PERCEPTION OF CUSTOMERS ON M-PESA AS THE MOBILE BANKING IN TANZANIA

By

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PERCEPTION OF CUSTOMERS ON M-PESA AS THE MOBILE BANKING IN TANZANIA
CERTIFICATION

We, the undersigned, certify that we have read and hereby recommend for acceptance by the Mzumbe University, a dissertation entitled, “The perception of customers on the M-PESA as the mobile banking in Tanzania; ”, in partial fulfillment of the requirements for award of the degree of Master of Business administration in Corporate Management.

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Mr. Makuru N. (Major Supervisor)

Date……………………………

Accepted for the Board of

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I, Magdalena Mwakitalu, declare that this research paper is my own original work and that it has not been presented and will not be presented to any other institution for a similar or other degree award.

Signature……………………………

Date…………………………………

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However, it should be noted that any error in this work remains solely the responsibility of the researcher, and should not be attributed to any of the above acknowledged people or any institution.
DEDICATION

This study is dedicated to my beloved parents late Fredrick Mwakitalu and Mrs Catherine Katwila who first send me to school, im gratefully to them and my husband Daimon Mlowola for his full support during my studies up to this level. I also dedicate my work to my brothers Anorld, Luckson, Shangwe and my sisters Joyce, Nelu, Tumpe, Leah for their support throughout my study.
### ABBREVIATIONS

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Full Form</th>
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<tr>
<td>BFIA</td>
<td>Bank of Financial institution Act</td>
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<td>BOT</td>
<td>Bank of Tanzania</td>
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<tr>
<td>FGD</td>
<td>Focus group discussion</td>
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<tr>
<td>GSM</td>
<td>Global System for Mobile Communication</td>
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<td>MMT</td>
<td>Mobile money transfer</td>
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<td>TCRA</td>
<td>Tanzania Communication Regulatory Authority</td>
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<td>TRA</td>
<td>Tanzania Revenue Authority</td>
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ABSTRACT

It research on the Perception of Customer on the M-PESA as the mobile banking, was done in Dodoma and ninety three respondent participated. The General objective was to investigate the perception on the usage of M-PESA as mobile banking. Specific objectives of the study where to determine the satisfaction of using the M-PESA and the challenges which faced by the customer in using the service. This study is based on the data collected from Dodoma. The study is based on customers availing the mobile banking services

There are number of issues that have been raised in respect of customer perception and attempts in evaluating their satisfaction towards telecommunication services provided by various companies in Tanzania. Regards was given on understanding and relationship existing between telecommunication services providers and their customers.

Empirical and theoretical literatures were reviewed. The data collected thorough group discussion questions, interview questions and questionnaire, which was based on both open ended and closed ended questions. The research methodology is largely based on extensive literature review and is based on exploratory research followed by descriptive analysis.

Finding indicates that important factors that affect the perception of customers towards mobile banking are convenience, security, faith on traditional banking and awareness. The findings of the paper cannot be generalized, as the sampling technique is non-probability sampling.

Recommendations to mobile banking service providers to strengthen the security policy and provide augmented services to attract new customers also The contribution of the paper lies in achieving a more profound understanding on consumer value perceptions to internet and mobile banking. It expands the literature on electronic and mobile commerce and on electronic banking especially.
LIST OF TABLES
CHAPTER ONE

INTRODUCTION

1.1 Introduction

Mobile banking is a financial service through mobile phones. It refers to the use of mobile device to perform banking tasks while away from the bank counters, such as transferring funds, making payment. In relation to the technological development, Financial services has been undergoing remarkable change during last ten years, electronic banking is one of the example of that development whereby financial services are not confined to banks only although traditional branch banking remains widely adopted method of conducting banking transaction.

This study identifies and investigates the factors which influence customers’ decision to use a specific form of mobile banking, and specifically focuses on assessing perception and challenges of mobile banking in the context of Tanzania a case of M-PESA. The research model includes the basic concepts of the Technology Acceptance Model (TAM), as well as some constructs derived through a focus group discussion. The model is tested to determine its predictive power with respect to individual’s behavior when considering the use of mobile banking.

The results of the data analysis contributes to the body of knowledge in the area by demonstrating that context specific factors such as service quality and service awareness are influencing user perceptions about the usefulness of mobile banking which in turn affect intention to use and adoption. Secondly, the study demonstrates, on the example of M-PESA mobile banking; how a hybrid approach involving qualitative data collection and a subsequent quantitative survey can help investigate how user perceptions about usefulness and ease of use are formed.
1.2 Background of the study

In recent years, the technological developments in information technology have lead to the evolution of a new concept in Banking Industry i.e. Mobile banking. Mobile banking is defined as the “type of execution of financial services in the course of which – within an electronic procedure – the customer uses mobile communication techniques in conjunction with mobile devices” (Pousttchi and Schurig 2004). Moreover, it is defined as “a channel whereby the customer interacts with a bank via a mobile device, such as a mobile phone or personal digital assistant” (Barnes and Corbitt 2003, Scornavacca and Barnes 2004).

Mobile banking is an application of mobile computing which provides customers with the support needed to be able to bank anywhere, anytime using a mobile handheld device and a mobile service such as text messaging (SMS). Mobile banking removes space and time limitations from banking activities such as checking account balances, or transferring money from one account to another. In recent research and studies it was found that while mobile banking and more specifically SMS-based mobile banking applications have become popular in some countries and regions, they were still not widely used.

Global System for Mobile Communication (GSM) originally from Groupe Spécial Mobile is the one of the most popular standard for mobile phones in the world. GSM is a cellular network which means that mobile phones connect it by searching the cell in the immediate vicinity. The GSM family of technology has provided the world with mobile communication since 1991. In over 20 years of development, GSM has been continually enhanced to provide platforms that deliver an increasingly broad range of mobile services as demand grows (Anderson et, al 1998:54).

Where the industry started with plain voice calls it now has powerful platforms capable of supporting mobile broadband and multimedia services. GSM association estimates that 82% of the global mobile market uses the standard. GSM technology is now used in 218 countries and territories serving more than three billion people. Mobile Banking
refers to the provision and the availability of Banking and financial services with the help of the mobile telecommunication devices. The scope of the offered services may therefore include the following, facilities to conduct bank and stock market transactions, to administer accounts and to access customized information. (Ibid).

GSM Mobile Money Transfer (MMT) initiatives provide the platform for mobile communication to become the key enabler in sending remittances around the world. MMT programmes leverages the benefits of GSM technology to improve access to money transfer for a wider section of the global community.

1.3 Statement of the Problem
Mobile phone technology has reduced communication costs in many parts of the developing world from prohibitive levels to amounts that are, in comparison, virtually trivial. Now there has this transformation been as acute as in sub-Saharan Africa, where networks of both fixed line communication and physical transportation infrastructure are often inadequate, unreliable, and dilapidated. While mobile phone calling rates remain high by world standards, the technology has allowed millions of Africans to leapfrog the land-line en route to 21st century connectivity.

Early on in this revolution, cell phone users figured out that they could effectively transfer money across wide distances. Phone companies have long allowed individuals to purchase “air-time” (i.e., pre-paid cell phone credit that can be used for voice or SMS communication) and to send this credit to other users. It was a small step for the recipient user to on-sell the received air-time to a local broker in return for cash, or indeed for goods and services, thus affecting a transfer of purchasing power from the initial sender to the recipient.

1.4 Research objectives
The general objective of this study was to investigate the perception of customers on M-PESA mobile Banking Services.
1.4.1 Specific objectives

1. To determine challenges facing customers on usage of M-PESA as Mobile Banking.
2. To assess customers perceptions on M-PESA mobile Banking.

1.5 Research Question

1. What are the challenges facing customers on usage of M-PESA as Mobile Banking?
2. What are the customers’ perceptions on M-PESA Mobile Banking?

1.6 Significance of the study

The customer’s perceptions on the M-PESA as the Mobile Banking service being offered by Vodacom will be revealed and this study will enable Vodacom Tanzania limited to review and modify the mobile banking service so as to be responsible to customers’ needs at the same time operate profitably.

Moreover, the regulatory for this case is the central bank of Tanzania (BOT) as the Financial Institution Regulatory in Tanzania and Tanzania Communication Regulatory Authority (TCRA) both entities will create a common and fair playing ground for both customers’ and practitioners to the understanding of customers’ perceptions towards the impact of mobile banking service in the telecommunication sector.

Furthermore, understanding customers’ perceptions towards mobile banking services will contribute to enhancing the TCRA policy and the Bank of Financial Institution Act (BFIA) of 1991.
1.7 Limitations of the study
These are constraints that in one way or another limited the performance. The following limitations were encountered during the fieldwork;

1.7.1 Poor response
Some employees responded poorly when requested by the researcher to make conversation during the interview. This was due to time limitation whereby some claimed to be busy with organization activities. However, the researcher tried to minimize this constraint by giving them questionnaire to fill them on their own spare time.

1.7.2 Slow return of questionnaires
Some of questionnaire distributed to the nominees were not returned. This is because some employees had traveled away until when fieldwork ended. However, the researcher used the returned scripts as well as information obtained through other methods such as interviews to make judgments.

1.7.3 Budget constraint
The researcher encounter Budget limitation as she was sponsoring herself, she was limited in term of funds.

1.7.4 Time constraint
The time scheduled to carry out the research study was very short to be able to collect adequate data and satisfy the motive behind the study.

1.8 Delimitation of the study
The focus of this research is to investigate on the perception of customers on M-PESA as the mobile banking in Tanzania. The term ‘perception’ will be used throughout the study exclusively relates to the the attitude of user. The study did not cover economic impact of the M-PESA in Tanzania, findings of the study are from Dodoma region only, therefore, any generalization of results beyond this scope can mislead the findings.
CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literatures suggest that financial institutions and telecommunication companies worldwide are facing a new loop on telecommunication information technology convergence spiral. The chapter organizes as follows, next section briefly introduce the definition of the mobile banking: examine the technological development which leads to emergence of mobile banking.

Theoretical Framework

Studies on customer perception are many and address various aspects of customer decision making process. Indeed, over the years, theorists have attempted to explain the reasons why customers buy. Accordingly, issues of perception and issues of the role of stimuli have been explained by various authors. According to Ashford and Beamish (2008), the nature of physical stimuli tends to influence the degree of perception for example, an ordered array of objects on display or a sudden loud noise are almost sure to attract attention. The senses are stimulated by an expected or unusual object or events. In a fairly predictable routine of everyday life, an individual tend to seek variety and change.

Chisnall (1975) asserts that personal factors modify the effect of the various physical stimuli which influence perception. Behind every act of perceiving, is the individual’s past history or experience. Previous experience has built up a relatively stable cognitive organization within the individual which determines the meaning of a particular percept. Perception is subjective; this means that an individual tends to interpret information according to his or her existing beliefs, attitudes, and general disposition, or instance, warning against the dangers of smoking which have to be included by government order on advertisement and packaging of cigarettes in Britain.
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A number of studies have been done in Kenya on the responses to challenges encountered in restricted banking hours and accessibility to the banks and other money transfer institutions, for example; Maina (2000) focused on, perceived quality and value preposition but failed to study the response of consumers while utilizing the service. Another study done by Odhiambo (2003) focused on factors that influenced customer satisfaction and service offered by mobile firms but failed to focus on one product or service to find out the exact reaction of the customers on the effectiveness of such a product/service.

Gitari (2006) focused on the challenges organization face in meeting consumer expectations but there was no document research data available to show peoples response to the new facility of accessing their money through their mobile hand- sets beyond normal working hours, easily and almost everywhere. The above study still focused on perceived quality and value preposition on a certain product offered by mobile company i.e. M-Pesa since its introduction in March 2007. Although extensive research had been carried out to establish how the banking sector responded to the challenges of the changing environment, no research had been done on the response of the consumer of the M-Pesa service.

M-banking can be used for person to person (2p2) transfers including remittances or disaster response; payments such as utility bills, airtime, microfinance, and loans
disbursements such as payroll, government benefits, or NGO operations; and incentives for health or education (Hughes and Lonie, 2007)

Since banking is highly regulated, the barriers to entry are massive. Doing m-banking requires marketing, education, changing behavior, and growing trust, and that it is a margin business, so volumes are needed. M-Pesa is now integrated with ATM’s (Automated Teller Machines) and that a user can send an instruction and receives money from an ATM. There are three models for m-banking i.e the technology-led model, the telecom-led model (such as M-Pesa), and the nank model, which is based on creating another channel for existing business.

Telecommunication, care about transactions than income. When thinking of m-banking business opportunities. They are stepping in as transaction agents, leading are also evolving from mobile transaction which is an extended road. For users, m-banking advantages include; a safer way to carry cash, a way to track savings, and formal integration into traditional banking as the next step, for example Wizzit of South Africa has now student loan (Vodafone, 2007)

On the other hand m-banking has its bad side which include; for instance, the cash in or cash out is difficult because of regulatory issues this will lead to interoperability. There is also different model with m-banking, the users can easily switch, or change SIMcard. From a cultural stand point, m-banking provides amplification effects, that is, people do more of what they are already doing and change effects for example; women can control savings more.

There is the issue of spending too much time in front of a phone which has more possibilities to spend too much. Also acceptance of infrastructure can be problematic that is money flows from the educated to the low-educated. M-banking may strain our inclinations to talk face-to-face. There could be family strains. M-banking may encourage families to live separately because it is easier to transfer money. In the earlier.
2.2 History of Mobile Banking

For 30 years, financial institutions have been on a quest to satisfy their customers’ need for more convenience. First came the automated teller machine (ATM), which New
York’s Chemical Bank introduced to the American public in 1969. It did little more than dispense cash at first, but the ATM evolved over time to become a true bank-away-from-bank, providing a full suite of financial transactions.

Then came Internet banking in the mid-1990s, which enabled consumers to access their financial accounts using a home computer with an Internet connection. Despite its promise of ultimate convenience, online banking saw slow and tentative growth as banks worked out technology issues and built consumer trust. Today, Internet banking has reached a critical mass, with about 35 percent of U.S. households conducting bank transactions online. Mobile banking can be defined as the ability to conduct bank transaction via mobile device, or more broadly to conduct transaction via mobile terminal(Drexelius & Herzig, 2001). This definition is a suitable working one as it includes not only basic services such as bank account statement and funds transfer but also electronic payment options as well as information based financial services.
According to Kienoski, 2000 mobile banking is the ability to bank virtually anytime and anywhere.

2.4.1 Empirical Literature

2.4.1 Concept of Mobile banking

Mobile banking refers to the provision and availment of banking and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities to conduct bank transactions, to administer accounts, and to access customized information (Tiwari and Buse 2007). In a broader sense, mobile banking is that type of execution of financial services in the course of which within electronic procedure
the customer uses mobile communication technique in conjunction with mobile devices (Pousttchi and Schurig 2004)

Mobile banking is defined as the “type of execution of financial services in the course of which – within an electronic procedure – the customer uses mobile communication techniques in conjunction with mobile devices” (Pousttchi and Schurig 2004).

Moreover, it is defined as “a channel whereby the customer interacts with a bank via a mobile device, such as a mobile phone or personal digital assistant” (Barnes and Corbitt 2003, Scornavacca and Barnes 2004).

Barnes and Corbitt (2003) suggest that recent innovation in telecommunication have enable the launch of new access method for banking services, one of this is mobile banking, whereby a customer interact with the Bank via mobile devices such as mobile phones or personal digital assistant.

Rugimbana(1995) found that there is vast market potential for mobile banking due to its always on functionality and option to do banking virtually anytime and anywhere.

Unnithan and Swatman (2001) studied the drivers for change in the evolution of the banking sector and the move towards electronic banking including mobile banking by focusing on two economies Australia and India and suggested strong growth potential of new banking channel in India.

Clark (2008) suggest that as channel the mobile phone can augment the number of channels available to consumer, thereby giving consumers more low cost self services by which to access funds, banking information and make payments. Mobile phone as a channel derivers convenience, immediacy and choice to consumers.

Suoranta(2003)found that some mobile banking customers omit internet banking adoption when adopting the mobile phone banking actions.
Commninos et al (2008)suggest that unbanked will only transact electronically if there convinnience and security.

Sharma and Singh(2009) found that Indian mobile banking users are specially concern with security issues like fraud, account misuse and user friendliness issue.

Anurag, Tyagi and Raddi,(2009) they view this mode of payment as an easier form of cash delivery to their suppliers and business partners, a system which is relatively affordable, personal and can be used anywhere and anytime. Micro business operators are able to transact payment direct with their customers and suppliers through mobile phone in the palm of their hands without necessarily going through a bank. This is beneficial because all it require is for one to have mobile phones and basic literacy to operate the phone. Other benefits derives from the fact that the system does not rely on any physical infrastructure such as phone wires and is accessible to large segment of the population.

Pagani(2004),states that ability to reach the required services is one of the main advantages of mobile payment services. Small and micro businesses are among the greatest beneficially of using mobile payment.

Omwasa(2009) assert that majority of macro business operator are familiar with the use of the mobile payment services as they are easy and require no formal training before use and the cost of sending money through mobile banking are lower than money transfer companies.

Most authors (eg Senn)agree that mobile phones will continue to be an important and significant part of the underlying infrastructure for mobile commerce and will be the device of choice for mobile transaction management, digital content delivery, and telemetry service.
2.5 Conceptual Framework

In this study the conceptual framework was based on the servequal model.

2.5.1 Servequal Model

One of the widely used instrument to measure service quality is the SERVQUAL scale, its original service dimension were developed by Parasuraman et al (1985) and then refined in 1985 and by Parasuraman et al (1991). SERVQUAL is a multi item scale developed to assess customer perceptions of service quality in service and retail businesses (Parasuraman et al, 1991).

Defining customer services and the user-friendly format of SERVQUAL have helped to make an industry standard (Llosa et al 1998). The approach starts from the assumption that the level of service quality experienced by customer is determined by the gap between their expectations of the service and their perception of what they actually receive from the specific provider (Parasuraman, 1988).

The SERVQUAL Model propose five dimension upon which customer evaluate service quality

1. **Tangibles** - appearance of the physical facilities and material related to services
2. **Reliability** – ability to perform the service accurately and dependably;
3. **Responsiveness** - the willingness to help customers and provide prompt service;
4. **Assurance** - the competence of the system and its security, credibility and courtesy.
5. **Empathy** - the ease of access, approachability and effort taken to understand customers requirements.

Various business sectors are embarking in deploying technology based services, with the aim of improving efficiency and consequently reducing the operational cost (Dabholkar, 1996). For services’ oriented sector such as telecommunication sector, mobile banking
technology based services seem to be climbing shoulder towards customer centric strategy for effective maintaining customer relationship and retentions.

Appreciations or depreciation of mobile banking technology based services is the bases of assessing the customers’ perception on the effect of mobile banking technology based service on service delivery on any business sector.

Based on the theoretical review discussed previously, SERVQUAL Model envisage that customer level of service quality experienced is determined by the gap between their expectation of the service and perceptions of what they actually receive. This gap can help to reduce the attitude, usage, and satisfaction of the customers’ toward the mobile banking technology based services.

TAM went far describing the perceived usefulness that is caused by ease of use influence behavioral intention to use. Ease use and perceived usefulness contribute to the attitude of the customers towards mobile banking technology based services. The customers’ adopting mobile banking technology service depends on willingness to adopt.

Information Quality influence usage and user satisfaction and have implication on individual impact and consequently organization impact. This model links the SERVQUAL and TAM although the use and user satisfaction can be influenced by other factors as evidenced by empirical studies.

This study therefore was focus on customer’s satisfaction on the usage of the mobile banking technology based service in the mobile sector in relative wide context based on customers’ characteristics. As supported by the theories, this study was investigating attitude and satisfaction reciprocally influencing each other and how both contribute to the usage of mobile technology based services.
CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction
This research was conducted in Dodoma region and the residential areas within the region. The method used were appropriate as it provide a quantitative description of attitudes, perception and opinions of the sample population(Creswell,2003,vienhland & Leong,2007)The research questionnaires were distributed to the selected sample of the M-PESA and mobile banking users, the questionnaire includes demographic questions. A total of 90 people completed the questionnaire which was be employed during this study.

3.2 Study Area
This study was conducted in Dodoma in Tanzania. Dodoma was chosen for being one among five major commercial cities in Tanzania, also it was chosen because it is among the regions with high population.

3.3 Study Design
The research design is the plan showing the approach and strategy of investigation aimed at obtaining relevant data which fulfill the research objectives and answer research questions (Cohen 1999). The descriptive research design was be adopted in this study which was facilitated by both qualitative and quantitative approaches.

Therefore qualitative and quantitative research approaches was employed. The decision to combine the two approaches was based on the need to go beyond the stimulus-response hypothesis to examine the subject matter. Qualitative research methods such as interviews and focus group discussion was used because of their ability to provide meaning that cannot be experimentally examined or measured in terms of quality, amount, intensity, or frequency (Denzin and Lincoln, 2003).
3.4 Population

Population is the totality of objects under investigation (Adam and Kamuzora, 2008). Hosea (2006) view target population as the one in which the researcher would like to generalize his results. The population for this study covered is all stakeholder of the mobile banking, includes staff of mobile company, agents of the mobile banking and users.

3.5 Sample Size and Sampling Procedure

3.5.1 Sample Size for Collecting Quantitative Data

In order to calculate the sample size for the study, the formula developed by Krejcie and Morgan (1970) will be used. It contains a built-in correction for taking a sample from a small population.

\[
\text{Sample size} = x^2 \cdot \frac{NP(1-P)}{C(N-1)} + XP(1-P)
\]

Where \(X^2\) is the chi square value for 1 degree of freedom at the desired probability level (3.841), \(P\) is the population parameter of a variable of a (0.5) and \(C\) is the confidence interval (0.01) (Bernard 1995; 77). \(N\) is the total population size, which is the total number of all respondents. From the above formula the sample size will be 78, rounded up to 80.

3.5.2 Sampling Procedure

The selection of the study area was chosen purposive, due to the presence of the many M-PESA selling stations. To get the sample from the study population, the use of random sampling selection of the respondent was employed to identify respondents. The selection of the sample from the population takes into the consideration representation of the whole population (Patton 1980). Among the reason why the researcher was use
random sampling was to avoid bias by giving all units in the target population an equal chance of being selected.

### 3.6 Data Collection Methods and Instruments

The following were data collection methods and instruments used in this study.

#### 3.6.1 Document Review and Documentary Review schedule

The first step involved gathering of documents that contains information in the sight of the problem under the study and the focus was on the published and grey literature on the subject under study and Tanzania in particular this involves compiled annual and progress reports and records. Universities Libraries was equally consulted for the various document reviews because of the number of available literature on the subject under study in these libraries.

The use of documentary and review schedule helps the researcher to systematically and effectively review documents.

#### 3.6.2 Interviews and Interview questions

In order to obtain qualitative descriptive information on the association between the attitudes of the people towards M-PESA and the satisfactions of the users and community participations an in-depth interview was conducted with selected respondent and furthermore some interviews was administered with the selected respondent and some key information such as M-PESA service provider, and M-PESA agents, whereby representatives was taken into account.

Interview questions where used to effect interviews, question were both open ended and Closed ended

#### 3.6.4 Focus Group Discussion and Focus Group Discussion question

Focus group discussion and questions used to validate gathered or collected information through other research instruments as well as clarifying some existing controversies
issues that rose during interviews and where consensus could not be reached. It was useful methods that enable a researcher and informants to be more open to discussing local experience and local perception than one to one interview.

3.7 Data Analysis Procedure
Both descriptive and statistical data analysis was done based on the data information collected from the primary and secondary sources. Data was edited to ensure completeness, consistency and reliability then they were coded for easy interpretation. The researcher constructed frequencies distribution which involved listing of categories of the variables and counting the number of observations in each Graph provided an alternative method of displaying the information organized in the frequency distribution
CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS, ANALYSIS AND DISCUSSION

4.1 Introduction
The scope of the study was to assess the perception of customer on M-PESA as mobile banking. The study used case study approach conducted at the Vodacom Company in Dodoma. The study involved a population of 140 respondents and a total of 73 questionnaires were distributed. The researcher considered this amount to be satisfactory to provide valid results.

Business practices in Tanzania have gone through many changes, the most important being the introduction of the information communication and technology (ICT). The mobile phones have been a key product in affecting business practices, this can be evidenced in various area like marketing, advertisement and new method of payment.

This chapter presents, discuss and analyze the major findings of the study. The study analyzes the perception of customers in using M pesa as a mobile banking.

The study had two objective names:
(i) To determine challenges facing customers on usage of M-PESA as mobile
(ii) To assess customers perception on M-PESA mobile Banking

4.2 Mobile banking models

4.2.1 Bank focused model

The bank focused model emerges when a traditional bank uses non-traditional low cost delivery channels to provide banking services to its existing customers. Mobile phonebanking to provide certain limited banking services to banks customers, it is extension of conventional branch based banking.
In this model only customers of the bank can avail the mobile banking services from the bank. With this the customer can do various banking transaction as per their convenience.

4.2.2 Bank led model

This model is opposite of branch based model, hereby the customer conduct financial transaction through mobile phone instead of bank branch. This model promises the potential to substantially increase the financially service outreach by using a different deliver channel like mobile phones.

4.2.3 Non bank model

This is totally different from the Bank led model, in this the mobile customers those who don’t even have access to traditional bank account can do banking transaction through their mobile service provider.

This model does not involve the Bank at all, non bank institution are the one which perform all the functions, it involve bank where there is a surplus. A good example is the services provided by the mobile Companies in Tanzania like Tigopesa, M-PESA, Easy pesa, Airtel money.

Mobile Banking Adoption

The combination of maturing cellular technology and a real need among people who can’t access traditional banking services has led to rapid growth for mobile banking specifically the M-Pesa service. M-PESA had attracted more than 4.7 million customers as of December 2012. And TelecomPaper.com recently reported that Vodacom plans to attract more than 600 small and medium-size companies by the end of 2012.

According to the Bureau of International Information Programs at the U.S. State Department, around one million of Tanzania's 41 million inhabitants use mobile phone technology to carry out financial transactions and save money. At the same time, only
12% of the population has a formal bank account, while almost half of them own a cell phone.

One of the main reasons mobile phone technology has spread quickly is that it followed other technologies that may eased the way. According to the Consultative Group to Assist the Poor, an organization focused on expanding financial services in the developing world, mobile banking in emerging countries could be worth up to $5 billion by 2012. The group estimates that about 1.7 billion people in the developing will have access to a cell phone but no bank account in 2012.

Figure 1 confirms the consequence property is likely at work, at least in the US: many of the new technologies that were introduce before 1950 were relatively slow to diffuse through the population, whereas those introduced in the second half of the century saw general steeper adoption.
Figure 4.1: Consumption Spreads faster today

Source: Data Researcher, 2012
As developed world begins to rebuild the recently collapsed global financial system, the financial architecture in parts of the developing world is being rapidly transformed. As the cost of mobile phone technology have fallen, and as the technology has been adapted to support financial services, mobile banking innovations have begun to spread across and within poor countries. The low cost, and the wide spread unmet demand for financial services, as captured by low rates of bank access, means that mobile banking has the potential to reach remote corners of socio-economic, as well as geographic, spectrum.

Mobile phone technology has reduced communication costs in many parts of the developing world from prohibitive level to amounts that are in comparison, virtually trivial. Nowhere has this transformation been as acute as in sub-Saharan Africa, where networks of both fixed line communication and physical transportation infrastructure are often inadequate, unreliable, and dilapidated.

While mobile phone calling rates remain high by world standard, the technology has allowed millions of Africans to leap-frog the land–line en route to 21st Century connectivity.

The success of the technology lies in necessity,(Seema Desai0 Early on this revolution, cell phone users figured out that they could effectively transfer money across wide distances. Mobile money transfer allows those without a bank account to transfer funds as quickly and easily as sending a text message. Phone companies have long allowed individuals to purchase air time and to send this credit to other users.

The spread of mobile phone technology has been rapid and broad in Africa where penetration rates stood at 650 million mobile phone subscribers. That’s more than either the United States or the European Union. And it’s a market that has seen explosive growth. Since 2000, the mobile phone market has grown 40-fold, from 16.5 million, according to the World Bank.
The report also indicates that Internet and mobile phones are transforming the development landscape in Africa, injecting new dynamism in key sectors. The challenge is to scale up these innovations and success stories for greater social and economic impacts across Africa over the next decade, the report highlights how information and communication technology (ICT) are spurring innovation in everything from agriculture to financial services to climate change adaptation. In Malawi, for example, villages are using GPS devices to map and record deforestation in order to prevent it from happening. In Mali, telemedicine is helping rural communities get access to healthcare.

Africa is rapidly becoming an ICT leader. Innovations that began in Africa – like dual SIM card mobile phones or using mobile phones for remittance payments – are now spreading across the continent and beyond.

After successfully launching M-Pesa in Kenya, Vodafone has rolled out its service in Tanzania, where it says its customers made nearly 700 million transactions last year and although the amounts of money transferred via mobile services are usually no more than just a few dollars, the overall volume of transactions provides a powerful impetus for growth in coming years.

Vodafone says it is now looking to expand its mobile banking service to several other countries. East Africa is the hub of mobile money in the world, so really the world has been incubated out of Tanzania with regards to mobile money and mobile payments. So Vodafone is looking at Tanzania and Kenya and learning and making sure that we can roll this out to the rest of our territories. It's been launched in South Africa now, it's been launched in Egypt, and it's been launched with a few of our partner markets in Afghanistan.
Evolution of Mobile banking and M-PESA in Tanzania

In 2005, mainland Tanzania (i.e. not Zanzibar) modified its licensing system for electronic communications, modeling it on the approach successfully pioneered in Malaysia in the late 1990s where traditional 'vertical' licenses (right to operate a telecoms OR broadcasting network, and right to provide services on that network) are replaced by 'horizontal' licenses (right to operate a telecoms AND broadcasting network, but a separate license required to provide services on that network).

This reform was the first of its kind on the African continent actually put into practice, and allows investors to concentrate on their area of expertise (i.e. network operation or service provision) across a maximum number of previously separate sectors (i.e. telecommunications, broadcasting, Internet).

This reform should, amongst other things, facilitate the arrival of telephony services over cable television networks, television services over telecommunications networks, and Internet services over all types of networks. In short, Tanzania is the first African country to adapt its regulatory environment to the phenomenon of convergence.

Internet services have been available since 1995 but there was no fiber connectivity available to the Internet backbone till 2009. Till then, the connectivity was over Satellite network to the rest of the world, even to the neighbouring countries. The SEACOM and EASSY fiber projects implemented in 2009 and 2010 respectively brought internet connectivity to Tanzania at lower latency and lower cost. This resulted in a surge in internet speeds, with download speeds increasing over 8 fold.

In December 1999, Vodacom Group (Pty) Ltd. won a bid to operate a GSM cellular network and provide Public Land Mobile Network Services (PLMN) in the United Republic of Tanzania and formed the subsidiary company Vodacom Tanzania. Vodacom Tanzania Limited is Tanzania's leading cellular network company. Vodacom Tanzania is a subsidiary company of Vodacom Group (Pty) Limited, South Africa which is also a
subsidiary of Vodafone Group UK. Vodacom Group (Pty) Limited owns a majority share portion of 65%, with the remaining 35% being owned by Tanzanian shareholder, Mirambo Limited.

By July 2000, Vodacom Tanzania completed its state of the art GSM infrastructure and went live August 14, 2000. Within the first four months of operations 50,000 subscribers were connected. In September 2004, Vodacom connected its one millionth customer and the company continued to grow rapidly. In September 2005, the Government of Tanzania introduced the converged licensing framework, which was meant to enhance the provision of communication services in the country thus bringing in the concept of technology neutrality. As leader in the telecommunications market, in February 2006, Vodacom Tanzania took a bold decision to negotiate converting its PLMN license into the new licensing framework.

In March 2006, Vodacom Tanzania, recorded its two millionth customer. In July 2006, Vodacom Tanzania was granted three major service licenses in the Communications Sector namely, Network Facilities License, Network Services License & Application Services License, with the authority to provide a range of communication services, voice & data combined both nationally & internationally.

Technology will continue to develop and make possible things we can not even dream of today. They will remain the most competent and innovative of all in this Information and Communication Technology (ICT), to not only dreams but to make every dream come true.

This opened a new era for increased investment and a more focused provision of quality communication services to the people of Tanzania. In January 2007, Vodacom reached another milestone as it connected its third million subscriber, and became the first mobile network in Tanzania to post such a huge subscriber base.
VODACOM believes that it can enhance people’s lives and empower them by making it possible for all people in Africa to have access to mobile telecommunications. They have the will and means to do so, and will strive to do so in a sensible manner. VODACOM will seek out the impossible to do in the Mobile communications, which have been made possible by the most innovative technology in the world.

VODACOM believes that it can enhance people’s lives and empower them by making it possible for all people to have access to mobile telecommunications. They have the will and the means to do so, and will strive to do so in a sensible manner.

Strategic error, and are frantically playing catch-up but they are looking pretty late to the party.

Rather than giving up on poor, isolated communities as unbankable, mobile companies has extended financial services to their most apparently unlikely customers. Rather than giving up on sophisticated economic transaction in countries with poor infrastructure, it has found a way to circumvent that infrastructure, creating a virtual, mobile users who have no alternatives. Many subscribers with bank accounts, credit cards and internet banking also use it to pay household staff, to send money to relatives in rural areas, or to pay a mechanic.

Many economic development experts have received Kenya’s M-PESA positively, as they have seen the ability of such a technology in increasing financial inclusion among the poor. The remarkable uptake of M-PESA among Kenyans had several proponent of this technology eagerly anticipating a major impact on the lives of poor Kenyan household.

Vodacom Tanzania introduced its mobile money transfer services (M-PESA) in Tanzania in April 2008 as valued added services. M-PESA is a convenient way of
withdrawing and or depositing money in Banks. Vodacom M-PESA is a revolutionary financial service offered by Vodacom Tanzania and the first choice for Tanzanians who need to send money anywhere in Tanzania to any person with a mobile phone.

With Vodacom M-PESA, customers are assured of money transfers that are immediate, safe and most important, reliable. It also allows for money transfer services from person (Customer) to person (Customer) ,Customer to business, Business to Customer and Business to Business.

As of January 2013, Vodacom Tanzania had over 45,000 M-PESA agents spread out across Tanzania, serving its over five million customers who are registered users of the service. Currently around 35% of Tanzania’s GDP goes through Vodacom Tanzania’s M-PESA system every month representing over TZS 1.5 trillion in transaction value carried through its 5 million customers across the country using M-PESA.

M-PESA’s small business customers already include retail stores and supermarkets, restaurants, savings and credit societies, schools, and many other organizations across Tanzania. In addition to the advantages, these businesses — as well as individual customers — benefit from the ability to access financial services and pay bills 24 hours a day, securely save money electronically instead of in cash, and access financial services like, It's a very popular way, and a very easy way, to grow financial services in a country," he adds.

VODACOM believes that it can enhance people’s lives and empower them by making it possible for all people in Africa to have access to mobile telecommunications. They have the will and means to do so, and will strive to do so in a sensible manner.

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Communication Technology (ICT), to not only dreams but to make every dream come true.

VODACOM believes that it can enhance people’s lives and empower them by making it possible for all people to have access to mobile telecommunications. They have the will and the means to do so, and will strive to do so in a sensible manner.

VODACOM will seek out the impossible to do in mobile communications, which have been made possible by the most innovative technology in the world. The mobile industry is known for evolving quickly and mobile money has been no exception. Since today M-PESA is available in every corner of the country. This revolutionary financial service facilitates the transferring of money or payments of services and goods at the click of a button.
How M-Pesa Operates

M-PESA was developed by mobile phone operator Vodafone and launched commercially by its Tanzania affiliate Vodacom. M-PESA (“M” for mobile and “PESA” for money in Swahili) is an electronic payment and store of value system that is accessible through mobile phones. To access the service, customers must first register at an authorized M-PESA retail outlet. Vodacom accept deposits of cash with a Vodacom cell phone SIM Card and who have register as M-PESA users. Registration involve identity card only which can be national identity, passport or driving license. In depositing the money Vodacom will issue e-float which is valued as money, there is no charge for depositing funds only in withdrawing and sending to other subscriber.
E-float can be transferred from one customer of M-PESA account to another or sold back to the Company in exchange for money, the e-float are used to pay for utilities, bills and school fees. Transfer is subject to the availability of network coverage. Vodacom Tanzania has continued to invest in network expansion in Tanzania.

In 2012, Vodacom Tanzania engaged in an intensive network expansion and upgrade process which saw it build over 890 new sites across the country. As of March 2013, Vodacom Tanzania had covered close to 90% of Tanzania with the target of having around 2,500 sites by end of 2013 effectively doubling the size of its network.

M-PESA customer can send money to non M-PESA customer in Tanzania, wether they are subscriber of M-PESA or other mobile company available in Tanzania. Under this services money is debited from the sender account and the recipient gets a code by SMS which it can use to receive money from M-PESA agent.

Source: Field data, 2013
4.2.4 Age Distribution

Table 4.1: Showing age of respondent who are almost beneficiaries to Vodacom M-PESA services

<table>
<thead>
<tr>
<th>AGE</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
<th>VALID PERCENT</th>
<th>CUMULATIVE PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>LESS THAN 20</td>
<td>13</td>
<td>16.25%</td>
<td>16.25</td>
<td>16.25</td>
</tr>
<tr>
<td>20-35</td>
<td>27</td>
<td>33.75%</td>
<td>33.75</td>
<td>50</td>
</tr>
<tr>
<td>36-45</td>
<td>25</td>
<td>31.25%</td>
<td>31.25</td>
<td>100</td>
</tr>
<tr>
<td>ABOVE 45</td>
<td>15</td>
<td>18.75%</td>
<td>18.75</td>
<td>68.75</td>
</tr>
</tbody>
</table>

*Source: Field Data, 2013*
The sample study show that more than 33.75% of person who are using the M PESA services are of age between 20-35 years old, 31.25% were aged between 36-45 years old, 18.75% were aged above 45 and final were 16.25% of the age less than 20. This preferably reflects the number of people who use the M PESA BANKING SERVICES covered by the Vodacom Tanzania. Age distribution result gives the implication that greater percentage of respondent that is 33.75% was aged about 20-35 years old. The greater number of respondent was mostly because of having knowledge on the importance of M PESA service.
Table 4.1: Indicate educational level of respondent in relation to Mobile Bank provided by Vodacom Tanzania

<table>
<thead>
<tr>
<th>LEVEL</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
<th>VALID PERCENT</th>
<th>CUMULATIVE PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary education</td>
<td>10</td>
<td>12.5%</td>
<td>12.5%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Secondary education</td>
<td>25</td>
<td>31.3%</td>
<td>31.3%</td>
<td>43.8</td>
</tr>
<tr>
<td>University level</td>
<td>39</td>
<td>48.7%</td>
<td>48.7%</td>
<td>92.5</td>
</tr>
<tr>
<td>Not attending</td>
<td>6</td>
<td>7.5%</td>
<td>7.5</td>
<td>100</td>
</tr>
<tr>
<td>TOTAL</td>
<td>100</td>
<td>100</td>
<td>100</td>
<td></td>
</tr>
</tbody>
</table>

Source: Field Data, 2013
This study indicates that 48.7% of person benefiting from Vodacom M-PESA services are people from University category who probably have knowledge on the benefit of telecommunication services (M PESA), there is unlikely attitudes towards M PESA services among low income people and people with lower education. The figure above depict 12.5% of interviewees who had primary education, this obvious due to their low knowledge on matters concerning with mobile bank (M PESA). Mobile bank services are under Vodacom Tanzania are available to at least educated person who may understand intricacies of mobile bank services compared to person with low level of education.

**Source:** Field Data, 2013
4.3 Gender distribution

The survey result in table 3 below reveal that greater percent of interviewed respondent that is 53.75% were females, which explicitly signifies that females are more used M PESA compared to men. This is because many females bear to use M PESA for various activities at home also much of the females are entrepreneur who can use the M PESA services to made repayment of loan to the financial institution.

Table 2: Gender distribution

<table>
<thead>
<tr>
<th>Gender</th>
<th>Frequency</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>37</td>
<td>46.25%</td>
</tr>
<tr>
<td>Female</td>
<td>43</td>
<td>53.75%</td>
</tr>
<tr>
<td>Total</td>
<td>80</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Data, 2013
Figure 1: Gender Distribution

Source: Field Data, 2013

Years in the services of M PESA as the mobile banking by respondent

<table>
<thead>
<tr>
<th>YEARS</th>
<th>FREQUENCY</th>
<th>PERCENT</th>
<th>VALID PERCENT</th>
<th>CUMULATIVE PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-2</td>
<td>25</td>
<td>31.25%</td>
<td>31.25%</td>
<td>31.25%</td>
</tr>
<tr>
<td>3-5</td>
<td>55</td>
<td>68.75%</td>
<td>68.75%</td>
<td>68.75%</td>
</tr>
<tr>
<td>TOTAL</td>
<td>80</td>
<td>100</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Field Data, 2013
The finding of study shows that majority of persons who are using Vodacom M PESA Tanzania services have been continuing to benefit from those services. Beneficiaries to M PESA services have been maintained their long established relationship with mobile bank services provision at affordable rates under M PESA, for instance the figure above show that most of M PESA beneficiaries used for over 3 years, 62.5% of beneficiaries have been used M PESA between 3 to 5 years, therefore they benefiting under M PESA. The increase number of customer to M PESA is remarkably growing at the rate of 37.5% for respondent who have benefiting from M PESA services for over 1 to 2 years.
Table 4: Technical skills required to run M PESA as an agent

<table>
<thead>
<tr>
<th>Possession of technical skill</th>
<th>Frequency</th>
<th>Percentage</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>YES</td>
<td>43</td>
<td>59.7</td>
<td>59.7</td>
</tr>
<tr>
<td>NO</td>
<td>39</td>
<td>40.3</td>
<td>40.3</td>
</tr>
</tbody>
</table>

Source: Field Data, 2013

Figure 3: Technical Skills Distribution

Source: Field Data, 2013
Table 4.7 present results on possession of technical skills required to run M PESA as an agent. The finding indicated that 59.7% of respondent had technical skills required to run the M PESA as mobile bank services this was due to the fact that Dodoma region contain much number of student and 40.3% had little or no technical skills.

Table 5: Growth of M PESA

<table>
<thead>
<tr>
<th>YEARS</th>
<th>NUMBER OF CUSTOMER</th>
</tr>
</thead>
<tbody>
<tr>
<td>2008</td>
<td>400000</td>
</tr>
<tr>
<td>2009</td>
<td>450000</td>
</tr>
<tr>
<td>2010</td>
<td>600000</td>
</tr>
<tr>
<td>2011</td>
<td>700000</td>
</tr>
<tr>
<td>TOTAL</td>
<td>700000</td>
</tr>
</tbody>
</table>

Source: Vodacom (2011)
The table and Graph present general growth trend of M PESA as mobile bank. The finding indicated that about four years after inauguration of M PESA it has shown general upwards growth. The table below show the number of customer has been increasing since inauguration of the M PESA services in 2008 to 2012 as shown in Table. The percentage increase in number of customer was in 2008/2009 and 2009/2010 and in 2011/2012. In general, there is increased number of customer from year to year, this was due to the services which are provided by the Vodacom and also Network coverage in Dodoma compare with other telecommunication company.

A survey of 3,000 M-PESA users and non-users conducted in the fall of 2008 shed considerable light on the profile of M-PESA’s early adopters and customer usage.
patterns. The survey found that the average M-PESA user is, in comparison to non-users, twice as likely to have a bank account (72 percent versus 36 percent), wealthier (65 percent higher expenditure levels), more literate, and better educated. Early adopters appear to be experienced with banking propositions and fairly “tech savvy,” which probably makes them more acutely aware of the convenience offered by M-PESA relative to the alternatives.

Consistent with its broad market positioning, more than half the sample use it primarily for sending and receiving money. Interestingly, 21 percent of M-PESA users report using M-PESA for storing money. However, the survey revealed that less than 1 percent of accounts had balances of over TSh 1,000 (US $13), and a government audit of M-PESA in August 2009 revealed that the average balance on M-PESA accounts was only US $2.70.12 The survey also found that 52 percent of customers use the service on a monthly basis, suggesting that customers have yet to incorporate M-PESA into their daily lives.

**Customer experience with M-PESA**

The perceived safety of using M-PESA and its convenience are main reason for customer adoption of the service. This study has found that the range of services provided by M-PESA is high quality and customer are having higher expectation upon the services provided in regard to their agreement of services.

There are intra factors that have been seen to be satisfactory to small portion of persons beneficiaries to M-PESA, costs are reduced to beneficiaries with lower amount of money that is paid by customer in order to get services through M-PESA. Promptness in responding to clients has been shown by most of people who were interviewed and accessibility of M-PESA is available almost to all its customer.
The way in which the M pesa agent make the profit

The studied 28 agents with 45 locations. They focused on small stores of the kind found in Dodoma Region, which make up the vast bulk of M-PESA agents. The finding show that first, it is profitable, to the tune of 3.2 times more profit per day being an agent (5.01/day) than selling airtime (Tsh 2170/day). What are the drivers behind this? First, volume of transactions. On average the agents we looked at did 86 transactions per day. But it’s equally critical to understand costs. In fact, this is where providers will need to do the most work to understand their agents.

The number one cost for most agents was liquidity management moving cash. Agents report a host of expenses, including bank charges, transport costs, and fees to aggregators who advance commissions and provide easy float/cash swaps for agents. On average, liquidity management consumed 30% of total expenses. Extending the network of aggregators would help alleviate some of the costs, and Vodacom has taken steps to calibrate the fees aggregators charge.

Second, being an M-PESA agent requires capital, and that capital has a cost. The typical agent had Tsh 1,60000 tied up in the agent business, mostly in cash and e-float. This is 12 times greater than the Tsh 129000 capital they had invested in airtime (mostly in their
stock of scratch-off cards). To put this in further perspective, Tsh1,60000 is equivalent to Tanzania per capita GDP.

Many agents we spoke to finance their initial capital for the agent business out of proceeds from another business. But the smaller the agent, the more frequently they reported borrowing, often in sums which are large compared to their other income flows. There are also a good number of M-PESA shops which were started from scratch, and these are usually financed by a loan. Many of these entrepreneurs are barely breaking even. Cheaper financing, secured by their M-PESA commissions, would help them immensely.
Potential economic impacts of M-PESA on household

M-PESA facilitate the safe storage and transfer of money, which make it more potential to the economy, it simply facilitate trade, making it easy for people to pay and to receive payment for goods and services. Utility bills can be paid without travelling anywhere; goods can be paid for without carrying cash at all.

Also M-PESA help the Household to save some money as it provide a safe mode of saving cash instead of saving money at bank which involve going to the branch and other complications like queue and formality for transactions.

The use of M-PESA facilitate inter personal transaction hence improve the allocation of savings across household and business by deepening the person to person credit market. This could increase average return to capital.

M-PESA facilitates timely transfer of small amount of money, the money is available at the time of need, and a good example is when there is emergency like sickness, school fees.

M-PESA help to empower the marginalized group especially women who had less bargaining power, remittance and transfer received and sent via M-PESA are not visible like money received through physical delivered and other means.

Challenges of Mobile Banking

Mobile banking services have a great potential for the integration of financial services with the spread of mobile technology. While these particular banking services are growing, they have also had a negative influence in term of trust among customers. To become broader and more adoptable service, therefore, many factors need to be addressed for banks and financial institutions. The following points below are the key
issues for managing mobile banking services in order to become an attractive service and to gain customers confidence and trust.

(i) Security

The main key drivers to motivate customers to use mobile devices for their online transactions are not only convenience, but also security. The security challenges are the most significant factor for the effective management in mobile banking services. Customers expectation on the security of mobile banking technology is at least the same level as the PC’s online banking service. The more secure mobile transaction means the enhancement of customers confidence and the improvement of customers perception toward banks.

It is necessary to ensure that online data transmission is done in the secure channel. The term “secure” represents the idea of confidentiality. Using identity authentication and authorization of established connection methods such as PIN numbers, password, smart cards, digital signatures and biometric identifiers are very essential for doing any online transactions.

The increasing numbers of various fraud techniques are also challenge for banks and non banks institutions involved in financial services. Many fraudsters attempt to steal or attack users personal information by developing new techniques to overcome the security methods, and this can lead to the new harms for mobile banking customers.

(ii) Reliability

Every business is running on customer’s or user’s reliability. A few seconds of system down time caused by unstable performance servers or insufficient technical support could mean an enormous loss of profit and a negative effect on trust relationship between customers and organizations. In banking businesses, performance plays a huge role, and it can have a directly influence on customers
trust. In every kind of service, especially the online transaction service, institutions are responsible for making sure that all the connection processes are initiated and closed properly without any problems.

Technical support is also important. The more levels of technical support mean the stronger of the relationship between “perceived ease of use” and “intention to use”. This means organizations must have the 24/7 support services to standby for customers anywhere and anytime in order to create the reliability and confidence, and to persuade customers to continue using mobile banking services.
CHAPTER FIVE
SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction
The research has been looking at the customer’s perceptions, towards M PESA as Mobile bank. The research was controlled by the research questions which have been answered accordingly hence meet the demand of objectives. In this way, the researcher proved and quantified on services which provide via M PESA as mobile bank. Therefore the services which provided by M PESA will lead to the satisfaction.

5.2 Conclusion
Mobile banking in general and M-PESA specifically has become a popular in Dodoma and Tanzania in general due to convenience that it gives its customers; they can pay bills and make cash transfer through M-PESA. It offer many advantages than Internet banking and banking in person.

With wide range of mobile connectivity the service can be accessed by anyone through mobile phone. It estimated that about TZS35 billion (USD22 million) is transacted daily through M-PESA and attributed this to the fact that the service is safe and reliable and is available throughout the country.’

M-PESA is a great success. Millions of Tanzanians use it regularly. Millions of shillings flow through M-PESA each day. It holds out the hope that it can be the platform for the provision of additional formal financial services such as savings, credit and insurance. But that nut has yet to be cracked, especially in the low-income market. Meanwhile it helps low-income Tanzanians manage risk and maintain and reinforce their social networks.
The study indicates that the majority of the correspondents service providers had only subscribed for Vodacom Limited services for various reasons; Market penetration, low cost, convenience/reliability, transmission and transactional speed, wide network coverage, company performance in the industry in terms of brand, influence from friends and product and services differentiation. The study further found out that all the respondents owned registered M-Pesa accounts and majority knew about M-Pesa services through advertisement.

The study also found the majority of the M-Pesa customer used the service to send and received money while others further used the service to pay utility and to save money. The study also found that majority of the M-Pesa customers used the service on a weekly basis. Majority of the respondents also intimated that they are moderately satisfied with M-Pesa service and considered it as reliable through which cash gifts and loans flow. That is good start.

The customer on M-PESA as the mobile banking were good according to the findings that has been collected during the study at Dodoma because the findings shows that the customers satisfy with the services that provided by the Vodacom mobile services.

There are intra factors that have been seen to be satisfactory to small portion of persons beneficiaries to M-PESA, costs are reduced to beneficiaries with lower amount of money that is paid by customer in order to get services through M-PESA promptness in responding to clients has been shown by most of people who were interviewed and accessibility of M-PESA is available almost to all its customer.

Due to various factors there is an understanding between services provider and customers, most of the clients of Vodacom M-PESA are satisfied in regard to the way customer are being cared, the responsiveness of M-PESA services or the willingness of
provider to meet client’s needs. Due to all such factors it is noticeable to hold that customer are satisfactorily benefiting from M PESA services.

5.3 Recommendations
Mobile banking is intended to improve banking convenience. With mobile banking, checking your account details, monitoring transactions and transferring funds becomes a lot easier. All you need is a high end phone with an internet connection, and you can save yourself the pain of visiting a bank each time you need to check account.

There are several services that you can use once you enable mobile banking. Some of them are Security alert and reminders Customer services alert for account withdraw, and deposits account balance and transactional history retrieval, funds transfer and transaction verification. One of the main advantage of mobile banking is Convenience, from transferring funds to checking your balance.

Challenges; the most important challenge that mobile bankers need to consider is security. Security is often compromised in the name of convenience, and the threat of identity theft exists. Phishing is common not only to online bankers but also to mobile bankers. There several instances, where text message rent requesting account details is sent to unsuspecting user and information received is used to hacking into the account.
Usually, people have the tendency to save their password on their phone, and once a phone is lost, their financial information and security are at risk. However, not all systems are foolproof, and you need to exercise caution when using such services. While mobile banking addresses the fundamental limitation of having a PC to carry out financial transaction, it does not guarantee especially where there is no network.

The findings from the study agree with the theory of satisfaction of services, it can be concluded that Mobile banking technology system is effective. On perception of the customers on the M-PESA services, the study findings indicate that customers consider the services as state of art money transfer service since it takes little time to transact and has made money transfer easy since its cheap, safe and one can make a lot of transaction like payment of utility bills without queuing up in the office while others said that M-PESA services had made money transfer and storage very more convenient compared to other services since one does not have to go to the bank to deposit or withdraw money.

The study also pointed to other customer’s sentiments that, while M-PESA services are so far good, M-PESA operators should endeavor to strengthen their relationship with the customers because it leads to economic growth and benefit the society in general.

But according to the researcher observation made during the study, the following recommendations are important to Vodacom M PESA:

(i) Majority of Customers perceived privacy and security a critical issue, mobile Companies are advised to educate their customer how they can secure their pin number and in case of stolen Handset what to do in order to guarantee safety of their money.

(ii) TRAINING - it was found out that while good system were in place and suitable for intended work, more investment is still needed in training of the system due
to the fact that if agent and staff did not adequately trained on using the system consequently they will not utilize the program extensively.

(iii) MANAGEMENT SUPPORT - another critical factor found in the study it was observed that the need for management support in system implementation is of vital importance basing on the fact that given a good system in place but no support from the top management the system will not be used.

(iv) POLICY- a good information system require to have organization policy that enforce its use ,without a policy staff and agent may not use the system to their full capacity even though they do appreciate system functionalities and its advantages.

(v) NETWORK PROBLEM, the management should consider the problem of network problem seriously by purchasing a modern instrument and bring about competent expert to serve a purpose whenever there is a problem of networking.

(vi) TRAINING END-USERS- it was observed that some customer were not competent with some technology applications. Therefore this resulted into wrong postage of transaction which eventually might jeopardize the decisions, especially to illiterate who are forced to rely on others in order to send and withdraw money in their Mobile. I recommend the management to arrange at least seminars and tutorials on computer based applications to the customer s in order to minimize/control wrong postage of transaction into the system.

On the basis of this study’s findings, it is quite evident that customers perceive M-PESA service as easily accessible, made bill payment easy and created job opportunities. This has had a wide influence on the economic development in the country as people find it convenient to pay bills through mobile than waste time queuing in the office despite having to waste time travelling to the pay point in the first place.
Since M-PESA is operated by human beings and machines it creates job and business opportunity which is being taken by the citizens. The study further concludes that customers perceive M-PESA services to have to have improved the living standard of people as people receive income and transfer money to friends and family through the medium and the transactions are safe and secure and very fast in terms of transaction as compared to other forms of money transfer and are easily adaptable.

Regardless of its macroeconomic impacts, M-PESA can potentially introduce the poorest Tanzanian into the financial system. For this to occur, however, financial inclusion should emphasize the delivery of savings products through branchless banking and eventually include other financial services, such as loans and insurance schemes, targeted to various needs of low-income individuals.

If M-PESA is to become a major force for financial inclusion, then the Government should relax regulations hindering Banks from offering financial services via mobile operators. Additionally, better analysis of M-PESA impact on monetary policy is necessary attenuate our expectations and maximize the true potential of this technology for financial development without imposing any serious burden on the economy.
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Dr.Myron L. Cramer (2000), Value of Information, University of Hampshire Press, USA.


http://www.vodacom.tz.com
APPENDICES

Appendix 1: Questionnaire for Customers

RESEARCH QUESTION FOR QUESTIONNAIRE ON CUSTOMER’S PERCEPTIONS ON M-PESA MOBILE BANKING SERVICES OFFERED BY VODACOM TANZANIA LTD.

INTRODUCTION:
My name is Mwakitalu, Magdalena Fredrick, student from Mzumbe University of Tanzania; recently I am doing a study on costumer’s perceptions on M-PESA Mobile Banking offered by Vodacom Tanzania ltd, so I would like to ask you some questions related to the above stated topic, your cooperation in this study essential and your feel to withdraw from this study at any moment, the information you provide will be treated confidential and used only for the purposes of this study to fulfill research objectives.

Part I – Customer Profile

Please, choose any of the relevant responses by putting tick in an appropriate box

PART A: SOCIAL DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS

INTRODUCTION

Name of the respondent …………………………………… Date …………………

Region …………………………… District…………………

Street ……………………………

1. Your gender?
   (a) Male
   (b) Female
2. Your Age category?
(a) Less than 20 Years
(b) 20-35 Years
(C) 36-45 Years
(d) Above 45

3. What is your marital status?
(a) Single
(b) Married
(c) Widowed
(d) Divorced

4. What is your level of education?
(a) Primary education
(b) Secondary education
(c) University education
(d) Never attended

5. What is your occupation? 

6. What is your religion?
(a) Muslim
(b) Christian
(c) Others (specify)
FOR AGENTS ONLY; the following questions has to be answered by the Vodacom M-PESA Agents

1. Do you get adequate security from the Vodacom M-PESA as the agents
   (a) Yes
   (b) No
   (c) I don’t know

2. Do you get reasonable profit for being a Vodacom M-PESA agents
   (a) Yes
   (b) No
   (c) I don’t know

3. How often do customers come to seek for M-PESA services
   (a) Very often
   (b) Often
   (c) Sometimes
   (d) Not often

4. Do you have enough customers?
   (a) Yes
   (b) No
5. As an agent do you get your commission and payments on time from Vodacom Tanzania Ltd?

(a) Yes

(b) No

(c) I don’t know

6. Have you have experienced the issue of shortage of money at your service station than the needs of the customers?

(a) Yes

(b) No

(c) I don’t know

2. FOR CUSTOMERS ONLY

1. Is the available M-PESA services outlets enough for you and cater your needs?

(a) Yes

(b) No

(c) I don’t know

2. Do you have enough knowledge to use Vodacom M-PESA services?

(a) Yes

(b) No

(c) I don’t know
3. Do you feel that your money is well secured by using Vodacom M-PESA as the mobile banking system?

(a) Yes

(b) No

(c) I don’t know

CHALLENGES TO CUSTOMERS ON M-PESA BANKING SYSTEM

Below are some of the lists of the challenges that are assumed facing most of the customers, please tick yes, no and I don’t know where appropriate

1. Do you consider the process of saving money at M-PESA station as any problem?

(a) Yes

(b) No

(c) I don’t know

2. Are the available M-PESA outlets accessible to everybody?

(a) Yes

(b) No

(c) I don’t know

3. What do you consider to be the best solution to overcome the challenges that is facing the M-PESA deliverance system

..........................................................................................................................................................................................................................................................................
4. What are the challenges do you face by using Vodacom M-PESA as the mobile banking system

……………………………………………………………………………………
……………………………………………………………………………………
……………………………………………………………………………………
Please circle where appropriate, you can circle more than one response,

5. Among the following services offered by Vodacom M-PESA which ones do you use?

(a) Deposit

(b) Withdrawal

(c) Payment of monthly bill

(d) Transfer money

(e) Receive money

FREQUENCY OF USING SERVICES OFFERED BY M-PESA VODA COM TANZANIA: Tick against the appropriate response

<table>
<thead>
<tr>
<th></th>
<th>Most frequently</th>
<th>frequently</th>
<th>less frequently</th>
<th>not using</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deposit</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Withdrawal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Payment of the bills</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Transfer money</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Receive money</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Part II – Security & Challenges

Rate at the 5– scale point from strongly disagree to strongly agree by circling the number to reflect your opinion on the security and challenges of M- PESA service offered by Vodacom Tanzania Limited.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Somewhat disagree</th>
<th>Uncertain</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. You feel secured/safe when using M- PESA service

2. Security aspect is very important in M- PESA service

3. I face challenges when using M- PESA service

4. What are the security threats you think exist in using M- PESA service

(Please, fill in the space provided below)

a. .......................................................................................................................................................... 

b. ..........................................................................................................................................................

c. ..........................................................................................................................................................

5. What are the challenges you are facing when using M- PESA (Please, fill in the space provided below).

a. ..........................................................................................................................................................

b. ..........................................................................................................................................................

c. ..........................................................................................................................................................
Part III – Satisfaction

Rate at the 5 – scale point from strongly disagree to strongly agree by circling the number to reflect your opinion on the characteristics of M- PESA service offered by Vodacom Tanzania Limited.

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Somewhat disagree</th>
<th>Uncertain</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. The M- PESA service offered by Vodacom is efficiency

2. The speed of transaction in M- PESA service is relative
   High

3. The M- PESA service is reliable

4. The M- PESA service is Ease to use (menu options)

5. The M- PESA service is flexible

6. The M- PESA service is very important

7. I frequently use the M- PESA service

Rate at the 5 – scale point from Extremely Dissatisfied to very satisfy by circling the number to reflect your opinion on the satisfaction of M-PESA service offered by Vodacom Tanzania Limited.
<table>
<thead>
<tr>
<th>Extremely dissatisfied</th>
<th>Somewhat dissatisfied</th>
<th>Neutral</th>
<th>Somewhat satisfied</th>
<th>Very satisfied</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

8. I am ___ With overall M-PESA service

9. I am ___ With personal contact from Vodacom staff rather than M-PESA services itself

10. I am ___ With M-PESA service itself rather than personal contacts

**Part IV – Attitude and Perception:**

Rate at the 5-scale point from strongly disagree to strongly agree by circling the number to reflect your opinion on Attitude towards M-PESA service offered by Vodacom Tanzania Limited.

<table>
<thead>
<tr>
<th>Strongly disagree</th>
<th>Somewhat disagree</th>
<th>Uncertain</th>
<th>Somewhat agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

1. There is relative advantage/benefits in utilizing M-PESA service

2. I will intend to continue using the M-PESA service in future

3. I will recommend to others to use M-PESA service
Part V – General Comments

Give any comments/ Suggestions regarding what should be done to improve the M-PESA service offered by Vodacom Tanzania Limited. Please write them down in the space below.

a. ..............................................................................................................................

b. ..............................................................................................................................

c. ..............................................................................................................................
Appendix 2: Schedule of activities

<table>
<thead>
<tr>
<th>Activity</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Orientation/Familiarization</td>
<td>1 2 3</td>
</tr>
<tr>
<td>Research design</td>
<td>4 5 6</td>
</tr>
<tr>
<td>Data collection</td>
<td>7 8 9 10</td>
</tr>
<tr>
<td>Answering of Research questions</td>
<td>11 12 13</td>
</tr>
<tr>
<td>Data analysis &amp; Interpretation</td>
<td>14 15 16</td>
</tr>
<tr>
<td>Documentation and submission</td>
<td></td>
</tr>
</tbody>
</table>
# Appendix 3: Research Budget

<table>
<thead>
<tr>
<th>NO.</th>
<th>PARTICULARS</th>
<th>AMOUNT (TSHS)</th>
</tr>
</thead>
</table>
| 1   | Stationeries;  
3 plain paper Reams  
Pens  
Data server-Flash disk | 50000 |
| 2   | Secretarial Services:  
Typing costs 40,000/=  
Printing 20,000/=  
Photocopying 15,000/=  
Binding 5,000/= | 80000 |
| 3   | Upkeep Costs  
Breakfast, Lunch and Dinner 7 days x 16 weeks | 40000 |
| 4   | Travel expense:  
Fare to and from home as well as holiday traveling. | 70,000/= |
| 5   | Travel expense:  
Fare to and from home as well as holiday traveling. | 70,000/= |
|     | **TOTAL** | **310,000/=** |

*Thank for cooperation*
Appendix 4: Vodacom Tanzania Management Chart

Chief executive Director

Director of Finance & Administration

Director of Human Resource & Legal Affairs

Director of insurance programs

Internal Auditor

Financial Controller

Administration Manager

Procure Manager

HR Develop Officer

Legal Officer

Personal Officer

HR Mgt Ass

Non life insurance Coordinator

PM

Life insurance Sector Coordinator

Policy & Advocacy

Financial Controller

Transport Officer

Dodoma Procurement Officer

Legal Officer

Personal Officer

HR Mgt Ass

Accounting manager

Accountants

Budget Manager

Administr ation Officer

Project Administrator

Executive Secretary