferential statistics failed to prove the concept that mobile money in general has a positive impact to business growth. The majority of the respondents were only using mobile money for services like receiving or sending money, and few were using the mobile money services to pay bills, counter transactions or access loans. As already outlined above, Mbiti and Weil (2011) found that most people used the mobile money service to send or receive money as opposed to savings or other services. High volumes in mobile money transfers have also been well demonstrated by the FSD (2012) report which noted that high volumes of mobile money payments account for over 90% of the Kenya economy compared to other forms of money transfers. These forms of cashless transaction have the benefits of increased financial liquidity which has benefits to the SMEs industry.

Lastly, this study established that mobile money services are considered efficient and reliable by SMEs in Naivasha Town. Most of the respondents in this study were of the opinion that mobile money services are not very reliable but are confident using it. Communication and quality of service was rated as often reliable, while customer support was rated as sometimes reliable or often reliable. The study revealed that various challenges contributed to the service efficiency and reliability rating further presented. Challenges were experienced by 90% of the respondents; the primary problem being delays in completing a transaction experienced by 66%. A smaller percentage (22%) had challenge related to no

floats that would enable them to transact and even fewer (18%) had lost money while transacting using this service.

Since delays accounted for the largest percentage of experienced difficulties, customers were most likely to deal with the challenge by wait for it to resolve itself. Moving to another agent helped with the transactions in relation to no floats. We did not explore how business owners reacted to the of loss of money, but most interestingly, no one decided on aggressive measures like legal option for solving problems experienced like losing money.

The other challenge was related to the affordability of mobile money services. Majority of the respondents thought that cost of a SIM card and SIM card replacement were affordable while the cost of sending or receiving money was expensive. This could be as a result of most SMEs being on M-Pesa that had increased their transaction cost as a result of taxation. Some of these findings have already been documented by Ndunge and Mutinda (2012) who outlined the current M-Pesa challenges as fraud, network or connectivity problems, mobile money transactional cost that are perceived as expensive and M-Pesa-limiting social aspects of meeting and sharing since one can send money and excuse themselves from social events.

Thus, this study achieved its objectives and obtained detailed information arising from the use of mobile money services by SMEs. In respect of the conceptual framework, mobile money transactional costs, convenience, efficiency and reliability have all been shown to affect SME business performance through the service leading to increased enrolment in mobile money services, increased financial transactions resulting in increased sales and therefore perceivable contribution to business growth. We can argue that these factors will increase business competitiveness (increased sales and resultant higher profits) due to a variety of transaction options when applied in a business as compared to those that may not have applied them. Further studies, however, may need to be undertaken to describe the

effect and relationships. Mobile money transactional cost may require further evaluation since our study found that even when the perception amongst users was that the service was expensive, they were still more likely to use it and think of the service as important to the business.

CHAPTER FIVE

CONCLUSION AND RECOMMEDATIONS

5.1 Conclusion

The study found high knowledge of currently available mobile money services surveyed. Additionally, this study demonstrated increasing use of mobile money services for various financial transactions in Naivasha town. Majority of study respondents agreed that mobile money has had a positive impact on their sales even though fewer respondents are using the service as a savings facility or to access loans services. Some business owners are using mobile money services for business related transactions like to pay bills, pay salaries, deposit or withdraw money from their banks, and to buy or sell business related goods. Majority of SMEs were utilizing this service for traditional functions like sending and receiving money for the business.

Respondents did not find it easy to use mobile money services to access loans even though currently this function is available through collaborations with some banks. Functions like salary payment and loan repayment have not been used or preferred by SMEs in Naivasha. Mobile money as the mode of payment has not penetrated the market very much accounting for fewer respondents using the service. 36% were against the idea of mobile money being used to pay suppliers.

Noteworthy, mobile money has a positive impact on sales amongst SMEs in this region and the biggest reason for this was due to convenience of the mobile money services. There is a positive correlation between SME performance and transaction cost, transactions time and convenience, financial accessibility and efficiency and reliability even though this is a weak relation. Efficiency and reliability contribute more to the mobile money usage.

Mobile money was viewed as not very reliable even though respondents were confident of using the services. Communications and quality of service was rated as reliable, while customer support was rated as reliable. The study revealed that various challenges contributing to reduced reliability included delays in completing a transaction and loss of floats.

The study concludes that mobile money has made a positive contribution to the SME sector since majority of the traders rely on it as opposed to the formal banking sector for their day to day transactions. Secondly, it is evident that all the respondents in this study have a deep understanding of the basic functions of mobile money. However, it is worth noting that majority of the respondents have reservations on the convenience and cost of the service as a result of problems associated with the functionality of the service. Delays were a major concern amongst the respondents followed by lack of floats. Thirdly, many of the players in the SME sector do not have bank accounts hence creating a huge potential for mobile money.

From the findings, it is evident that, mobile money users are not conversant with mobile-bank transactions on loan applications and repayment and possibly prefer the normal banking system to mobile banking when it comes to loans and advances, or other forms of business loans applicable to SMEs.

5.2 Recommendations

The study recommends an awareness campaign on the services offered by the mobile money services with bias towards loan applications and repayment. Further, given the recent launch of the 'M-Shwari' and 'Lipa na M-Pesa' mobile money services, the study recommends enlightening campaigns of their benefits to SMEs given that majority handle cash and do not use mobile money to pay for supplies and salaries.

Kenya is used as a model of an economy rapidly moving towards cashless transactions. The amount transacted in 2012/2013 fiscal year was close to the country

national budget (Okutoyi, 2013). With Safaricom creating partnerships with 25 banks in Kenya to provide these services, mobile money will become a progressively more convenient method of financial transaction for SMEs. Educating SMEs on such benefits will lead to increasing use of the service thereby reaping the benefits previously not accessible to them.

Of greater importance are the increasingly user-friendly support services that target SMEs. For example, increased support services have resulted in use of mobile money and mobile internet services on some transport services. These are just some of the examples of the critical role service provider's play with respect to increased use of products that could benefit consumers. Therefore, increasing the service provider and SMEs collaborations and the support of available products is recommended to increase the use of currently available products like M-Shwari and help in the design of more SME directed services.

Simple measures to evaluate SME performance is still a critical area that requires dedicated attention. Financial measures adopted by larger businesses have not been widely adopted by SMEs. Book keeping is erratic, yet it which could be a source of useful information on business turnover, employee information and business growth. Other practical tools may have to be thought of to bridge the gap that exists when looking for data on SMEs. In this respect, the service from Safaricom 'Lipa na M-Pesa' could have a built in function to undertake simple analyses like total income and total expenditure in a given time.

To minimize the current risks, it is recommended that mobile money service providers identify platforms capable of minimal delays and fast responses to increase adoption rates in other urban towns in Kenya. Of particular interest are systems that minimize the risk of losing money, such as providing a method to confirm the business identity one has registered on their systems, verification using business name as opposed to the business mobile number and a faster method of cancelling a faulty transaction when it arises. Current local area

networks can be developed to boast internet network connectivity within certain zones even though the cost benefits of such interventions need to be further evaluated.

5.3 Area for Further Research

The study recommends further study on the causes of the inconvenience associated with mobile money and reasons why mobile-bank services (accessing bank account via mobile phone) are not popular among SMEs.

An experimental study ought to be done to evaluate the contribution of mobile money services to business convenience and financial management with one group using the mobile money and the other not using the service.

Further follow-up studies on the same topic could identify changes over time especially with the expectation that mobile money services may become the primary platform for cashless transactions especially with services like 'Lipa-na-M-Pesa' rapidly gaining popularity. This study can be replicated in the same setting at a different time, or in other urban towns in Kenya.

A study to explore factors that have made M-Pesa achieve high uptake despite other cheaper providers like Airtel money and other competitors like the banking sector and wire transfer services like Western Union will shed more light into the competitiveness of M-Pesa.

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APPENDIXES

APPENDIX I: Survey Cover Letter

Dear Participant:

My name is Kenneth Miriti and I am a Masters (MBA Corporate Management) student at Kenya College of Accountancy University (KCAU). For my final research project, I am examining the ***"Impact of Mobile Money on Small and Medium Enterprises in Naivasha***". Because you are having been selected according to the selection criteria used, I am inviting you to participate in this research study by completing the attached surveys.

The following questionnaire will require approximately **15 minutes**. There is no compensation for responding nor is there any known risk. The information collected will remain confidential and I, therefore, kindly requested that you do not include your name. If you choose to participate in this project, please answer all questions as honestly as possible and return the completed questionnaires promptly to the field assistance who will visit your shop/location to offer guidance and collection the filled out questionnaires. Participation is strictly voluntary and you may refuse to participate at any time.

Thank you for taking the time to assist me in my educational endeavours. The data collected will provide useful information regarding how mobile money services have helped businesses, and advice on the possibilities of improving currently available products to improve services available to businesses.

Sincerely,

Kenneth Miriti Nyaga

Phone Number; 0733601313

Email: kmiriti@gmail.com

APPENDIX II: Questionnaire

Section A: Respondents Demographics

In this section the researcher wishes to capture the respondent demographics related to gender, age of the respondents, position held in the business (either as owner, employee or partner), the ownership of the business (sole, partnership or company) and the number of branches operated by the same business**.**

1	Name (Optional)	Tick appropriately	
2	Sex (tick appropriately)	Male	
		Female	
3	Position held in the business (tick appropriately)	Owner	
		Employee	
		Partner	
4	Type of ownership	Sole	
		Partnership	
		Company	
5	Number of employee	1-5	
		6-10	
		11-15	
		>16	
6	Number of branches	1	
		2-5	
		>6	

Section B: Business Type

In this section the researcher wishes to capture the SME duration of operation categorized in 5 years each, if the SME owners have other businesses they operate and their number, the size of the business as it related to annual turnover and the number of employees**.**

1. How long have you been in the business? (Tick appropriately)

1-5 Years	
6-10 Years	
11-15 Years	
Above 15 years	

2. Do you have other businesses you hold?

Yes ( ) No ( )

3. If yes, how many businesses? (Tick appropriately)

Number of business

2-3 Business	
4-6 Business	
Above 7	

4. What is the size of the business in terms of sales per year?

10000 - 100000 ( )

101000-350000 ( )

351000-900000 ( )

Above 1000000 ( )

Section C: Knowledge of Mobile Money Services

In this section the researcher wished to establish if the respondent had subscribed to a mobile money service, if they had knowledge of the available mobile money service providers (i.e. M-Pesa, Airtel Money, YU-Cash and Orange Money) according to the information available during the time of this research and the number of years they had used that service.

Further on, the researcher inquired if respondents had knowledge of various mobile money services provided at the time through various networks which included receiving or sending money, purchase of airtime, savings, withdrawals from the mobile money account or the bank using mobile money services, checking balances with mobile accounts or bank using mobile services and viewing transaction information as presented in the tables below.

This was followed by information related to actual services the SMEs respondents had used for their businesses and frequency rating for such services in terms of importance to their businesses. Banks that were accessed by SMEs to support mobile money functions were explored at this point.

1. Do you use mobile money services?

Yes 〔 〕 No 〔 〕

2. If yes, which mobile money service do you use and for how long? Tick all appropriate

Service provider	<1 Year-5 Years	1-26-10 Years	3-5Years11-15 Years	Above 15 years
M-PESA				
Airtel Money				
YU-Cash				
Orange money				

3. I have sufficient information regarding the following services through mobile phone

(Tick alongside the services you are familiar with)

Buying airtime through Mobile Money	
Saving (depositing) into Mobile Money	
Withdrawing from mobile money	
Sending money	
Receiving money	
Checking account balance with the bank	
Checking account balance in the mobile money transfer account	
Paying bills	
Knowing when I receive deposit into mobile money	
Knowing when I receive deposit into the bank	
Viewing recent mobile money transactions	

4. To what extent are these services important to your business?

Tick your rating only for the services you have used from question 1 above

	Very Important	Important	Less important	Least important	Not at all
Buy airtime					
Buy business goods and supplies					
Receive money from another dealer/customer					
Receive salary					
Pay salaries					
Deposit money into mobile phone account					
Withdraw money from mobile phone					
Pay business bills					
Repay loans					
As a savings facility					
Insurance premiums remittances					

Access bank loans					

5. Other than mobile dealers or agents, indicate by ticking which banks or financial institutions enable you to utilize mobile money services

1a,	Equity Bank	
1b,	KCB	
1c	Cooperative Bank	
1d	Other Banks	

Section E: Mobile Services Preferred by the Business

In this section the researcher wished to establish the frequency at which SMEs used various mobile money services with ratings such as: many times, few times, never or commonly used. Any reason they preferred those services or opted not to use others was also recorded. Reliability of the mobile money service providers was explored at this stage and graded as: very reliable, often reliable, sometimes reliable or very unreliable. The other variable explored at this point included the convenience of mobile money services, duration of transaction using mobile money services, accessibility of mobile money services, and lastly cost of various mobile money services.including their importance to the business

1. Please indicate the relative frequency in using the mobile money services to

	Many times	A few times or once	Never	Don't Know/ refused
Withdraw cash from the bank				
Check Balance				
Request for statement				
Make a transfer				
Buy airtime				
Pay bills				
Access bank loans				

2. How reliable is your mobile money provider on a scale of 1-5

	Very reliable	Often reliable	Sometimes reliable	Often unreliable	Very unreliable
Support from the service provider					
Adequate Quality of services from provider					
Communication with suppliers and customers					
Conducting the outlined transactions					

3. In regard to convenience of mobile money services and time taken to transact (1=strongly agree, 5 = strongly disagree)

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Mobile money service is convenient for transactions					
Time taken to transact business with MM is short					
Easy to use MM to transact					
Many other users already registered with MM					
No additional documents needed to transact except the phone					
MM saves time compared to other services					

4. How costly is your mobile money provider on a scale of 1-5

   Tick the appropriate rate

	Very costly	Quite costly	Reasonable	Cheap	Very cheap
Affordable cost of SIM Card					
Easy replacement of SIM card					
Affordable cost of sending or receiving money					

Section F: Mobile Money and Business Growth

In this session, the researcher wishes to establish the respondents' opinion of SMEs on the Impact of mobile money service to their business Growth. Further, the researcher explored areas where SMEs thought that Mobile money services contributed to business performance such as in sales, payment to suppliers, rent or salary payments, or loan accessibility and loan repayments.

1. Mobile money has contributed to the growth of my business (on a scale of 1-5)

Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree

2. In which areas has mobile money contributed to your business growth?

	Strongly agree	Agree	Neither agree nor disagree	Disagree	Strongly Disagree
Payments to suppliers					
Sales					
Rent payments					
Salary payments					
Loan payments					
Loan applications					

Section G: Challenges Arising from Mobile Money Services

The researcher wishes to establish the respondent challenges arising from use of mobile money services based on previous reported of issues related to lack of floats, loss of money during transactions, few agents who might not be able to meet the demands, and service provider reliability. Frequency of those challenges was explored to see if it was a common challenge (daily or weekly) as opposed to a rare challenge (yearly or rarely).and how SMEs managed to cope with those challenges.

The means SMEs used to deal with those challenges was lastly explored using pre-corded responses and an open response of others.

1. Have you encountered any problem while using mobile money?

   Yes [ ] N o [ ]

2. Which problems and how often have you encountered while using mobile money services?

	Rarely	Yearly	Monthly	Weekly	Daily
Lost money					
No floats					
Few agents					
Service provider reliability					

3. How do you solve the problem you encounter while using mobile money? Please tick appropriately.

   a. Contacting service provider [ ]
   b. Going to court [ ]
   c. Calling the administration [ ]
   d. Other means [ ]

APPENDIX III, Relationship: Regression Analyses on relationship between Mobile Money Service and Importance to SME

Regression Statistics	
Multiple R	0.380716851
R Square	0.144945321
Adjusted R Square	0.038063486
Standard Error	0.18328091
Observations	10

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.045554865	0.045555	1.356127	0.277759195
Residual	8	0.268735135	0.033592		
Total	9	0.31429			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.615135135	0.113664672	5.411841	0.000637	0.353023932	0.8772463	0.35302393	0.87724634
X Variable 1	0.297297297	0.25529412	1.164529	0.277759	-0.291412	0.8860066	-0.291412	0.88600659

RESIDUAL OUTPUT			
Observation	*Predicted Y*	*Residuals*	*Standard Residuals*
1	0.885675676	-0.195675676	-1.13239
2	0.766756757	0.183243243	1.060442
3	0.707297297	0.122702703	0.71009
4	0.641891892	0.058108108	0.336276
5	0.680540541	-0.280540541	-1.62351
6	0.707297297	0.152702703	0.883702
7	0.799459459	0.190540541	1.102672
8	0.719189189	0.030810811	0.178304
9	0.671621622	-0.081621622	-0.47235
10	0.71027027	-0.18027027	-1.04324

PROBABILITY OUTPUT	
Percentile	*Y*
5	0.4
15	0.53
25	0.59
35	0.69
45	0.7
55	0.75
65	0.83
75	0.86
85	0.95
95	0.99

Interpretation

y=0.615135+0.297297x where, y represents importance to business, and x represents respondents frequency.

There is positive relationship between respondents' frequency of use (x) and importance to business (y). This means that as the respondent's frequency to use mobile money service increases, the importance attached to the business by the SME owners increases. This finding corresponds to the finding that those using particular mobile money service where more likely to rate that service as important to the business, as opposed to those not using the same mobile money service for their business.

APPENDIX IV: Regression Statistics on Cost Relationship to Perceived Importance of the Service to the Business

y = Frequency; x1 = Expensive; X2 = Reasonable; X3 = Cheap

SUMMARY OUTPUT	
Regression Statistics	
Multiple R	0.996262
R Square	0.992539
Adjusted R Square	0.488808
Standard Error	0.077198
Observations	4

ANOVA					
	df	*SS*	*MS*	*F*	*Significance F*
Regression	2	1.585581	0.79279	133.0277	0.061193
Residual	2	0.011919	0.00596		
Total	4	1.5975			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A
X Variable 1	0.932379	0.397145	2.347706	0.143408	-0.7764	2.641154	-0.7764	2.641154
X Variable 2	0.528343	0.301795	1.750666	0.222105	-0.77018	1.826863	-0.77018	1.826863

PROBABILITY OUTPUT	
Percentile	*Y*
12.5	0.38
37.5	0.57
62.5	0.71
87.5	0.79

Interpretation

y=0.932379x1+0.528343x2

Conclusion: The larger the number of respondents using mobile money services, the greater the impact on the business. Regardless of the costs of mobile money services, respondents were still more likely to use the service. Use of mobile money services

regardless of the cost was also associated with business growth. Therefore, the relation between respondent frequency of use of the service and the mobile money transaction cost are positively related. In addition, respondents' use of mobile money services and business growth had a positive relationship regardless of the cost of the service.

APPENDIX IV: Mobile Money Services in Kenya

M-Pesa Services	Airtel Money	YUCASH	Orange Money
Send (transfer) money	Deposit Money	Deposit Money	Send money
Buy Airtime	Buy airtime for yourself and for other Airtel customers	Sending money	Withdraw money
Buy Goods	Send money using Airtel money	Withdrawing cash	Pay bills
M-Kesho	Withdraw money	Pre-paid top-up	Manage payrolls
M-Pesa Corporate solutions	Make Payments using Airtel money	Balance inquiry	Mini statements
Pay bills	Bank transactions	Utility bills payments	Current stock prices
Bulk payment (business to consumer)	Manage my account	Requesting money	Current forex rates
M-Pesa to Bank	Access and manage your Bank Account	Transaction History	Request for full statements
M-Pesa to prepay safari card	Pay for your utility bills	Short Message with Transactions	Stop Cheques
Lipa Karo na M-Pesa	Airtel Money Batch Payment Solution	Help	Orange Money Visa Debit card
Deposit cash to your account	Airtel money cash collection solution	Invitations for others to join the services	Mobile money transfer facilitated directly from a bank account
Withdraw cash		YU Cash – Equity Bank Linked Account service	Access to financial services through Equity Branches
M-ticketing			Access to credit facilities on application

Source: all accessed on 19th October 2012

1. http://www.safaricom.co.ke/personal/m-pesa/m-pesa-services-tariffs/tariffs
2. http://www.africa.airtel.com/wps/wcm/connect/africaairtel/Kenya/AirtelMoney/
3. http://yu.co.ke/yucash

4. http://www.orange.co.ke/Orange_money_home.html