FACTORS AFFECTING THE OF USE MOBILE BANKING IN KENYA: A Case of Equity Bank Garissa Branch

BY

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DECLARATION

This research project is my original work and has not been presented for a academic award in any other university

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This research project is submitted for exanimation with our approval as university supervisors.

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ACKNOWLEDGMENT

I dedicate this report to my family, wife Nancy and my children Kimberly, Bedan and Mark.

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ABSTRACT

The purpose of this study was to establish the factors that affect the mobile banking in Kenya. The study was guided by four objectives which revolved around the effect of educational level, the age of the individual, the perceived usefulness of mobile phone and the perceived ease of use of the mobile phones on mobile banking. The literature review focused on the factors that affect the mobile banking such as the level of education, age, perceived usefulness and perceived ease of use. The study embraced a descriptive survey design. The data collected was both qualitative and quantitative with the questionnaire and document analysis being the main tool for data collection. The target population included all the 39,204 customers of Equity bank Garissa Branch and the sample size was arrived at using the Mugenda and Mugenda (2003) formulae. The data analysis was done by use of SPSS version 20 and the data was presented using frequency tables and correlational tables. Through data analysis the study established that; there is a relationship between the levels of education, the age of the individual, the perceived usefulness of the mobile phone and the perceived ease of use of the mobile phone on the use of the mobile banking facility. The study recommended that the customers of Equity bank need to be sensitised on the need to use mobile banking with the aim of decongesting the long queues experienced as people carry out banking transactions especially the end of the month. It also recommended that, the banks needs to market the mobile banking services to the client with the aim of increasing the number of people using mobile banking. The bank should also lower the charges of the services sought through mobile banking facility with the aim of wooing many people into using the facility. There is also need to encourage the people who are already registered with mobile banking facility to desist from travelling to the bank to seek services that they can seek through mobile banking and also the community around Garissa town should embrace education in order to increase literacy rates with the view of encouraging people to embrace technology like the use of the mobile banking.

LIST OF ABBREVIATIONS

ICT-Information Communication Technology

M-Banking- Mobile Banking

E-Banking- Electronic Banking

CHAPTER ONE

INTODUCTION

1.1 Background to the study

E-business has been continuously growing as a new industry during the last decade (Van Hoeck, 2001). The banking industry has been leading this trend in recent years, and now all banking transactions are completing through internet applications (Boss et al., 2000; Smith, 2006; Hwang et al., 2007; Shin, 2008). E-banking technologies have proliferated in recent years, and the availability of a wide range of products has led to increasing adoption among consumers. These technologies include mobile banking (Servon and Kaestner, 2008).

A more recent e-banking development is wireless internet applications of banking sometimes called m-banking (mobile banking) (Choi et al., 2006; Scornavacca and Hoehle, 2007). With the combination of two most recent technological advancements – internet and mobile phone, Mobile banking is a service provided by financial institutions in cooperation with mobile operators. It is about getting banking services to the unbanked, those who do not have bank access or bank accounts, and those who are at the bottom of the economic pyramid, often living in remote areas. They receive the benefits of banking services such as being able to save and borrow in a cost-efficient and secure way. The services include viewing account balances, making transfers between accounts, or paying bills via a mobile device such as a mobile phone. In recent time Mobile banking is most often performed via SMS or the Mobile Internet but can also use special programs called clients downloaded to the mobile device (Salzaman, Palen & Harper, (2001).

Studies on the performance of mobile banking have shown varrying results. For instance Sylvie and Xiaoyan(2009) found that market status for online/mobile banking in China is

predominantly practiced by males who are not necessarily young and highly educated, in contrast with the electronic bank users in the West. The issue of security was found to be the most important factor that motivated Chinese consumer adoption m-banking. According to Jim Bruene (2006), m-banking is the best thing to happen to personal finance management since the invention of the paper statement. In many countries, half or more of mobile phone users routinely use their phones to check account activities, verify deposits, and just see if everything is in order'. According to a report by Mintel International Group Ltd (June 1, 2006), the forces driving the growth of the Internet-increased broadband access, new innovations that provide a secure environment, and the coming-of-age of more tech-savvy people-will combine to propel online banking as well.

The convergence of the Internet and mobile networks creates new opportunities and applications. Treating mobile business as simply an extension to the traditional web could result in missing out unique differentiated qualities for new value-added possibilities. Mobile Banking is considered to be one of the most value-added and important mobile service available. Arcraf's (2005) current research examined technological changes in mobile networks and innovative attributes of Mobile Internet. It has advanced the theoretical framework of innovation in service to develop a customer centric analysis of m-banking value proposition. This article goes on to discuss critical factors in the diffusion of m-Banking and explores reasons of failure and further prospects of success (Ayadi, 2005).

According to Rasheda Sultana (2009), across the developing countries, millions of people rely on informal economic activity and local level networks to earn their living. Most of these populations are from bottom of pyramid and they don't have access to basic financial services/banks as access to them is costly and very limited. However, the outstanding growth

of mobile sector worldwide has created a unique opportunity to provide social and financial services over the mobile network. With over 4 billion mobile cellular subscriptions worldwide, mobile network has the ability to immediately offer mobile banking to 61% of the world population (Sultana, 2009). With the improvement of mobile technologies and devices, banking users are able to conduct banking services at any place and at anytime. Recently, many banks in the world have provided mobile access to financial information.

Mobile banking, commonly referred to as M-banking, is an innovation which has been perpetuated by the wide spread of this mobile communication technology. M-banking is defined as the financial services delivered via mobile networks and performed on a mobile phone (Bangens and Soderberg, 2008). Research has shown that mobile communications has a potential of leapfrogging traditional infrastructure; M-banking has great potential to extend the provision of financial services to unbanked people through a technology that is both familiar and widespread.

In Kenya, adoption of M-banking services is still very low compared to mobile operator led transfer services using mobile phones. Unlike mobile money transfer services operated by mobile network operators, M-banking promises a lot more to the users, including interest on funds saved, credit history and access to loans. This leads to questioning the banking sector as to whether the un-banked user has been well understood. There is a need to understand users' acceptance of M-Banking and to identify the factors influencing their intentions to use M-banking. This information can assist developers to build M-banking systems that consumers want to use, or help them to discover why potential users avoid using the existing system. The reason to understand what factors contribute to users' intention to use mobile banking is important issue of research and it will be the undertaking of this study.

1.2 Statement of the problem

Financial transactions that are based on wireless handsets may soon prove to be as pervasive as Internet-based financial applications. The foregoing discussion shows that the earlier studies established that many developed countries have embraced mobile banking hence enabling people to seek services such as viewing account balances, making transfers between accounts, or paying bills via a mobile device such as a mobile phone. The statistics at the ministry of information and communication shows that there has been exponential growth of the mobile subscribers which increased to 28.08 million up from 26.49 million in the year 2012 which is a 5.99% increase. However, the statistics from the Kenya Bureau of statistics shows that there is a small number of people using mobile banking, an indication that even if there is high growth is access to mobile phone a small number of people use it for mobile banking services. This triggers the study of this nature in order to establish the factors that influence the mobile banking in Kenya.

1.3 Purpose of the Study

The purpose of this study was to establish the factors influencing mobile banking in Kenya

1.4 Objectives of the Study

The main objective of this study was to establish the factors influencing mobile banking in Kenya

1.4.1. Specific objectives

The specific objectives of the study were;

i. To establish the influence of users level of education on the use of M-banking among the customers of Equity branch Garissa Branch
ii. To determine the influence of users' age on the use M-banking among the customers of Equity branch Garissa Branch

iii. To determine the level at which usefulness of the mobile phone influence the use mobile banking among the customers of Equity branch Garissa Branch

iv. To determine the influence of ease of use of mobile phone on the use M-banking among the customers of Equity branch Garissa Branch

1.5 Research Questions

This study was guided by the following research questions:

i. What is the influence of users' level of education on the use of M-banking among the customers of Equity branch Garissa Branch

ii. What is the influence of Users' age on the use of M-banking among the customers of Equity branch Garissa Branch

iii. What is the influence of usefulness of the mobile phone on the use mobile banking among the customers of Equity branch Garissa Branch

iv. What is the influence ease of use of mobile phone on the use of M-banking among the customers of Equity branch Garissa Branch.

1.6 Significance of the Study

The findings of this study may be useful to business owners by educating themselves on the many avenues and platforms that m-banking affords. The mobile phone operators and banking institutions may use the findings of the study to improve or expand their services in a way geared to economic empowerment to all those who are involved. The managers and software vendors seeking to enhance the adoption of communication-oriented forms of ICT and telecommunications may use the finding of the study to improve their services. Finally the researcher may also use the finding of the study to come up with other studies to supplement the findings of this study in order to improve the banking services.

1.7 Limitation of the Study

The major limitation of the study was that, there was limited literature on research concerning the factors influencing mobile banking in Kenya and this prompted the researcher to carry an

in-depth study in order to elicit the factors influencing mobile banking in Kenya. The other limitation was that the respondents were not willing to give information for fear of revealing their bank accounts; this was countered by explaining the importance of the study to them before administering questionnaires and assuring them confidentiality.

1.8 Delimitation of the Study

This study only focused customers of Equity bank and the managers of the same bank. It explored on the factors influencing mobile banking.

1.9 Basic Assumption

The researcher had the assumption that the customers of the Equity bank use mobile banking. The other assumption was that the respondents gave genuine responses.

1.10 Operational definitions of Significant Terms

Bank: Refers to financial institution that accepts deposits and channels those deposits into lending activities, either directly or through capital markets**.**

Mobile Phone: is a device that can make and receive telephone calls over a radio link whilst moving around a wide geographic area.

Banking Business: Means receiving money on current or deposit account, paying and collecting cheques drawn by or paid in by customers,

Mobile Banking: refers to provision of banking and financial services with the help of mobile telecommunication devices.

Customers: Are the people seeking banking services

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews related information concerning mobile banking. It discusses issues related to mobile banking such as; the concept mobile banking, the influence of education level on M-banking, the influence of users' age on M-banking and the extent to which the usefulness of the mobile phone and ease of the use of mobile phone affects mobile banking.

2.1 The concept of M-Banking

The terms m-banking, m-payments, m-transfers, m-payments, and m-finance refer collectively to a set of applications that enable people to use their mobile telephones to manipulate their bank accounts, store value in an account linked to their handsets, transfer funds, m-banking or even access credit or insurance products. This study uses the compound term m-banking/m-payments systems to refer to the most common features. The first targets for these applications were consumers in the developed world. By complementing services offered by the banking system, such as checkbooks, ATMs, voicemail/landline interfaces, smart cards, point-of-sale networks, and internet resources, the mobile platform offers a convenient additional method for managing money without handling cash (Karjaluoto, 2002). For users in the developing world, on the other hand, the appeal of these m-banking/m-payments systems may be less about convenience and more about accessibility and affordability (Cracknell, 2004; infoDEV, 2006). An exploration is underway—between banks, mobile operators, hardware and software providers, regulatory agencies, donors, and users—to determine the shape of m-banking/m-payments services in the developing world (infoDEV, 2006; Ivatury, 2004; Ivatury & Pickens, 2006; Porteous, 2006).

Mobile phone operators have identified m-banking/m-payments systems as a potential service to offer customers, increasing loyalty while generating fees and messaging charges (infoDEV, 2006). Financial institutions, which have had difficulty providing profitable services through traditional channels to poor clients, see m-banking/m-payments as a form of "branchless banking" (Ivatury & Mas, 2008), which lowers the costs of serving low-income customers.

There is no universal form of m-banking; rather, purposes and structures vary from country to country. The systems offer a variety of financial functions, including micropayments to merchants, bill-payments to utilities and long-distance remittances. Currently, different institutional and business models deliver these systems. Some are offered entirely by banks, others entirely by telecommunications providers, and still others involve a partnership between a bank and a telecommunications provider (Porteous, 2006). Regulatory factors, which can vary dramatically from country to country, play a strong role in determining which services can be delivered via which institutional arrangements (Mortimer- Schutts, 2007).

Most m-banking/m-payments systems in the developing world enable users to do three things: (a) Store value (currency) in an account accessible via the handset. If the user already has m-banking a bank account, this is generally a question of linking to a bank account. If the user does not have an account, then the process creates a bank account for her or creates a pseudo bank account, held by a third party or the user□s mobile operator. (b) Convert cash in and out of the stored value account. If the account is linked to a bank account, then users can visit banks to cash-in and cash-out. In many cases, users can also visit the GSM providers□ retail stores. In the most flexible services, a user can visit a corner kiosk or grocery store—perhaps the same one where he or she purchases airtime—and transact with an independent retailer working as an agent for the,transaction system. (c) Transfer stored value between accounts.

Users can generally transfer funds between accounts linked to two mobile phones, by using a set of SMS messages (or menu commands) and PIN numbers. The new services offer a way to move money from place to place and present an alternative to the payment systems offered by banks, remittance firms, pawn shops, etc.. The uptake of m-banking/m-payments systems has been particularly strong in the Philippines, where three million customers use systems offered by mobile operators Smart and Globe (infoDEV, 2006); in South Africa, where 450,000 people use Wizzit ("the bank in your pocket") (Ivatury & Pickens, 2006) or one of two other national systems (Porteous, 2007); and in Kenya, where nearly two million users registered with Safaricom M-Pesa system within a year of its nationwide rollout (Ivatury & Mas, 2008; Vaughan, 2007).

2.2. Factors Influencing mobile banking

2.2.1 Influence of education on the use of M-Banking

The rapid development of information technology has affected the banking industry globally. An impact of information technology in the banking sector is the introduction of mobile banking. Earlier studies have shown the usefulness of mobile banking in facilitating the financial transactions between banks and their customers (Kleijnen et al., 2004; Luarn and Lin, 2005; and Mattila, 2003).

Since mobile banking is one of the most technological applications in terms of innovation, it is important that a strong understanding on how these innovations would benefit is inculcated among clients. Based on previous research work, an educated community is better at adopting new mobile banking technologies (Mattila, 2003). Rapid changes in the financial services environment; increased competition by new players from non-banking sector, product innovations, globalization and technological advancement have led to a market situation where battle of customers is intense. In order to rise to the challenges, service providers are even more interested to enhance their understanding of consumer behaviour patterns.

The newly emerged mobile banking services represent an innovation where both intangible service and an innovative medium of service delivery employing high technology are present. Thus, concepts of innovation and diffusion of innovation are even more intricate as technology and service aspects have an effect on the characteristics of mobile banking services (Mohr 2001). Traditionally research relating to the customer adoption of innovation has tended to concentrate on socio-demographic and psychographic attributes of potential adopters. Even though these kinds of personal characteristics of a consumer have been found to be predictors of adoption, an increasing body of research has demonstrated that it is the perceived attributes of innovation itself rather than the personal characteristics that are the stronger predictors of the adoption decision (Black et al. 2001,)

Studies have shown that most of electronic (Internet) banking users have traditionally had university level education and higher professions (Jayawardhena & Foley, 2000). In their studies, Jayawardhena & Foley (2000) found during interview that people who have adopted technology enabled services like mobile phones and ATMs are more open and eager to adopt mobile financial services (MFS). On the contrary, the villagers who had never used an ATM or a mobile phone were found to be reluctant to make financial transaction through mobile phones. This clearly showed that lack of technology readiness among the rural population would be a barrier towards ensuring adoption of MFS.

Laforet and Li (2005) found that in China, the lack of understanding of the concepts and benefits was a main barrier to consumers using mobile banking. Subsequently, users of mobile banking were not intended to be highly educated and were typically younger people in China. This was in contrast to the situation in the western countries as discussed by Karjaluoto, Mattila, and Pento, (2002). As discussed by Trappey and Trappey (2001), the Chinese are used to carrying cash, and have little confidence in traditional financial

management. Compared to other Asian consumers, Chinese consumers seem to be more traditional and less affected by new technology advancements. Heinonen (2004) & Forman and Sriram (1991) found that some customers simply prefer to deal directly with a bank clerk instead of utilizing "arms-length technology" (e.g. mobile banking). The examples tend to show that education level of consumers have a bearing on their adoption of new technology, mobile banking being one of them. The extent to which education level affects the adoption of mobile banking in Kenya is not quite clear however a study by Adrian (2009) shows that the level of education influence the use of M-pesa. According to Adrian (2009) the better educated individuals are more likely to use M-Pesa to purchase airtime, save and store money while travelling, and use M-Pesa to pay wages than their respective counterparts with low education. He further established that more-educated, and banked individuals are each approximately 2.5 times more likely to report using M-Pesa while travelling when compared to their counterparts.

2.3 Influence of Age of individual on mobile banking

According to Polatoglu & Ekin (2001) and Howcroft et al. (2002), demographic factors that describe typical electronic banking customers include young, affluent and highly educated. Northern European countries are among the most advanced ones in the adoption to and use of different new mobile and technological appliances. These countries have extended the implementation of technological advancement in banking services (Howcroft, Hamilton & Hewer, 2002

Although the densities of fixed and mobile connections are high in all the Nordic countries, the number of most advanced Internet-enabled mobile phones is still fairly low; in Finland 20 % of population has Internet-enabled device. Access to advanced model is slightly more common to men than to women. In addition younger people have advanced mobile phones

more often than older people (The Finnish Bankers' Association, 2002). In fact in the age group 60 years or over as well as among retired persons the access rate is only 3-9 %.

In one study, age and education were found to have major influences on the use of the mobile phone for banking services (Suoranta, 2003). Gender and age were found to be the main differentiators in another study (Laukkanen & Pasanen, 2007). A study by Mattila (2002) found that Internet banking user is middle aged, relatively wealthy and highly educated. In the study, a user of mobile banking belonged most often to age group 25 to 34 years old. Majority of the so called regular users (43.6 %) were 25 to 34 years old as well as majority (36.8 %) of occasional users, whereas non-users were relatively older compared to the two other groups. Every third of non-users (31.7%) belonged to age group 35 to 49 years old and 25.9 % to 50 to 64 years old (Mattila, 2002).

In their study Rajanish & Sujoy (2011) found that user demographics like education and age have impact on the amount of technology readiness of the population. Technology readiness was seen to be higher among the educated people and lower among the higher age groups (older than 50 years). Thus, technology readiness among the set of population can be determined based on the awareness and adoption of available technologies and a combination of demographics like education and age.

A study by Wood (2002) in Jordan found that the influence of age is noticeable. Through the fact that compared to older consumers, younger adults, especially those under age 25 are more interested in using any new technologies, such as Internet or mobile banking application. This finding is supported by a study by Mattila (2003), who found that the age group of 17 to 25 years has the potential to become users of mobile banking, because of its familiarity with the latest mobile technologies. These results require the banking sector to focus on these cohorts

as a target for marketing and strategic planning. This would make them to be the major group of users for mobile banking application. Besides that, the targeted users would also comprise middle aged, earning relatively good income and highly educated. Thus, age was found to be an important factor to be considered for the adoption of mobile banking application in Jordan. In Kenya there is not study which has been carried to establish the level at which age influence the use of mobile banking and this will be the undertaking of this study

2.4 The influence of usefulness of mobile phone on mobile banking

Perceived usefulness had been confirmed that it can be important in influencing intention and use by the extensive research in the past .There is also extensive empirical evidence that supports the significant effect of perceived usefulness on behavioral intention (e.g., Davis et al., 1989; Jackson et al., 1997; Venkatesh, 1999).

The constructs Perceived Usefulness (PU) and Attitude towards Adoption (ATA) of M-banking were adapted from TAM. These constructs have also been maintained for studying the adoption of mobile services where results fairly well comply with the findings from TAM studies. TAM posits that a user‘s acceptance of information system is determined by that user‘s intention to use the systems, while perceived usefulness predict the usage intention. According to TRA, users‘beliefs influence their attitude, which in turn influence behavioural intention. The perceived usefulness is a beliefs. Thus, it affect user‘s attitude. Accordingly, perceived usefulness and ease of use may not fully explain behavior attitude to use M-banking. Wang examined the impact of perceived credibility on usage intention, and found that perceived credibility had a significant effect on intention (Nysveen et al, 2005).

2.5 The influence of ease of use mobile phone on mobile banking

Extensive research has provided evidence that perceived ease of use has a significant effect on usage intention, it is an important predictor. Perceived ease of use can be an important

determinant, perhaps even more than perceived usefulness, of information system success when process-oriented issues are at the forefront of users' minds (Venkatesh, 1999). A considerable of prior studies supported the significant effect of perceived ease of use on behavioral intention, either directly or indirectly through perceived usefulness and attitude (e.g., Davis et al., 1989; Jackson et al., 1997; Venkatesh, 1999). This study seeks to revalidate such relationships in the context of mobile banking. Attitude is defined as positive or negative sense about the desired behavior. While some theorists argue that beliefs influence behavior only via their indirect influence on attitudes (Fishbein and Ajzen, 1975), others view beliefs and attitudes as co-determinants of behavioral intentions and still others view attitudes as antecedents of beliefs (Weiner, 1986). Counter to Fishbein and Ajzen's (1975) position, both Davis (1986) and Davis, et al. (1989) found that attitudes do not fully mediate the effect of perceived usefulness and perceived ease of use on behavior .Behavioral Intention Refers to individual's intention to perform a behavior and is a function of Attitude, Subjective Norm and Perceived Behavioral Control Attitude Refers to individual's positive or negative evaluation of the behavior (Ajzen, 1988) Subjective Norm Refers to individual's "perception of social pressure to perform or not to perform the behavior" (Ajzen, 1988,)

2.6 Conceptual framework

2.1 Conceptual framework

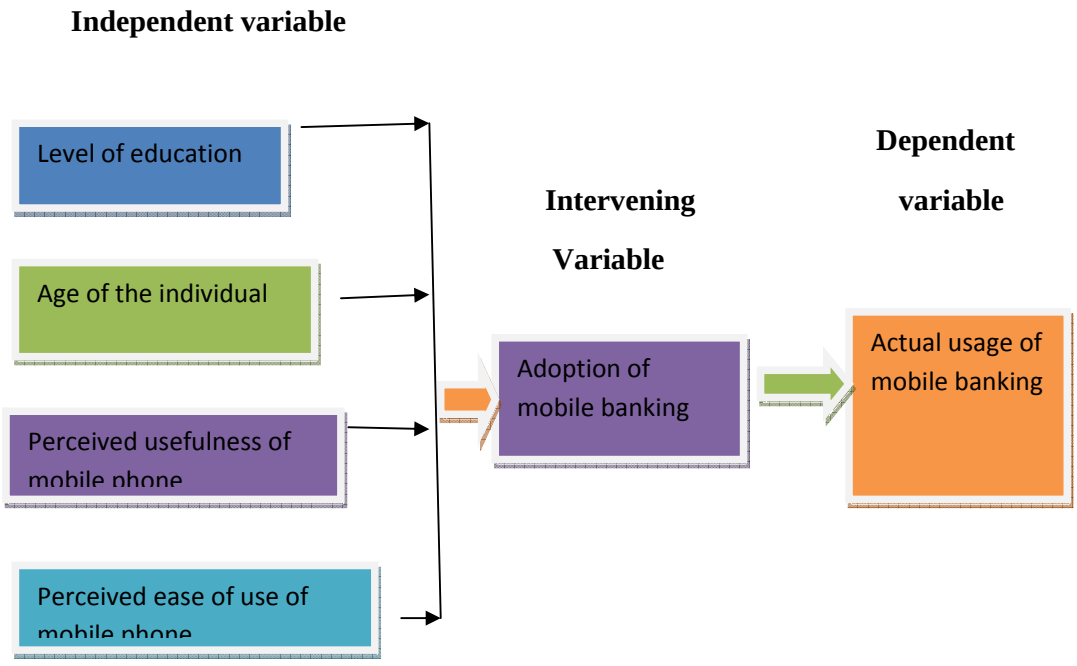

Figure 2.1 shows that the use of mobile banking depends on the level of education of the individual, the age of the individual, the perceived usefulness of the facility and the perceived ease of the mobile phone. For the people to use mobile banking they need to adopt the technology

2.7 Theoretical framework

This study adopted theory of planned behavior, which was designed to understand and predict (determine) the doing or not doing the human behavior. This theory is an improvement of theory of reasoned action. The theory of reasoned action was developed by Fishbein, M., in 1975 (Fishbein, M., Ajzen, I. 1975). Ajzen developed the theory of reasoned action and later called it the theory of planned behavior, in 1985 (Pavlou, P.A. 2003), This theory tries to predict the involuntary behaviors considering the perceptions of performance control. Theory of planned behavior was designed to eliminate defects and deficiencies of studies that aim to investigate the relationship between attitudes and behavior, and it determines the impact of three factors "attitude", "subjective norms" and "perceived behavior control" on the

behavioral intention (Shih, Y.Y., and Kwoting Fang, 2004). In this case attitude refers to people's general feelings about desirability or undesirability of a subject or specific behavior while subjective norm refers to individual's perception of the important people's opinions to do or not to do the behavior (Luarn, P. and Lin, H. 2005). In other words, the subjective norm is perceptions about the community opinions to do or not to do the behavior by individuals.

Perceived behavior control construct is the individual's perception about ease or difficulty of doing behavior and shows individual's perception of required skills, resources and opportunities to perform the behavior (Luarn, P. and Lin, H. 2005). TPB was designed for situations where people have not complete control over their behavior. According to this theory, behavior is a direct function of behavioral intentions (desire to doing the job) and perceived behavioral control. objective norm refers to social pressures perceived by individuals to do or not do the target behavior. People often act based on their perceptions of what others think they should do, and their intention to accept the behavior is potentially influenced by people who have close connections with them. Perceived behavioral control indirectly through intentions and directly when the person does not have complete control over the behavior, and when individual perceptions is based on control beliefs, affects the individual's behavior. This theory suits this study because the beahaviour of individuals such as perceived usefulness and the perceive ease of use coupled with individual characteristics such as age and level of education determine individuals ability ot adopt mobile banking for financial transactions.

2.8 Summary of literature review

The available literature shows that some studies have been carried out to establish the factors that make people adopt new technology. The studies have shown that the education level of an individual, the age of the individual, the perceived usefulness of an individual and the perceived ease of use of the technology determines the rate at which people embrace technology. This study will therefore seek to establish whether this factors influence customers of Equity bank Garissa Branch to use mobile banking to carry out banking transactions by use of their mobile phones. The earlier studies have shown that mobile banking plays significant role like offering services such as viewing account balances, making transfers between accounts, or paying bills.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the research methodology of the study. It discuses research design, location of the study, study population, sample size and sampling techniques, data collection and analysis method, validity and reliability of research instruments.

3.1 Research Design

This study embraced a case study design where both qualitative and quantitative data was collected. The qualitative aspect captured data on the opinions of the respondents on the factor that affect the usage of mobile banking while the quantitative data captured data on respondent's age, gender, level of education and duration of the use of mobile banking.

3.2 Location of the study

The study was carried out within Garissa town. The choice of the town was guided by the convenience and presence of Equity bank within the town hence respondents could easily be reached. Garissa town serves as the head-quarter for the Garissa county and therefore a metropolitan town

3.3 Target Population

The target population include all the account holders with the Equity bank Garissa Branch and the branch manager of the bank. According to the customer care office Equity branch there are 39,204 account holders in Garissa Branch.

3.3 Sample size and Sampling Technique

A sample is a subset of the population to which research intends to generalize the results (Wiersma, 1986). To get the sample size, The Mugenda and Mugenda (2003) formulae was

used. According to Mugenda and Mugenda (2003) when the population is over 10,000 the following formulae is used

$n=Z^2Pq/d^2$

where

n= The desired sample size (if the population is greater than 10,000)

Z= The standard normal deviation at the required confidence level

P= The proportion in the target population estimated to have characteristics being measured

q=1-p

d=The level of statistical significance set

Using the above formulae Mugenda and Mugenda got sample size of 384 from a population which is greater than 10,000. Since the target population for this study was greater than 10,000 as recommended by Mugenda and Mugenda (2003) the study used 384 respondents as the sample size. To get the respondents to participate in the study the researcher applied the systematic random sampling where every fifth customer to visit the bank was picked to participate in the study.

3.6. Validity and reliability of research instruments

3.6.1 Validity of research instruments

Validity is defined as the accuracy and meaningfulness of inferences, which are based on the research results (Mugenda & Mugenda, 1999). In other words, validity is the degree to which results obtained from the analysis of the data actually represents the phenomena under study. Validity, according to Borg and Gall (1989) is the degree to which a test measures what it

purports to measure. To ensure validity of the instrument the researcher shared the information in the questionnaires with the lecturers and colleague students to establish whether the questions were relevant. The ambiguous questions were discarded and harmonized to ensure that the questionnaire was valid.

3.6.2 Reliability of the instruments

Refers to the extent to which the instruments yield similar results under similar circumstances (Borg and Gall, 1989). To test the reliability the test items were split into two sub-sets; one with even number items and the other with odd numbered items. Scores of each sub-set was computed and correlated using the Pearson's Product Moment correlation (r). This is because it is the most often used and the most precise coefficient of correlation (Beat and kahn 1998). The correlated results gave 0.89 which is way above 0.05 considered to be lowest figure for the reliability of the instrument.

3.7 Research Instruments

Questionnaire and document analysis were the main tool for data collection. The document analysis was used to get the records of the people who have bank accounts and are registered for mobile banking. The questionnaire were used to get information from the customers on their age, level of education, perceived usefulness of the mobile banking and the perceived ease of use of the mobile phone.

3.8 Data collection procedures

Data was collected from the sampled Equity bank customers after attaining research permit from the National Council of Science and Technology. Before collecting data the researcher sought permission from the senior management office of Equity bank. The researcher with the help of the customer care attendant administered questionnaires to the respondents as they come to seek their bank account inquiries. The customer care attendant explained to the

respondents the importance of the study and then administered the questionnaires to them. After the questionnaires were fully filled the customer care attendant picked them.

3.9 Methods of Data Analysis

After data collection the researcher conducted data cleaning, which involved identification of incomplete or inaccurate responses, which was corrected to improve the quality of the responses. After data cleaning, the data was coded and entered in the computer for analysis using the Statistical Package for Social Sciences (SPSS) version 20. The research yielded both qualitative and quantitative data. Qualitative data was analysed qualitatively using descriptive narratine with implied meaning as observed by Gray (2004) who said that qualitative data provides rich descriptions and explanations that demonstrate the chronological flow of events as well as often leading to serendipitous (chance) findings. On the other hand, quantitative data was analysed using various statistics including measures of central tendency and dispersion. Simple descriptive statistics was employed to analyse quantitative data.

3.9 Operational Definition of Variables

Objectives	Variables	Indicators	Level of scale	Tool of analysis
To establish the influence of users level of education on the use of M-banking among the customers of Equity branch Garissa Branch	Level of education (Independent variables)	Level of education • People with high level of education using mobile banking • People with low level of education not using mobile banking	Ordinal	Measure of central tendency and correlations
To determine the influence of users' age on the use M-banking among the customers of Equity branch Garissa Branch	Age (Independent variables)	• Chronological age of respodents • Young people using mobile banking • Old people not using mobile banking	Ordinal	Measure of central tendency and correlations
To determine the level at which usefulness of the mobile phone influence the use mobile banking among the customers of Equity branch Garissa Branch	Perceived usefulness of mobile banking (independent variables)	• People regarding mobile banking as useful using the facility • People regarding the m-banking not useful not using the facility	Ordinal	Measure of central tendency and correlations
To determine the influence of ability to use mobile phone on the use M-banking among the customers of Equity branch Garissa Branch	Perceived ease of use of mobile phone (independent variables)	• People with ease of using the mobile phone using the mobile banking facility • People with difficulty of using mobile phone not using m-banking	Ordinal	Measure of central tendency and correlations
Factors determining the use of mobile banking among the customers of Equity branch Garissa Branch	Actual Usage of mobile banking (Dependent variable)	• Number of people using m-banking	ordinal	Measure of central tendency

3.10 Logistical and Ethical considerations

The researcher placed a formal request for permission from the various data sources to carry out the research. The researcher assured all the respondents of the confidentiality of the information to be obtained in the course of carrying out the research. Based on this assurance, the researcher hoped that permission to carry out the research was granted.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter focuses on the questionnaire return rate, demographic information of the respondents, data presentation, interpretation and discussion of findings. The presentation was done based on the research questions.

4.1 Questionnaire return rate

Questionnaire return rate is the proportion of the questionnaires that have been returned after they have been administered to the respondents. Out of 384 questionnaires administered 380 of them were returned making a questionnaire rate to be 99% hence a higher one.

4.2 Demographic information of respondents

This section deals with the demographic information of the respondents such as level of education, age and gender of the respondents.

4.2.1. Education level of the respondents

The study sought to establish the level of education of the respondents with the aim of establishing whether respondents across all the levels of education participated in the study and to establish the relationship between education level and the use of mobile banking. The results are as in Table 4.1

Table 4.1 Education level

Education level	Frequency	Percent
Primary	38	10
Secondary	190	50
Tertiary colleges	95	25
University	38	10
Informal	19	5
Total	**380**	**100**

Table 4.1 shows that majority of people using banking services in Garissa town have secondary education. They are followed by those with middle level college education. The results also show people with informal education use banking services available in the area.

4.2.2 Gender of respondent

The study also sought to establish the gender of the respondents with the aim of establishing whether all people regardless of the gender participated in the study. The results are as in Table 4.2

Table 4.2 Gender of the respondents

Gender	Frequency	Percentage
Male	284	75
Female	96	25
Total	**380**	**100**

As indicated in Table 4.2 majority of respondents who have bank account are males at 75% and females. This shows that there are some cultural factors that hinder women from having bank accounts.

4.2.3 Age of the respondents

One of the objectives of the study was to establish the relationship between age and mobile banking. The respondents were therefore asked to indicate their age. The results are as presented in Table 4.3

Table 4.3 The age of the respondents

Age	Frequency	Percent
18-25 years	68	17.9
26-35 years	122	32.1
36-50 Years	109	28.6
>50 years	81	21.4
Total	**380**	**100**

According to Table 4.3, majority of respondents who have bank account with Equity bank were aged 26 years and above. This consisted of 26-35 years (about 32%), 36-50 years (about 29%) and over years (about 21%).

4.3 Factor influencing mobile banking

The purpose of this study was to establish the factor influencing the residents of Garissa town to use mobile banking. The study therefore sought to establish whether people who have bank account have a mobile baking facility. The respondents were asked to indicate if they own a mobile phone. All the respondents who participated in the study agreed that they have mobile phone which is suggestive that implying 100% of the respondents have mobile phones.

The study further sought to establish whether respondents use mobile banking facility by the use of their phones. The results are as presented in figure 4.1

Figure 4.1 Responses on whether respondents use mobile banking facility

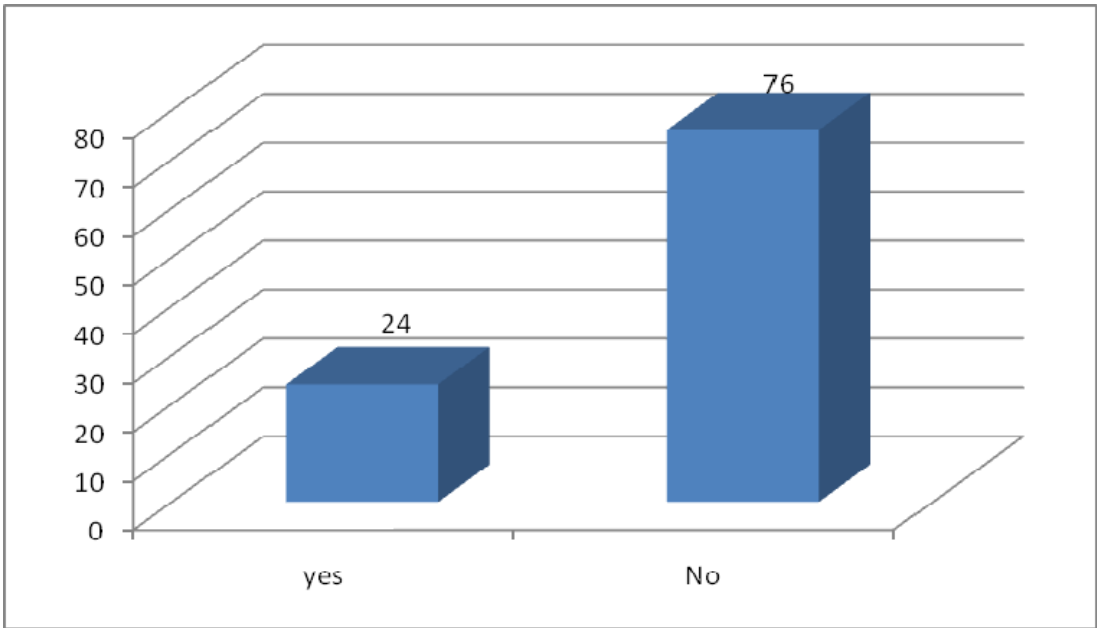

Figure 4.1 shows that majority of the respondent do not use mobile banking facilities in Garissa town. This is an indication that mobile banking facility is not commonly used by the people of Garissa. This is despite the findings that all the respondents have mobile phones

The study also sought to establish the services commonly sought by use of the mobile banking services. The results are as presented in Table 4.4

Table 4.4 Mobile banking services accessed

Type of service	Frequency	Percent
Buy airtime	82	21.4
Transfer funds	107	28.6
Check balance	122	32.1
Pay bills	29	7.9
Total	**380**	**100**

According to Table 4.4, there were two main services accessed by mobile banking customers. These services include; checking balance and transferring funds from one account to another. This was mentioned by about 32% and about 29% of respondents respectively. Others services included buying air time shown by 21% of the respondents and paying bills as indicated by about 8% an indication that paying bills is the least sought service by the holders of Equity bank Garissa Branch

4.4 Perceived ease of use of mobile phone

The other objectives of the study was o establish whether the ease use of the mobile phone affect mobile banking. The respondents were asked to indicate whether they face any difficulty when using mobile phone to transact banking services. The results are as in figure 4.2

Figure 4.2 Respondents opinion on whether mobile banking technology is difficult

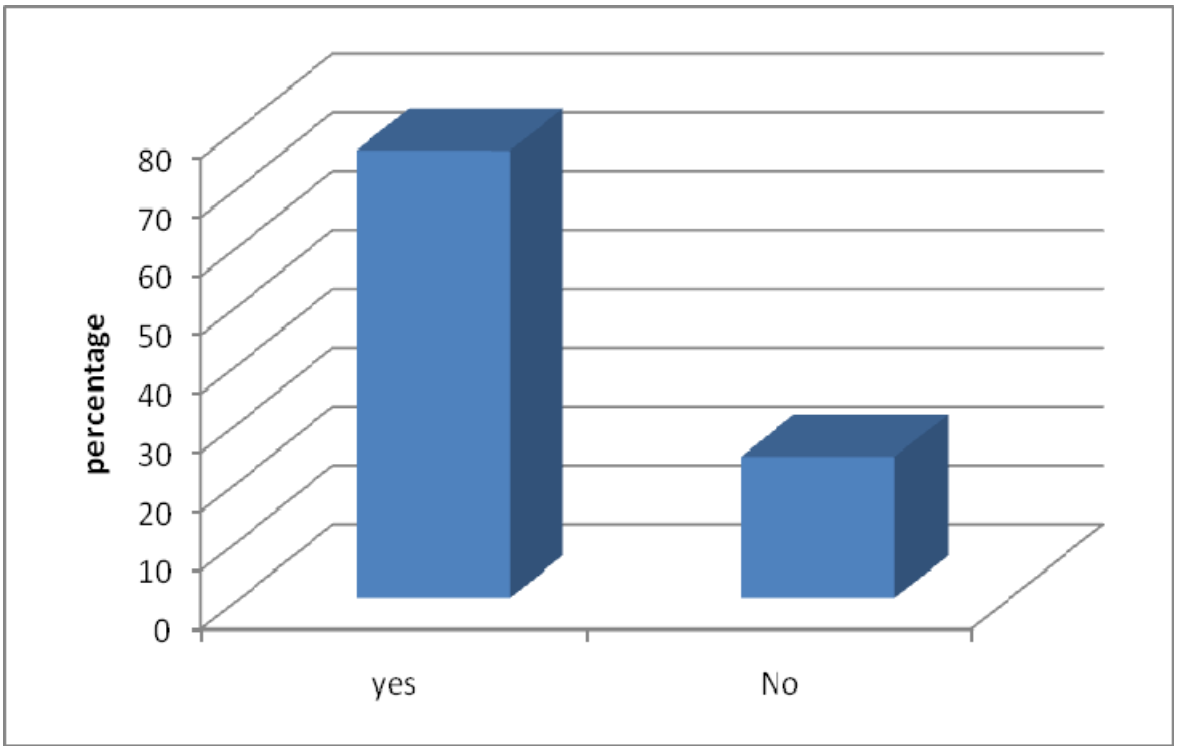

Figure 4.2 shows that most of the respondents agree to the statement that the use of mobile phone to access bank services is difficult an implication that clients of the Equity bank in Garissa Branch are unable to use mobile banking services because they have difficulty in the use of mobile phone for that service. In the same token the study sought to establish whether there is a relationship between the ease use of the phone and mobile banking. The results are as in Table 4.5

Table 4.5 coefficient correlation relationship between ease use of mobile phones and the use of mobile banking services

		Ease use of mobile phone	The use of mobile bank services
Ease use of mobile phone	Pearson Correlation	1	.761 (**)
	Sig. (2-tailed)	.	.000
	N	380	380
The use of mobile bank services	Pearson Correlation	.761 (**)	1
	Sig. (2-tailed)	.000	.
	N	380	380

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

Table 4.5 shows that there is relationship between the ease use of the mobile phone and the use of mobile banking services. This implies that the ease use of mobile phone influences the use of mobile banking services in that those people who know how to use mobile phone to transact banking services find it convenient to use the facility and those who have no skills of using the mobile phone do not use the facility.

4.5 Perceived usefulness of mobile phone

On the perceived usefulness of the mobile phone, the respondents were asked to indicate whether they consider a phone to be a useful gadget for facilitating mobile banking. The results are as in figure 4.3

Figure 4.3 Respondents opinion on whether usefulness of mobile phone influences the use of mobile banking services

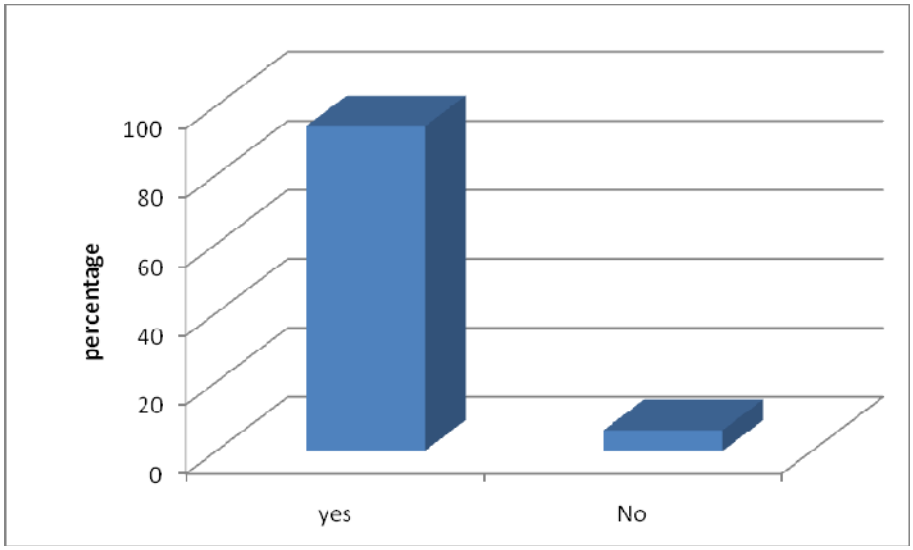

Figure 4.3 show that overwhelming majority of the respondents said that a phone is a prerequisite tool for mobile banking services. However, despite the respondents opinion that, a phone is a necessary tool for transacting mobile banking services majority of the respondents do not know how o operate it.

In order to establish whether there is any relationship between the perceived usefulness of the mobile phone on the use of the mobile banking facility a coefficient correlation was established and the results are as in Table 4.6

Table 4.6 coefficient correlation relationship between perceived usefulness of mobile phone and the use of mobile banking services

		Perceived usefulness of mobile phone	The use of mobile bank services
Perceived usefulness of mobile phone	Pearson Correlation	1	.781 (**)
	Sig. (2-tailed)	.	.000
	N	380	380
The use of mobile bank services	Pearson Correlation	.781 (**)	1
	Sig. (2-tailed)	.000	.
	N	380	380

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

Table 4.6 shows that there is a very strong relationship between the perceived usefulness of mobile phone and the use of mobile banking facility. This implies when people see mobile phone as a useful tool for transacting the banking facilities using the mobile phone they are likely to own phones and use it for the purposes of banking transactions.

4.6 Influence of age on mobile banking

The study also sought to establish the influence of age on the use of the mobile phone. The results are as in table 4.7

Table 4.7 coefficient correlation relationship between age of an individual and the use of mobile banking services

		Age	The use of mobile bank services
Age	Pearson Correlation	1	.291 (**)
	Sig. (2-tailed)	.	.000
	N	380	380
The use of mobile bank services	Pearson Correlation	.291 (**)	1
	Sig. (2-tailed)	.000	.
	N	380	380

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

Table 4.7 shows hat here is a relationship between age of the respondents and the use of the mobile banking but the relationship is not significant. This implies that regardless the age of an individual one can still use mobile banking facility.

4.6 Influence of respondents level of education and the use of mobile banking

One of the other objectives of the study was to establish the influence of education on the use of the mobile banking facility. The results are as in table 4.8

Table 4.8 coefficient correlation relationship between education level of an individual and the use of mobile banking services

		Education level of the respondents	The use of mobile bank services
Education level of the respondents	Pearson Correlation	1	.882 (**)
	Sig. (2-tailed)	.	.000
	N	380	380
The use of mobile bank services	Pearson Correlation	.882 (**)	1
	Sig. (2-tailed)	.000	.
	N	380	380

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

Table 4.8 shows that there is a strong relationship between the age of the respondents and the use of mobile banking and the relationship are significant. This implies that the level of education plays a major role on the use of the mobile phone. This is because the people who are educated can easily use the mobile phone and follow all the procedures involved in mobile banking without difficulties.

The study also sought to establish the security concerns of the mobile banking. The respondents were therefore asked to indicate the level at which they agree or disagree with the statement which says that there are Losses due to fraudulent access of customers' account through hacking. The results are as in table 4.9.

Table 4.9: Losses due to fraudulent access of customers' account through hacking

Category	Frequency	Percent
Strongly disagree	68	17.9
Disagree	54	14.3
Neutral	106	28.0
Agree	95	25.0
Strongly agree	95	25.0
Total	380	100.0

According to Table 4.9, majority of respondents (50%) agreed that there were losses due to fraudulent access of customers' accounts through hacking. A sizeable number (about 32%) said there were no losses incurred and a few (28%) remained neutral. Even with loss due hacking, over 70% of respondents felt their banks were trustworthy. This can be interpreted to mean that customers understood that in this era of ICT, fraud was possible. Most encouraging for banks, customers did not feel like it was an inside job in which case they would shift their many to other banks.

CHAPTER FIVE SUMMARY OF FINDINGS,CONCLUSIONS AND RECOMMEDATIONS

5.0 Introduction

This chapter summarizes the findings of the study and presents conclusions, recommendations and suggestions for further research.

5.1 Summary

The purpose of this study was to establish the factors that affect the mobile banking in Kenya. The study was guided by four objectives which revolve around the effect of educational level, the age of the individual, the perceived usefulness and the perceived ease of use of the mobile phones on mobile banking. The literature review focused on the factors that affect the mobile banking such as the level of education, age, perceived usefulness and perceived ease of use. The study embraced a descriptive survey design and both qualitative and quantitative data was collected. The main tool for data collection was a questionnaire and document analysis. The target population included all the 39,204 customers of Equity bank Garissa Branch and the sample size was 384 respondents.

Through data analysis the study established that,

- Majority of people using banking services in Garissa town have secondary education followed by those with middle level college education.
- Majority of respondents who have bank account with Equity bank were aged 26 years and above. This consisted of 26-35 years (about 32%), 36-50 years (about 29%) and over years (about 21%).
- Majority of the respondent do not use mobile banking facilities in Garissa town. This is an indication that despite all the respondents having indicated that they have mobile phones only 24% use mobile banking facility.

- The main mobile banking services sought by the customers were checking balance and transferring funds as mentioned by about 32% and about 29% of respondents respectively. Others services included buying air time (about 21%) and the least was paying bills (about 8%).

- The study also established the use of mobile phone to access bank services is difficult an implication that majority of the clients of the Equity bank in Garissa Branch are unable to use mobile banking services
- The results also shows that there is relationship between the ease use of the mobile phone and the use of mobile banking services a relationship which is significant
- There is also a very strong relationship between the perceived usefulness of mobile phone and the use of mobile banking facility.
- There is also a relationship between age of the respondents and the use of the mobile banking but the relationship is not significant. this implies that people use mobile banking facility regardless their age
- There is a strong relationship between the education level of the respondents and the use of mobile banking and the relationship is significant. This implies that the level of education plays a major role on the use of the mobile phone. This is because the people who are educated can easily use the mobile phone and follow all the procedures involved in mobile banking without difficulties.

5.2 Conclusions

Studies have shown that the E-banking technologies have proliferated in recent years, and the availability of a wide range of products has led to increasing adoption among consumers. However, in kenya despite a significant number of people having mobile phone gadget, a few

of them are using mobile banking facilities. Analysis have shown that the level of education, age of the respodents, perceived usefulness of the mobile phone and the perceived ease of use of the mobile phone affects the adaptation of mobile banking facility in kenya especiallly the customers of Equity bank Garissa Branch.

The results of this study mimic the results of other studies in some aspect and differ with the results of other studies in other aspects. On the relationship between the perceived usefulness of the mobile phone and the use of mobile banking, this study established that there is a strong relationship between peoples' perception of the usefulness of mobile phone on the use of mobile banking facility. This is in line with Kleijnen et al., (2004), Luarn and Lin, 2005; and Mattila, 2003) who got similar results. Another study by TAM also established that a user's acceptance of information system is determined by that user's intention to use the systems, while perceived usefulness predict the usage intention. According to TRA, users'beliefs influence their attitude, which in turn influence behavioural intention. The perceived usefulness is a beliefs. Thus, it affect user's attitude. Accordingly, perceived usefulness and ease of use may not fully explain behavior attitude to use M-banking.

This study has also established that there is a strong relationship between the level of education of an individual and mobile banking as earlier established by Laforet and Li (2005) who found that that in China, the lack of understanding of the concepts and benefits was a main barrier to consumers using mobile banking. Subsequently, users of mobile banking were not intended to be highly educated and were typically younger. This was in contrast to the situation in the western countries as discussed by Karjaluoto, Mattila, and Pento, (2002).

Another study by Adrian (2009) indicated that the level of education influences the use of M-pesa in that better educated individuals are more likely to use M-Pesa to purchase airtime,

save and store money while travelling, and use M-Pesa to pay wages than their respective counterparts with low education.

On the age of the respondents and mobile banking, this study established that there is a relationship between the age of the respondents and the use of mobile banking but the relationship is not significant. These results contradict the findings of Finnish Bankers' Association, (2002) which established that younger people have advanced mobile phones more often than older people hence able to use e-banking facilities.

On the ease of the use of the mobile phone on mobile banking the study established that the ease use of he mobile phone influences the use of the mobile banking. This is so because for one to use mobile banking facilily one must be knowing how to use the mobile phone. A considerable number of prior studies supported the significant effect of perceived ease of use on behavioral intention, either directly or indirectly through perceived usefulness and attitude (Davis et al., 1989; Jackson et al., 1997; Venkatesh, 1999).

5.4 Recommendations

Owing to the benefit enlisted on the use of the mobile banking to transact banking services and the findings of this study the researcher recommends that;

- The customers of Equity bank need to be sensitised on the need to use mobile banking. This would help the customers use the facility and decongest the long queues experienced as people carry out banking transactions especially the end of the month. This will help by making people save time and be engaged on other matters of national development

- The study also recommends that, there is need for banks to market the mobile banking services to the client with the aim of increasing the number of people using mobile banking

- The bank should also lower the charges of the services sought through mobile banking facility. This will act as an incentive for wooing many people into using the facility

- The other recommendation is that the people who are registered with mobile banking facility should mostly use it and desist from travelling to the bank to seek services that they can seek through mobile banking

- The community around Garissa town should embrace education. This will ensure that the illiteracy rates are low and people can be able to embrace technology like the use of the mobile banking for economic development

5.4 Suggestions for further studies

In order to supplement the findings of this study, the researcher suggest that other studies ought to be carried on;

- ✓ The effect of use on mobile banking on economic empowerment of women in Garissa County

- ✓ Factors affecting the use mobile banking in Kenya. This should be carried in all the counties in order to compare the challenges facing mobile banking in the whole country

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APPENDICES

APPENDIX A: TRANSMITTAL LETTER

Dear respondent

I am a post graduate student pursuing a Masters degree in project planning and management at the University of Nairobi. I am conducting an academic research on factors influencing mobile banking in Kenya

This questionnaire is aimed at obtaining more information about your opinions, perceptions, experiences and particular issues on Mobile banking technology. Your business story and particular experiences in accessing Mobile banking services will be valuable to this study. This will later result to valuable recommendations on how the service and technology can be improved.

My request is that you try and answer the questions as comprehensively as possible by using the available space provided. If you need more space you can add the same as an attachment. Your response will be treated with utmost confidentiality it deserves and no name will be disclosed without your consent.

Thank you in advance.

Yours faithfully

RAPHAEL NGERA

0763369477

APPENDIX B:

QUESTIONNAIRE FOR MOBILE BANKING USERS

You are kindly requested to complete the questionnaire as honestly and objectively as possible giving as much details as possible where necessary.

Section A:

1. Name (optional)

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2. Age

   18-25 [ ] 25-35 [ ] 35-50 [ ] Above 50 [ ]

3. Gender

   [ ] Male [ ] Female

4. Education

   i. Primary [ ]

   ii. Secondary [ ]

   iii. Technical and vocational education [ ]

   iv. University [ ]

   v. No formal education [ ]

   vi. Others (specify) …….

5. Do you have or use a mobile phone?

[ ] Yes [ ] No

6. Do you have a bank account?

Yes [ ] No [ ]

7. Are you subscribed to mobile banking service?

Yes [ ] No, not interested [ ]

8. If Yes on question 7, what do you use mobile banking for?

[ ] Buy airtime [ ] Transfer funds [ ] Check balance [ ] Pay bills [ ] Cash withdrawal

[ ]

Others……...

9. In your opinion, do you think Mobile banking technology is complicated and difficult to use Yes [ ] No [ ]

9b) if yes above, what in your view are the technicalities involved in Mobile banking?

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10. Is Mobile banking transaction secure?

Yes [ ] No [ ]

If No, what risks have you encountered?

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Are you satisfied with the authentication process with service provider when initiating a transaction?

Yes [ ] No [ ]

11b)If No, what in your opinion do you think is a challenge as far as financial transactions are
concerned?.....
.....
.....

APPENDIX C:

QUESTIONNAIRE FOR BANK PERSONNEL

You are kindly requested to complete the questionnaire as honestly and objectively as possible giving as much details as possible where necessary.

1. Who can use mobile banking and what criteria do your organization use to enroll subscribers?

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2. Which services are accessed through mobile banking?

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3. What are the charges for each transaction?

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   ……

4. Do you provide training to your customers on how to transact using mobile banking platform and sensitive or risks associated with the process?

Yes [ ] No [ ]

5. How secure is mobile banking and what has the bank done to ensure that mobile banking users are protected against unethical practices?

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6. What precautions does one take when accessing mobile banking?

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7. How many individuals have subscribed to mobile banking and are active?

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8. What challenges do you face in administering mobile banking transactions and if any what are some of the fraudulent incidences so far experienced by users and what has the bank done to mitigate?

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Is there a compensatory plan for mobile banking users whose bank accounts have been fraudulently transacted and money lost through mobile banking

Yes [ ] No [ ]

If yes, kindly give a brief description

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9. Are there mobile banking policies and procedures which provide proper framework to ensure mobile banking service providers comply to avoid possible risks and ensure there is consistency when dealing with mobile banking usage?

Yes [ ] No [ ]

If yes above, kindly highlight the existing policies

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