# CUSTOMER ADOPTION OF MOBILE BANKING AND PERCEIVED QUALITY OF SERVICE IN COMMERCIAL BANKS IN KENYA

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# **DECLARATION**

This Research project is my own work and has not been submitted to any other

university for the award of a Master's Degree.		
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# **DEDICATION**

To my beloved family and friends, who have supported me financially all through my course work, may the Almighty God bless them.

#### **ACRONYMS**

**ATM-** Automated Teller Machine

SMS- Short Message Service

**SMEs -** Small Scale business Enterprise

**UNCDF-** United Nation Capital Development Fund

M-Banking Mobile banking

# TABLE OF CONTENTS

DECLARATION	ii
ACKNOWLEDGEMENTS	iii
DEDICATION	iv
Table of Contents	vi
List of Tables	ix
ABSTRACT	X
CHAPTER ONE:INTRODUCTION	1
1.1 Background	1
1.1.1 Customer Adoption	3
1.1.2 Perceived service quality	4
1.1.3 Mobile banking	6
1.1.4 Banking industry in Kenya	7
1.2 Research Problem	8
1.3 Research objectives	10
1.4 Value of the study	10
CHAPTER TWO:LITERATURE REVIEW	11
2.1 Introduction	11
2.2 Mobile Banking Acceptance Theories	11
2.2.1 Diffusion of innovation theory (DOI)	11
2.2.2 Theory of Planned Behaviour (TPB)	12
2.2.3 Decomposed Theory of Planned Behavior	13
2.3 Services enabled on Mobile Banking	14
2.3.1 Account information	14

2.3.2 Payment, Deposits and Transfers	14
2.3.3 Investments, support and content services	14
2.4 Mobile banking challenges	15
2.4.1 Security	15
2.4.2 Customer Authentication	15
2.4.3 Financial institutions concern	16
2.4.4 Network complications	16
2.4.5 Customer Illiteracy	17
2.5 Mobile banking opportunities	17
2.6 Factors affecting the adoption of Mobile Banking	18
2.6.1 Social cultural Factors	18
2.6.2 Personal factors	18
2.6.3 Psychological factors	19
2.6.4 Service Quality factors	19
2.7 Effects of technology on mobile-banking	20
CHAPTER THREE:RESEARCH METHODOLOGY	21
3.1 Introduction	21
3.2 Research Design	21
3.3 Target population and study area	22
3.4 Sampling and sample size	22
3.5 Data collection procedures	22
3.6 Data analysis.	23

CHAPTER FOUR: RESEARCH FINDINGS	25
4.1 Introduction	25
4.2 Quantitative analysis	25
4.2.1 Response rate	25
4.2.2 Gender of the respondents	25
4.2.3 Age distribution of respondents	26
4.2.4 Occupation distribution	27
4.2.5 The income of the respondent	28
4.2.6 Frequency of usage of mobile banking	29
4.2.7 Problems encountered in utilizing M-banking	31
CHAPTER FIVE:CONCLUSION AND RECOMMEND	ATIONS34
5.1 Introduction	34
5.2 Summary	34
5.3 Conclusions	35
5.4 Recommendations	36
5.5 Suggestions for further research	36
REFERENCES	37
APPENDICES	41
Appendix 1: Questionnaires	41
Appendix 2: Research budget	49
Appendix 3: time schedule/ frame	49
Appendix 4: Letter of introduction	50

# LIST OF TABLES

Table 4.2.1: Gender of respondents	26
Table 4.2.2: Age of Respondents	26
Table 4.2.3: Occupation Distribution	27
Table 4.2.4: The monthly income of respondents	28
Table 4.2.5: Frequency of mobile banking Services that customers have used	l in
commercial Bank	29
Table 4.2.6: Frequency of usage of mobile banking	29
Table 4.2.7: Comparison of M-banking and Tradition banking	30
Table 4.2.8. Reliability Rating	30
Table 4.2.9: Problems encountered in utilizing M-banking	31
Table 4.2.10 Problems encountered in utilizing M-banking (percentage)	32

#### **ABSTRACT**

The aim of this study was to evaluate the customer adoption of mobile banking and perceived quality of service by customers in commercial banks in Kenya .The researcher focussed mainly on commercial banks and concentrated mostly on customers who are currently using mobile banking services. The major purpose of this study was to find out how the adoption of mobile banking by the customer has influenced the perceived quality of service in the commercial banks in Kenya. The specific objectives of the study was to; examine the types of mobile banking services available in the commercial banking sector, investigate the problems encountered by the customers in utilising mobile banking, determine the awareness of mobile banking by customer and provide recommendations for improving the mobile banking facility among customers. The population of this study consisted of bank customers who were active users of mobile banking services. The study used a sample size of 30 customers. The sample size provided good representation and therefore representative report. The data collected from the questionnaire was sorted and edited and then presented in tables and charts for quick reference and to provide insight into the response from the opinions of the respondents. The study revealed that mobile banking forms the highest percentage of banking usage among clients. Clients preferred using this mode of banking service compared to traditional banking halls because it saves time and costs. Majority of the subscribers of M-banking rated security as the most frequent problem encountered while system failure rated the most less frequently problem encountered. In conclusion, the researcher recommended that the banks need to improve the efficiency in terms of the delivery of the mobile banking services currently available. Secondly, the banks should invest in better information technology infrastructure in order to improve the systems and network failure. Finally, there is need for the banks to look into aggressive promotional advertising to popularise or to create awareness of mobile banking services. The researcher established and suggested that the research is comprehensive but there is need for more research to establish why other customers don't prefer mobile banking while it is very convenient and cost effective. Other researchers can also explore on other services related to M-banking that a bank can take up.

#### **CHAPTER ONE**

#### INTRODUCTION

#### 1.1 Background

The customer adoption process is constant. Marketing tools may change, the way consumers discover products may change, and consumer behaviours may change, but the 5 stages that make up the consumer adoption process will always remain the same. The 5 stages are: product awareness, product interest, product evaluation, product trial, and product adoption. Companies work hard to create a product, but in order to sustain and succeed in the market, organizations also need to create a process that successfully walks their consumers through the stages of the consumer adoption process. (Mullins, J., & Walker, O., 2013)

The theories that were used in this study were; Diffusion of innovation theory (DOI) which was developed by E.M. Rogers in 1962 and is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. Another theory was the Theory of Planned Behavior (TPB) which was developed In order to address the limitations of technology acceptance model. Lastly the decomposed Theory of Planned Behavior which was raised by Taylor and Todd in 1995. They developed the theory of planned behavior through breaking down structure of attitude, subjective norm and perceived behavioural control (Luarn and Lin, 2005). This resulted in increased power to explain behavioral intentions and accurate understanding of behavioural events (Pedersen, 2005).

According to the decomposed theory of planned behavior, the behavior is determined by "intention to use". "Intention to use", in turn, is determined by the attitude toward behavior, subjective norm and perceived behavioural control. Perceived usefulness is an extent to which a person believes using a particular technology will improve his or her job performance (Laukkanen and Cruz, 2009).

Mobile technologies have become a crucial functional element of modern organizations. They provide uninterrupted access to information, regardless of the user's geographic location and time. Customer service, quality, satisfaction and retention are key proponents of measuring success and profitability in organisations.

Due to the exponential growth of information technology, banks face dual competitive pressures to provide service quality and administrative efficiency. Accordingly, banks need to retain their existing users of mobile banking (m-banking) services to be able to benefit long term from this sustained usage behaviour. The problem for banks is that the current understanding of determinants of m-banking sustained usage is limited. We proposed some modifications to the DeLone and McLean Model (2003) of Information Systems Success in light of descriptive and relational studies, whereby the universal model may be applicable in post adoption user retention context. Using the findings of the review of theories and models, banks in Kenya can improve their m-banking strategies to achieve higher retention rates of existing users of m-banking services. While this study focused on m-banking user retention in the Kenyan context catering to post adoption scenario, the purpose of this study was also to establish a universal measurement model for post adoption user perception of m-banking services, with global applicability.

#### **1.1.1 Customer Adoption**

There are five stages to customer adoption. The first stage is about creating awareness that the product is in the market. It is important that the company develops a successful avenue for their customers to become aware of their product. If customers do not know the product exists, than it might as well not exist! It is important to create marketing material and Make these marketing materials easily accessible. Utilizing creativity and wit is a great way to engage consumers in this awareness stage. (Mullins, J., & Walker, O., 2013)

In the second stage consumers are ready to learn more about the companies' product and or service. The organization must guide the consumer through the interest stage by providing easily accessible information on the product. Among the methods used in the today's business landscape include a website describing the product, blog posts, tutorial or instructional videos, white papers, and other sources of info that the potential consumer can discover and review. (Mullins, J., & Walker, O., 2013)

Prior to purchasing, consumers examine, compare and evaluate the product. Consumers go online and utilize social media channels to ask other individuals about their product or service.

In addition, they find online reviews and recommendations. In order to simplify a customer's search and evaluation of a companies' product, creating information that outlines the difference between a companies' product and other similar products, or differences within the different products and services is critical. (Mullins, J., & Walker, O., 2013).

The fourth stage is where the consumer "kicks the tires". Nothing helps a consumer make a decision about a product more than actually trying the product out! There are many ways this is accomplished e.g. provide consumer with a free trial or a proof of concept campaign. In this stage it is very important to set the customer expectations correctly and deliver on said expectations. (Mullins, J., & Walker, O., 2013)

The last stage is the product adoption phase, when the consumer enters the product adoption phase, he/she is ready to purchase the companies product. This is the critical stage that businesses need to get their consumers to. When the customer is here, a companies need to make the payment process simple, intuitive, and pain free. In addition, it need to ensure that the consumer can easily obtain the product. If it makes it to and through this last phase successfully, than it can take money to the bank, a job well done! (Mullins, J., & Walker, O., 2013)

### 1.1.2 Perceived service quality

Perceived quality can be defined as the customer's perception of the overall quality or superiority of a product or service with respect to its intended purpose, relative to alternatives. Perceived quality is, first, a perception by customers. It may have little or nothing to do with the actual excellence of the product, and is based on the firms (or brands) current public image, consumer's experience with the firm's other products, and the influence of the opinion leaders, consumer's peer group, and others. Perceived quality cannot necessarily be objectively determined, in part because it is a perception and also because judgments about what is important to customers are involved. To understand perceived quality, the identification and measurement of the underlying dimensions will be useful, but the perceived quality itself is a summary, global construct (Aaker, D 1991).

According to Aaker, perceived quality is generated by each buyer's perception of up to seven elements. In evaluating these quality elements, consumers literally make up their mind about whether what you're saying matches the qualities they're seeing. Just as importantly, these elements are how they decide to choose your qualities over the qualities of others: If it's a product, its evaluated on: Performance, Features, conformity with specifications, Reliability, Durability, Serviceability, Fit and finish.

If it's a service, Aaker says your customers make quality decisions based on: Tangibles, Reliability, Competence, Responsiveness and Empathy (Aaker, D 1991)

According to academics Scott Maynes and Valarie Zeithaml, as there is no general agreement on standards for the skewed term "quality", a consumer's judgment about a product's excellence and superiority is an intangible aspect of a brand. As a result, objective quality is moot, and all quality evaluations are considered to be subjective. This argument supports the premise that quality is determined by customers' perceptions, based on individual values. Consequently, perceived quality is defined as a measure of belief. (Roumeliotis, J., 2012)

It can be concluded therefore that financial performance is deemed to be linked to a brand's perceived quality – a distinct relationship between them. Perceived quality is an intangible and overall feeling about a brand and can't essentially be objectively determined, partly because it is a perception and also because judgments about what is important to customers differ sharply in their personalities, needs, and preferences. However, perceived quality is based on essential factors which include characteristics of the products to which the brand is attached to such as performance and reliability.

#### 1.1.3 Mobile banking

Mobile banking can be defined as the ability to conduct bank transactions via a mobile device, or more broadly – to conduct financial transactions via a mobile terminal (Drexelius & Herzig, 2001). This definition is a suitable working one as it includes not only basic services such as bank account statements and funds transfer bur also electronic payment options as well as information based financial services (e.g. alerts on account limit or account balance, access to stock broking). It compares with the definition found in (Kiesnoski, 2000) where mobile banking is referred to as the "ability to bank virtually anytime, anywhere".

This definition needs to be expanded to include the two different types of customer account access: a Web based interface and a simple text-messaging interface. This addition is important as it differentiates between the two network infrastructures for mobile commerce: the global, public, and 'free' Internet, and the cluster of regional, public, and paid wireless telecommunication networks. Is there a need for mobile banking? The answer is a firm "yes".

Although consumer demand for more sophisticated mobile services has not been very strong, demand for basic mobile banking is more pronounced compared to the general demand for mobile commerce services (Bansai, 2001). The widely quoted report (Muller-Veerse, 1999) classifies mobile financial services as a key commercial driver for mobile commerce. As already indicated provision of mobile banking relies on a mobile end-user device; currently there are in fact two basic types of mobile end-user devices – the mobile (cellular, cell) phone and the portable handheld computer known as Personal Digital Assistant (PDA).

#### 1.1.4 Banking industry in Kenya

The Companies Act, the Central Bank of Kenya (CBK) Act and the Banking Act are the main regulators and governors of banking Industry in Kenya. Central Bank of Kenya is tasked with formulating and implementation of monetary and fiscal policies, it is the lender of last resort in Kenya and is the banker to all other banks. The CBK ensures the proper functioning of the Kenyan financial system, the liquidity in the county and the solvency of the Kenya shilling. Kenyan Banks have realized tremendous grow in the last five years and have expanded to the east African region. The banking industry in Kenya has also involved itself in automation, moving from the traditional banking to better meet the growing complex needs of their customer and globalization challenges. There has been increased competition from local banks as well as international banks, some of which are new players in the country. This has served the Kenyan economy well as the customers and shareholder are the ones who have benefited the most.

The major challenges facing the banking industry include: New regulations especially with the passing of the new constitution. CBK requires financial institutions to build up their minimum core capital requirement to Kenya shillings 1 Billion by December 2012. The Terrorist attacks on the twin towers in United States of America emphasized and led to the mandating Acts like Anti-money laundering. Nations are working closing to ensure that proceeds of crime do not get into the financial systems of the world. Another challenge is the Global crisis experienced affected banking industry in Kenya and more so the mobilization of deposits and trade reduction. Lastly the Interest margins declines have also affected the banking industry in Kenya. Langat, L., & Rop, B. (2013).

#### 1.2 Research Problem

Technological changes has been inevitable in the financial sector. The adoption of internet banking has changed the dimensions of competition following the introduction of Personal computer banking, Automated Teller Machines (ATMs) and phone banking, which are the initial cornerstones of electronic finance. The increased adoption and penetration of internet has added a new distribution channel to retail banking. Getting cash into the hands of people who use it is limited on the supply –side rather than demand side: there is no shortage of funds but it's the ability to move money from the sender to the receiver that is the stumbling block. Since the creation of money ability to move it from A to B- the so called 'Velocity of money'-has been a fundamental cornerstone of economic activities (Hughes etal 2007)

Almost all banks in Kenya have had to change their ATM technologies frequently to curb the rising frauds at these machines. To combat the prohibitive costs associated with roll-out of banking networks, alternative access channels i.e. M- banking can be considered. A good example is M-pesa which has proved to have significance for economic activity across the board.

It reduces the cost and risk intervene in dealing with cash ,M-pesa also helps in facilitating the flow of money from one party to another using a mobile communication infrastructure that already connects several millions Kenyans (Info DEV, 2006).M-Banking holds the prospect of offering a low cost, accessible transaction banking platform for currently unbanked customers in Kenya.

Different scholars have done studies on electronic and mobile banking in Kenya. Kigen (2010) studied the impact of mobile banking on transaction costs of microfinance institutions where he found out that by then, mobile banking had reduced transaction costs considerably though they were not directly felt by the banks because of the then small mobile banking customer base. The current study differs from Kigen (2010) because the rate of mobile banking and the number of banks which have adopted mobile banking have increased. In addition, this study will consider the impact of customer adoption on perceived quality and not just transactional costs.

Kingoo (2011) did a study on the relationship between electronic banking and financial performance of commercial banks in Kenya where he paid keen attention on the microfinance Institutions in Nairobi. However, the current study is focusing on commercial banks and not microfinance institutions. Kingoo (2011) also looked at the wider electronic banking whereas this study will only concentrate on mobile banking. Munaye (2009) studied the application of mobile banking as a strategic response by equity bank Kenya limited to the challenge in the external environment. Munaye (2009) reviewed the concept of mobile banking as a strategic response where its effects on financial performance were not considered.

The study aimed at finding out impact of mobile banking uptake on service delivery in Kenya Commercial Banks, determine the level of awareness of the facility by the customers and provide recommendations needed to improve the M-banking facility among customers. The research question that was addressed in this study was; what are the impact of customer adoption of mobile banking on perceived quality service in commercial banks in Kenya?

#### 1.3 Research objectives

The main research objective was to access the impact of customer adoption of mobile banking on perceived quality of service in commercial banks in Kenya. The specific objectives were.

- To examine the types of mobile banking services available in the commercial banks in Kenya.
- ii. To investigate the uptake of mobile banking by bank customers of commercial banks in Kenya
- iii. To establish the impact of mobile banking on service delivery by the commercial banks in Kenya

#### 1.4 Value of the study

The study provides a broad overview and enlightens mobile phone users on fast and efficient ways to effectively achieve a truly convenient banking medium. it aimed to provide a preliminary analysis of the types of mobile banking services attached to banks from the customers perspective and compares the difference between the use of m-banking and conventional banking(branch banking).

The study also helps the policy makers in that they have more insight into mobile banking and thus implement policies that are applicable and effective and relevant. The study aimed at contributing to better understanding of the use of mobile banking services among users both retail and corporate, by providing useful insights to better meet market needs efficiently. As a basis of research and knowledge in the fields of academia, the study is resourceful in this field and provides a new frontiers.

#### **CHAPTER TWO**

#### LITERATURE REVIEW

#### 2.1 Introduction

In this chapter the researcher will discuss literature on mobile banking which includes background of the study, types of mobile banking services, uptake and impact of mobile banking to commercial banks, mobile banking problems and opportunities, factors affecting the adoption of mobile banking, trends in mobile baking and finally the effects of technology in mobile banking.

#### 2.2 Mobile Banking Acceptance Theories

Several theories are offered in order to identify factors that cause people accept new technologies and information systems and use them (Rao and Troshani, 2007).

# **2.2.1 Diffusion of innovation theory (DOI)**

Diffusion of Innovation (DOI) Theory, developed by E.M. Rogers in 1962, is one of the oldest social science theories. It originated in communication to explain how, over time, an idea or product gains momentum and diffuses (or spreads) through a specific population or social system. The end result of this diffusion is that people, as part of a social system, adopt a new idea, behaviour, or product. Adoption means that a person does something differently than what they had previously (i.e., purchase or use a new product, acquire and perform a new behaviour, etc.). The key to adoption is that the person must perceive the idea, behaviour, or product as new or innovative. It is through this that diffusion is possible.

Adoption of a new idea, behaviour, or product (i.e., "innovation") does not happen simultaneously in a social system; rather it is a process whereby some people are more apt to adopt the innovation than others. Researchers have found that people who adopt an innovation early have different characteristics than people who adopt an innovation later. When promoting an innovation to a target population, it is important to understand the characteristics of the target population that will help or hinder adoption of the innovation. There are five established adopter categories, Innovators, Early Adopters, Early Majority, Late Majority and Laggards. Although the majority of the general population tends to fall in the middle categories, it is still necessary to understand the characteristics of the target population.

#### 2.2.2 Theory of Planned Behaviour (TPB)

In order to address the limitations of TAM, Venkatesh and Davis (2000) enhanced the TAM to Extended Technology Acceptance Model (TAM2), which provides a detailed explanation of the key forces underlying judgments of perceived usefulness (Venkatesh & Davis, 2000). Using TAM as the starting point, TAM2 incorporated additional theoretical constructs including social influence processes (subjective norm, voluntaries, image, and experience) and cognitive instrumental processes (job relevance, output quality, and result demonstrability), which original TAM lacked (Venkatesh & Davis, 2000). In TAM2, the social influences such as image and subjective norm were studied in order to overcome the limitations of the original TAM. TAM2 actually incorporated social influences into an individual's perceptions of usefulness (Venkatesh & Davis, 2000). Subjective norm is the same construct that has been studied in TRA and TPB. Compared to subjective norm, image can be defined as the way that people want to be seen.

Image was found to have a significant influence on perceived usefulness (Chan & Lu, 2004; Venkatesh & Davis, 2000) and attitude (Karahanna, et al., 1999). TAM2 also included diverse variables in order to enhance the explanatory power, but many times TAM2 explained low percentages of a system's use (Lu, Yao, & Yu, 2005). As TAM2 was developed in order to improve the explanatory power of the original TAM, the Unified Theory of Acceptance and Use of Technology model (UTAUT) was developed to address the same limitation in TAM2 (Venkatesh, Morris, Davis, & Davis, 2003).

#### 2.2.3 Decomposed Theory of Planned Behavior

Decomposed theory of Planned Behavior was raised by Taylor and Todd in 1995. They developed the theory of planned behaviour through breaking down structure of attitude, subjective norm and perceived behavioural control (Luarn and Lin, 2005). This resulted in increased power to explain behavioural intentions and accurate understanding of behavioural events (Pedersen, 2005). According to the decomposed theory of planned behaviour, the behaviour is determined by "intention to use". "Intention to use", in turn, is determined by the attitude toward behaviour, subjective norm and perceived behavioural control. Perceived usefulness is an extent to which a person believes using a particular technology will improve his or her job performance (Laukkanen and Cruz, 2009).

Perceived ease of use refers to the degree to which a person believes using a particular system does not require a lot of effort (Taylor and Todd, 1995). Perceived compatibility is an extent that an innovation is consistent with existing values, past experiences and current needs of potential adopters (Puschel and Mazzon, 2010). While the theory of planned behaviour simply explains the relationship between structure of beliefs and the prerequisite of intention.

In brief, decomposed theory of planned behaviour, offers a comprehensive approach to understanding the factors affecting a person's decision to use technology information (Suoranta and Mattila, 2004).

#### 2.3 Services enabled on Mobile Banking

#### 2.3.1 Account information

These includes: mini-statements and checking of account history, alerts on account activity or passing of set thresholds, monitoring of term deposits, access to loan statements, access to card statements, mutual funds/equity statements, insurance policy management, pension plan management, status on cheque or stop payment on cheque, ordering cheque books, balance checking in the account, recent transactions, due date of payment (functionality for stop, change and deleting of payments).

#### 2.3.2 Payment, Deposits and Transfers

These includes: domestic and international fund transfers, micro-payment handling, mobile recharging, commercial payment processing, bill payment processing, peer to peer payments, withdrawal at banking agent and deposit at banking agent.

#### 2.3.3 Investments, support and content services

Investments include portfolio management services, real-time stock quotes, mobile banking, personalized alerts and notifications on security prices. Support services include status of requests for credit, including mortgage approval and insurance coverage, cheque book and card requests. Content services include general information such as weather updates, news loyalty-related offers, and location-based services.

#### 2.4 Mobile banking challenges

Financial transactions that are based on wireless handsets may soon prove to be as pervasive as internet based financial applications. Recent surveys indicate that as many as 7% of mobile phone customers use their handsets for mobile banking, while mobile banking technology is still in a developmental stage.

That is most certainly true for the legal and regulatory framework that governs these services. However there are a number of legal and technical challenges that will need to be met before financial institutions can safely deploy mobile transactions on a wide scale to their interested customers (VonReijswoud, 2007).

#### 2.4.1 Security

Unlike the use of ATM, credit and debit card networks, the use of wireless technology creates additional risks that information will be stolen, triggering concerns under the privacy provisions of the Gramm-Leach-Billey Act, as well as the fair and accurate credit Transactions Act amendments to the fair credit reporting Act. Without the use of highly secure technology to prevent 3<sup>rd</sup> party intrusion and losses, the ubiquitous tools of mobile finance open the door to enormous potential for monetary as well as reputational risk. (Von Reijswoud, 2007).

#### 2.4.2 Customer Authentication

One of the most difficult problems facing banks is the issue of customer authentication. While in many ways a mobile handset is inherently more secure than a desktop computer, the mobility of the device and the nature of wireless communications create additional authentication and security issues for financial institutions and their customers.

The now familiar "know your customer" rules must be reviewed to see whether and how the financial institutions providing mobile banking services can accurately determine the identity of an existing customer (Porteous, 2007).

#### 2.4.3 Financial institutions concern

The financial services sector may share some things in common with wireless carriers, particularly with regard to risk management and customer protection but, pretty soon, the similarity end.

Understandably, financial services companies view these transactions as not merely another application, rather every mobile finance transactions runs to the very heart of their raison deter to initiate and complete safe and secure transfer of money. If even one of these transactions goes awry, they have much more at stake than simply reimbursing a customer for a transaction fee. For financial instructions, mobile banking and mobile finance raise a number of legal, regulatory and operational issues that have yet to be resolved on a comprehensive basis (Ivatury and Pickens, 2006).

#### 2.4.4 Network complications

Financial services companies that provide their customers with mobile financial services are accustomed to regulatory disclosures and consumer protection requirements that apply to electronic delivery of services. In mobile finance, they also need to be mindful of communication networks play a part in originating and terminating mobile finance transactions: traditional wireline network ("public switched telephone network") the internet, and wireless cell phone / PCS networks. Today there are many phone companies, making the financial institutions to have far more carriers to deal with today to make mobile banking a reality.

Most part of the country is served by more than one wireless carrier each with proprietary technology and their own ways of doing business. Throughout each of these layers of communications, there are a wide array of legacy regulations and technologies to contend with before a mobile transaction can be initiated and completed. Safe, secure and cost-effective deployment of mobile banking requires an understanding of how all these networks inter-operate (Vaughan, 2007).

#### 2.4.5 Customer Illiteracy

Reading illiteracy: the majority of poor clients cannot read or write and can only trust voice services or what the sale agents say. Also, since mobile phone software and hardware is based on Latin alphabet, non-Latin language users are at a disadvantage. Technological illiteracy: prospective customers who might be a good match for the product may feel that the product is technologically too complex for them. Financial illiteracy: the target customers may often be unaware of the terms and conditions that underlie the financial agreements they agree to with the financial service provider.

Illiteracy at these 3 levels enables many firms to take advantage of their unwitting customers. This possibility increases as the financial services on offer become more and more complex. Hence the financial institutions should be ready to teach the customers financial and technological literacy (Maurer, 2008).

## 2.5 Mobile banking opportunities

The mobile banking offers a convenient method of managing money without handling cash (Karjaluoto, 2002). Mobile banking in developing countries is more about accessibility and affordability (Cracknell, 2004).

Mobile phone operators have identified mobile banking systems as a potential service to offer customers, increasingly loyalty while generating fees and messaging charges (Info DEV, 2006). Financial institutions, which have had difficulty providing profitable services through traditional channels to poor clients, see M-banking systems as a form of "branchless banking" (Ivatury and Mass, 2008), which lowers the costs of serving low-income customers. Government regulators see a similar appeal but are working out the legal implications of the technologies, particularly concerning security and taxation.

#### 2.6 Factors affecting the adoption of Mobile Banking

#### 2.6.1 Social cultural Factors

Cultural assists an adult to acquire a set of value perception, preferences and behaviours through a process of socialization involving family and other educational institutions. Cultural principles enable us to classify products to categories.

Therefore culture play a very important role during the formation of a person's behaviour and customs along these lives. These suggests that the cultural background of individual has a great effect on how they view mobile banking. The various cultural background of individual will determine their perception on mobile banking and this has an effect on their decision to carry out banking services. (Arnould Price and Sinkhan, 2002)

#### 2.6.2 Personal factors

Arnould Price and Sinkhan, (2002) claim the characteristics such as family size, age, income, geographical location, gender and occupation are useful in studying factors affecting adoption of M-banking.

Eves and Earley, (1993) identifies personal factors that influence individual behaviour to be personality, which Eves and Earley, (1993) defines as the total patterns of characteristics ways of thinking, feeling and behaving that constitute the individuals

distinctive methods of relating to the environment. People buy different modes of mobiles phones over a lifetime relative to their personality indicating that one's personality has an effect on the choice of mobile banking services.

#### 2.6.3 Psychological factors

There are four psychological factors which are motivation, perception, learning and belief and attitude and these have an influence on persons choice .A need become a motive when it is aroused to a sufficient intensity and a motivation is such a need that is sufficiently driving a person to act. Perception is the process of electing, organizing and interpreting information. Eves and Earley, (1993) relates the psychological matter to the motivational theories. Such theories like the Maslows motivational theory on Hierarchy of needs to try understanding the personality aspect of factors that influence decision.

#### 2.6.4 Service Quality factors

Bick & Brown Andrew (2004) claims, that customer's service is very important to a business. They go further to say that customer satisfaction is essential for customer loyalty within banking. However to achieve customer satisfaction a superior level of service and customer orientation is required. Gatners, (2004) established that the quality of service offered by the banks affects savings of income.

This is because delighted customers will be happy and therefore be loyal to the bank.

It is essential for the banks to ensure that the services provided trigger a positive stimulus so as not to lose the customer. The same would apply to trying to attract new customers to the bank. (Koltler et al, 2003)

#### 2.7 Effects of technology on mobile-banking

The spread of mobile phones across the developing world is one of the most remarkable technology stories of the past decades. Buoyed by prepay cards and inexpensive handsets, hundreds of millions of first-time telephone owners have made voice calls and text messages part of their daily lives.

However, many of these same new mobile phone users live in informal and / or cash economies, without access to financial services that others take for granted. Indeed, across the developing world, there are probably more people with mobile handsets than with bank accounts (Owens, and Anna, 2006).

Technology offers banks the potential to dramatically reduce operating costs and improves the quality of management information hence making banking more profitable. It has been, and continues to be, the core focus of operations and strategic direction since the early 1990's (Vaughan, 2007).

#### **CHAPTER THREE**

#### RESEARCH METHODOLOGY

#### 3.1 Introduction

This chapter describes the type of research conducted and defines the population and sample design used. It further indicates the sources of data and the type of data the researcher used, in addition it describes in detail the data collection methods utilized and the data analysis process that was used to obtain results from the sample.

#### 3.2 Research Design

The study adopted a quantitative research approach. It employed a descriptive statistical model to analyse and present the data. Kothari, (2005) defines descriptive research as those studies that are concerned with specific predictions, with narration of facts and characteristics concerning individuals groups and situations. This research was descriptive since it investigated the impact of customer adoption of mobile banking on perceived quality of service in commercial banks in Kenya despite its availability. Descriptive research employs survey design. Survey design is a report of study, which requires the collection of quantifiable information from the sample. The survey research was descriptive because it obtained information about an existing phenomenon.

A descriptive research answers questions concerning the current status of subject in the study. Survey design is conducted under natural settings of the respondent that is no control of the events. The secondary data was accessed from the Banks policy documents and statistics obtained from branch operations in Nairobi.

#### 3.3 Target population and study area

The target population of this study was Commercial Banks customers in Nairobi who are subscribers to the mobile Banking facilities. The target population was composed of customers who use mobile banking services.

#### 3.4 Sampling and sample size

A sample is a represent group of the target population that is selected using various sampling methods. This research would have allowed for more mobile banking subscribers to be included but due to financial constraint, accuracy and speed of collecting data, the researcher only studied 50 mobile banking subscribers in various commercial banks in Nairobi. This sample was adequate for conclusive generalizability of the whole population. The sample was selected by first categorizing the mobile banking customers according to the type of account that they hold with the Bank i.e. current account, ordinary account, savings accounts, super junior investment account, and fixed deposit accounts. After the categorization, a representative sample was obtained randomly from each strata in population to the total population in consideration. The study mainly focused on the impact of customer adoption of mobile banking on perceived quality of service in commercial banks in Kenya. Due to the large number of individuals involved, convenience sampling methods was used where the researcher contacted customers from the banks data base so that they fills in the questionnaire on their next visit to the bank.

#### 3.5 Data collection procedures

The data was locally limited to specific areas that are assumed to represent the category within which they fall. The main primary data collection instrument used was the questionnaire.

A draft was pre-tested on a sample of 5 respondents and the final draft adjusted as per the observations made during the pre-test. Close ended questions and a few open ended questions were used to collect data. They were given to customers who operated a bank account and who were currently using mobile banking services. The researcher also contacted them via their telephone contacts available from the banks data base to request them to fill in the questionnaire.

Detailed interviews were also carried out with the experts in the field of mobile banking facilities. The customers' questionnaire contained 5 sections. Part A consisted of introductory and background questions pertaining to general issues. Part B consisted of phrases and objectives to determine the type of mobile banking services available. Part C contained questions pertaining the problems encountered by customers in utilizing mobile banking. Part D dealt with the level of awareness of mobile banking by the customers while Part E contained questions that provided recommendations from the customers on what should be done to improve mobile banking.

#### 3.6 Data analysis.

Analysis of data in this study was descriptive. According to Nachmias and Nachmias (2004), descriptive statistics enables the researcher to summarize and organize data in an effective and meaningful way. It was first established if the entire questionnaire was dully completed. The data on the questionnaire was then coded, classified and summarized for analysis. This enabled generating percentages and counts of the respondents' opinion on the issues being researched. Statistical Package for Social Sciences was used to aid in data analysis.

The paired t-test, a non-parametric test of differences developed by Sir Williams Gosset (Mugenda & Mugenda, 1999) was also used in this study as a test of significance. The analysis was at 0.05 level of significance. Data generated from there was then presented in form of frequency and percentage tables, and charts. These gave a clear and a more understandable presentation of the data so to be obtained. This was by way of comparing the different variables such as gender, age, distribution, and occupation with usage of banking facilities. In this study data gathered from the files was integrated with available secondary data for the purpose of interpretation that involved the research for broad meaning in response given and making inferences.

#### **CHAPTER FOUR**

#### RESEARCH FINDINGS

#### 4.1 Introduction

This Chapter presents the results of data collected and further discusses the findings. Tables and figures have been used to analyse and present the findings in the study. The aim of the study was to explore the opportunity presented by the mobile banking facilities in enhancing banking services. The study sought to find out the impact of mobile uptake on service delivery in commercial banks in Kenya.

#### 4.2 Quantitative analysis

Data collected was presented in charts and tables making it easier to read and interpret.

Percentages are used to show the relationship between variables.

## **4.2.1 Response rate**

The researchers gave out 50 questionnaires to the respondents, from which 47 were collected, giving a 94% response.

# **4.2.2** Gender of the respondents

This data helped the researchers to understand the number of male and female respondents. A large number of respondents interviewed were males. Out of the 47 mobile phone subscribers interviewed about 70% of them were males while the rest 30% were women as shown in the table 4.2.1

**Table 4.2.1: Gender of respondents** 

Gender	Frequency	Percentage
Male	33	70
Female	14	30
Total	47	100

The data indicates that most of those who use mobile banking are male possible because they are more involved in undertaking business transactions as opposed to women and are interested in banking services as compared to women. They therefore would require to get constant information.

## 4.2.3 Age distribution of respondents

Age has an effect on attitude and usage. This data therefore helped the researchers to understand the level of likely effect age could have on mobile banking.

**Table 4.2.2: Age of Respondents** 

Age group	Frequency	Percentage
18-20	2	4
21-30	20	43
31-40	18	38
41-50	4	9
Over 50	3	6
Total	47	100

Table 2 shows the results of the study indicating the age distribution of the mobile banking users concentrated in the age group of between 21 and 40 years forming a total of 81%. The minority were under 20 years and over 50 years who were only 2 and 3 respectively just making 4% and 6% respectively. This would be attributed to the fact that under 20 years are mostly students and school levers who have not graduated therefore they may not have much use of mobile baking facilities as opposed to other categories. While for the 41-50 age group formed 9%.

# 4.2.4 Occupation distribution

From the results of the study it can be noted that majority of the subscribers using mobile baking are:

**Table 4.2.3: Occupation Distribution** 

Occupation	Frequency	Percentage
Student	4	8
Student		
Company Employee	29	62
Government Employee	6	12
Self Employed	8	18
Others	0	0
Total	47	100

This indicates that the employed client find mobile banking more useful since they form a total of 74%. This is an indication of the need for the employees to transact, and keep track of the status of their account depending on the different days on which transaction take place or employers remit the salaries to the bank. The need to use other mobile banking Services such as purchase of air time could be another reason where it is

common self-employed clients also need constant access to their accounts since their banking is mostly predefined.

# 4.2.5 The income of the respondent

Income levels really tell to a larger extent the level of motivation and ability to save, this data therefore helped the researchers to understand the level of earnings.

Table 4.2.4: The monthly income of respondents

Level of income	Frequency	Percentage	
Below Ksh.1000	2	4	
1,000-10,000	9	19	
11,000-30,000	17	37	
31,000-40,000	10	21	
41,000-50,000	7	15	
Over 50,000	2	4	
Total	47	100	

Table 3 shows that majority of those interviewed (17) earn between Ksh.11,000 -30,000 at 37% followed by those earning 31,000-40,000 who were 10 at 21%.

Those who earn between 1,000 -10,000 were 9 at 19% with those between 41,000-50,000 being 7 at 15%. Those who earn below 1,000 over 50,000 were 2 at 4%. This shows that the low income to the large income earning persons utilises this service but with the Ksh.11000-30,000 being the majority users.

Table 4.2.5: Frequency of mobile banking Services that customers have used in commercial Bank

Services	Frequency	Percentage
Mini-Statements and checking of account history	10	21
Account alerts	5	11
Monitoring of term deposits	4	9
Access to card statements	2	4
Status on check	3	6
Balance checking in the account	14	30
Change of PIN	7	15
Others	2	4
Total	47	100%

# 4.2.6 Frequency of usage of mobile banking

Table 4.2.6: Frequency of usage of mobile banking

Usage	Frequency	Percentage
Daily	12	25
Once in a week	20	43
Once after two weeks	8	17
Once a month	5	11
Others	2	4
Total	47	100%

Inferring from the data collected, it's evident that the mobile banking services are utilised more, once a week followed by daily usage. Further to that, customers utilise the service at a high rate overall.

Table 4.2.7: Comparison of M-banking and Tradition banking

Services	Frequency	Percentage
Mobile banking	29	62
Traditional banking	18	38
Total	47	100%

The study reveals that mobile banking forms the highest percentage of banking usage among clients. Clients prefer using this mode of banking service compared to traditional banking halls because it saves time and costs.

Table 4.2.8. Reliability Rating

Rating	frequency	Percentage
Excellent	4	9
Very good	13	28
Good	22	46
Fair	8	17
Poor	0	0
Total	47	100

Majority of the users still that there is room for improvement to enhance customer satisfaction. This is supported by the above ratings where 46 % rated mobile banking as good as opposed to 28%, 17%, and 9% of ratings who thought otherwise. We note that no customer rated the service as being poor.

## 4.2.7 Problems encountered in utilizing M-banking.

Table 4.2.9: Problems encountered in utilizing M-banking

Problem encountered	Very frequently	Less	Once in a
		frequent	while
Low network	9	7	6
High transaction costs	8	8	5
Security	20	5	3
System failure	4	19	21
Lack of enough information	6	8	12
Total	47	47	47

Table 4.2.10 Problems encountered in utilizing M-banking (percentage)

Problem encountered	very frequently	less frequently	once in a while
Low network	19%	15%	13%
<b>High transaction costs</b>	17%	17%	11%
Security	42%	11%	6%
System failure	9%	40%	45%
lack of information	13%	17%	25%
Total percentage	100%	100%	100%

From the survey conducted 42% of the subscribers of M-banking rated security as the most frequent problem encountered while system failure rated the most less frequently problem encountered with 40% and 45% respectively.

From the above findings it is seen that most of those who use mobile banking and are interested in banking services are men, constant information about the services is therefore required to women to encourage them take up the services. It is also noted that the age group of between 21 and 40 years forming a total of 81% of mobile banking users meaning that the service is mostly used by the youth as opposed to teenagers and those over 50 years of age. This would be attributed to the fact that teenagers are mostly students and school levers who have not graduated therefore they may not have much use of mobile baking facilities. It also indicates that the employed client find mobile banking more useful since they form a total of 74%.

The need to use other mobile banking Services such as purchase of air time could be another reason where it is common self-employed clients also need constant access to their accounts since their banking is mostly predefined. It can also be noted that those earning a salary of between Ksh.11000-30,000 are the majority users

The study reveals that mobile banking forms the highest percentage of banking usage among clients. Clients prefer using this mode of banking service compared to traditional banking halls because it saves time and costs.

#### **CHAPTER FIVE**

#### CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter discusses and concludes the research study and makes recommendations that may be necessary for improvement in M-Banking system at the commercial Banks in Kenya.

### **5.2 Summary**

The aim of this study was to evaluate the impact of Mobile banking uptake on service delivery in commercial banks in Kenya. The researcher mainly focussed on commercial Banks within Nairobi and concentrated on employees and Customers. Commercial banks within Nairobi like many other Banking service customers around the globe have been under pressure to streamline their Mobile banking services delivery to satisfy customers and move with the ever-changing technology.

The main objective of this study was to find out the impacts of mobile uptake on service delivery in commercial banks with a special focus on commercial banks within Nairobi. The specific objectives of the study were to examine the types of mobile banking services available in the commercial banking sector, to investigate the problems encountered by the customers in utilising mobile banking, to determine the awareness of mobile banking by customers and to provide recommendations for improving the mobile banking facility among customers.

The population for this study consisted of customers. The sample size was 50 respondents and 47 responded. The data collected from questionnaire was sorted, edited, and then presented in the tables and charts for quick reference and to provide insight into the response from the opinions of the respondents. Data was collected, presented and analysed. Some of the findings included that mobile banking services are mostly used by Male at 70%, it is more convenient and efficient as compared to traditional Banking with 62% and 38% respectively.

Mobile banking was also rated to be good with 46% and it was mostly used once a week at 43%, daily at 25% and once after two weeks at 17%. Most of the respondents would recommend mobile banking to other people.

#### 5.3 Conclusions

From the findings of the study, presentation and analysis of the data from the field, the following conclusions were made:-In determining, the Mobile banking services that commercial banks offer. Customers are majorly unaware of the existence of other services except Mini-Statements and checking of account History and balance checking in the account. This is evidenced by the fact that 13 % of the respondents' lack information and 17 % of the respondents rated mobile banking to be costly. The banks should therefore create more awareness and do proper promotions on mobile banking services.

In finding out the problems encountered by the customers in utilizing mobile banking the research revealed that there is a lot still needs to be done in order to satisfy the customer. This includes the harnessing and building up on network, reviewing the transaction costs, improving of security when one is using M-banking.

#### 5.4 Recommendations

From the foregoing discussion and conclusions, it is evident that the opportunities available for mobile banking within Kenya banking industry are innumerable. However, the following recommendations are put forward if implemented may improve the quality of mobile banking services.

Firstly, the banks need to improve the efficiency in terms of the delivery of the mobile banking services currently available. Secondly, the banks should invest in better information technology infrastructure in order to improve the systems and network failure. Finally, there is need for the banks to look into aggressive promotional advertising to popularise or to create awareness of mobile banking services.

## **5.5 Suggestions for further research**

The research is comprehensive but there is need of research to be conducted to establish why customers who are fully aware of the mobile banking services still don't use it and what avenues can be used to get them to use the service. Other researchers can also explore on other services related to M-banking that a bank can take up.

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www.worldresourcesinstitutefinance.org

www.kbs.co.ke

# **APPENDICES**

# **Appendix 1: Questionnaires**

# **SECTION B: Background information**

(Please	Tick where	appropriate)
(1 leuse	I lck wileie	appropriate)

1.	What	is	your		name?
	(Option	al)			-
2.	Gender's	?			
	1)	Male	(	)	
	2)	Female	(	)	
3.	What is	your occupation?			
	1)	Student	(	)	
	2)	Company employee	(	)	
	3)	Government employee	(	)	
	4)	Self-employed	(	)	
	5)	Others			(Please
		specify)			
4.	Please in	ndicate into which age category	y you fall under?		
	1)	18-20 years	(	)	
	2)	21-30 years	(	)	
	3)	31-40 years	(	)	
	4)	41-50 years	(	)	
	5)	0ver 50 years	(	)	

<b>5.</b> What is your marital status?	
1) Single	( )
2) Married	( )
3) Divorced	( )
4) Widowed	( )
<b>6.</b> What is your monthly income level?	
1) Below 1000 kes	( )
2) 1,000-10,000 Kes	( )
3) 11, 0000-30,000 kes	( )
4) 31,000-40,000 Kes	( )
5) 41,000-50,000 Kes	( )
6) Over 50,000 Kes	( )
SECTION B: Types of M-banking services	
7. Do you have a bank account with any commercia	ıl bank?
1) Yes	( )
2) No	( )
8. What type of account do you maintain with your	bank?
1) Current account	( )
2) Ordinary account	( )
3) Savings accounts	( )
4) Call and fixed deposit account	( )

<b>9.</b> How did you find out about the mobile banking ser	vices?
1) Through television advertisements	( )
2) Through newspapers advertisements	( )
3) From other bank customers	( )
4) From the internet	( )
5) Do not know about the facility	( )
10. Do the Branch Staff assist in providing information	on how to use the M-Banking
Services?	
1) Yes	( )
2) No	( )
In which form?	
1) Written material	( )
2) Direct conversation with Bank employee	( )
3) Others (specify)	
11. What services/products of M-Banking do you know	that commercial banks offer?
1) Mini-statements and checking of account h	istory ( )
2) Account alerts,	( )
3) Monitoring of term deposits	( )
4) Access to card statements,	( )
5) Status on cheque	( )
6) Balance checking in the account	( )

/)	Change of PIN and reminder over the internet	(	)
8)	Others(specify)		
<b>2.</b> Of the <b>N</b>	M-banking services offered which one have you used	1?	
1)	Mini-statements and checking of account history	(	)
2)	Account alerts,	(	)
3)	Monitoring of term deposits	(	)
4)	Access to card statements,	(	)
5)	Status on cheque	(	)
6)	Balance checking in the account	(	)
7)	Change of PIN and reminder over the internet	(	)
8)	Others(specify)		
3. How m	uch time does it take for you to get a service?		
1)	Less than 1 Minute	(	)
2)	2 to 3 Minutes	(	)
3)	4 to 5 Minutes	(	)
4)	Above 5 Minutes	(	)
<b>4.</b> How of	ten do you use M-banking services?		
1)	Daily	(	)
2)	Once a week	(	)
3)	Once after two weeks	(	)

4)	Once a month	(	)
5)	Others		
	(specify)		
<b>15.</b> Has M-l	Banking played any role in any way	y in your life?	
1)	Yes	(	)
2)	No	(	)
If Yes	s please tick where appropriate.		
1)	Faster processing of loans	(	)
2)	Improved money transfer	(	)
3)	Faster payment of utility Bills	(	)
4)	Any o	ther	specify
	please state why?		_
<b>16.</b> In comp	aring Mobile Banking to Traditiona	al Banking (going to t	he Bank) services
which o	ne do you find more convenient an	d efficient?	
1	) Mobile banking	(	)
2	) Traditional Banking	(	)

17. If you rate Mobile Banking Services on a scale of	of 40%-100%, how would you rate
Mobile Banking?	
1) 100 to 70 % (Excellent)	( )
2) 69 to 60 % (Very Good)	( )
3) 59 to 50 % (Good)	( )
4) 49 to 40 % (Fair)	( )
5) Below 40 %(Poor)	( )
18. Has M-pesa and airtel money in any way affect	ted your use of M-banking?
1) Yes	( )
2) No	( )
If Yes, state how?	
1) Depositing money to your account	( )
2) Money transfer services	( )
3) Purchase of Airtime	( )
4) Utility Bills payments	( )
5) Others	(please
specify)	
If No, please state why?	

# **SECTION C: Problems encountered in utilizing Mobile-Banking**

19. How frequently do you encounter problems while using mobile banking services?

Problems	Very	Less Frequent	Once in a Time
Encountered	Frequently		
Low Network			
High Transaction costs			
Security			
System failure			
Lack of enough			
information			

**20.** How long are problems solved when reported?

1)	Daily	(	)
2)	Weekly	(	)
3)	after Two weeks	(	)
4)	Monthly	(	)
5)	More than a Month	(	)

## **SECTION D: Improvement suggestions**

<b>21.</b> What other services do you think would be a great	eat addition to Mobile Banking to
enable meets your future needs?	
1) Mobile-shopping	( )
2) Booking of Flights, Buses, Hotels etc	( )
3) Others (Please specify)	
22. Would you recommend M-Banking to other peo	ople?
1) Yes	( )
2) No	( )
23. What recommendations would you suggest so	as to improve Mobile banking
facility and to enhance its efficiency?	

Thank you for your cooperation

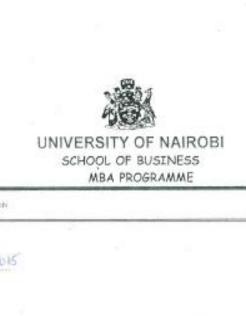
# **Appendix 2: Research budget**

Details	Amount
Printing and binding	2500
Transport	1500
Typing	1000
Internet	1000
Miscellaneous expenses	1000
Total	7000

# Appendix 3: time schedule/ frame

Details	Days
Preliminary pages	3
Chapter one	10
Chapter two	20
Chapter three	3
Chapter four	12
Chapter five	7
appendices	5
Total	60

## **Appendix 4: Letter of introduction**



Parinti, Katya

#### TO WHOM IT MAY CONCERN

The bearer of this letter BONKE MAKORI MICHAEL
Registration No. DOI 171234 2014

is a bona fide continuing student in the Master of Business Administration (MBA) degree program in this University.

He/she is required to submit as part of his/her coursework assessment a research project report on a management problem. We would like the students to do their projects on real problems affecting firms in Kenya. We would, therefore, appreciate your assistance to enable him/her collect data in your organization.

The results of the report will be used solely for academic purposes and a copy of the same will be availed to the interviewed organizations on request.

Thank you.

MBA ADMINISTRATOR SCHOOL OF BUSINESS