EFFECTS OF TECHNOLOGICAL INNOVATIONS AT EQUITY BANK ON ACCESSIBILITY OF BANKING SERVICES TO SMALL BUSINESS VENTURES IN NAKURU COUNTY

By,

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DECLARATION

This research report is my original work and it has not been submitted to any other institution of higher learning for examination.

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This research report has been done with my approval as the University Supervisor.

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DEDICATION

I dedicate this research report to my wife for her encouragement and support that has enabled me to accomplish and present this research report.

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The successful completion of this research report was as a result of the efforts of many people. It is not possible to list all of them here but I have truly appreciated their contribution. I also wish to extend my heartfelt appreciation to my employer Equity Bank for giving me the chance to pursue further study. I must also extend my appreciation to all my classmates for making all the necessary arrangements to ensure smooth learning and preparation for conducting the research. Finally I wish to thank the Almighty God for granting me the opportunity to successfully complete the research project.

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ABSTRACT

Technological innovations play a significant role in improving efficiency of service delivery and reduction of transaction costs in the banking sector. With the introduction of technological innovations in the banking sector it was expected that accessibility of banking services would be enhanced. However this has not been the case. Therefore this study sought to investigate the effects of technological innovation on the accessibility of banking services in Equity Bank, Nakuru. The objectives of the study were to find out the effects of agency banking, mobile banking and internet adoption on the accessibility to banking services in Equity Bank, Nakuru. The study also sought to determine the level of customer satisfaction with the adoption of Information Technology on the accessibility of banking services in Equity Bank, Nakuru. The study was based on a case study design. The target population of the study was 295 registered small scale business account holders in Equity Bank, Nakuru Town. Purposive and simple random sampling techniques were used to identifying a sample size of 127 small scale business operators who held accounts in Equity Bank. The data was collected using questionnaires and a scheduled interview and the data obtained analyzed using the descriptive techniques and represented using Tables, charts and percentages. The study has concluded that technological innovation has led to increased accessibility of bank services through mobile banking, internet banking and agency banking. As a result of increased accessibility to banking services through technological innovations the bank has witnessed increased financial activities which include cash deposit, cash withdrawals, transfer of funds, balance enquiry and payment of loans. The study has also concluded that the customers' level of satisfaction with the adoption of technological innovation was high and the customer's experience with technological innovation was favourable. The study recommends that Equity bank should open more agency and mobile banking services in the rural areas to reach out to more customers. It also recommends that basic education on the use of the technology should be given to both the agents and the bank customers. It further recommends enhanced capacity of IT at Equity bank to handle large financial transactions in lieu of regular systems failure.

ABBREVIATIONS

ADC	Alternate Delivery Channels
ATM	Automated Teller Machines
AVR	Automated Voice Response
CBK	Central Bank of Kenya
EBI	Earnings Before Interest,
TDA	Tax, Depreciation and Amortization
ECA	Economic Commission for Africa
EFTPoS	Electronic Funds Transfer at Point of Sale
EN	Enterprise Network
GRS	Global Robust State
ICT	Information and Communications Technology
KYC	Know Your Customer
MoU	Memorandum of Understanding
PCB	Personal Computer Banking
PIN	Personal Identification Number
POS	Points of Sale
SMS	Short Message Service
SPIDER	Swedish Programme for ICT in Developing Regions
UNDP	United Nations Development Programme
USSD	Unstructured Supplementary Service Data
WAN	Wide Area Network

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CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

The development in information and communication technology (ICT) is radically changing the way business is done. Electronic commerce is now thought to hold the promise of a new commercial revolution by offering an inexpensive and direct way to exchange information and to sell or buy products and services. This revolution has set in motion a readjustment in the banking sector in which transaction system is compatible with the demands of the electronic marketplace (Bresnahan, 1997; Singleton & Wilson, 1998).

Innovations in information processing, telecommunications and related technologies – known collectively as "information technology" (IT) – are often credited with helping fuel strong growth in many market economies (Bresnahan, 1997). According to Shaukat and Zafarullah (2009) technological innovation affects not just banking and financial services, but also the direction of any economy and its capacity for continued growth. IT is defined as the modern handling of information by electronic means, which involves its access, storage, processing, transportation or transfer and delivery (Ige, 1995; Lewis & Mitchel, 1994).

According to Alu (2002) IT affects financial institutions by easing enquiry, saving time, and improving service delivery. In recent decades, investment in IT by commercial banks has served to streamline operations, improve competitiveness, and increase the variety and quality of services provided. Implementation of information technology and communication networking has brought revolution in the functioning of the banks and the financial institutions. It is argued that dramatic structural changes are in store for financial services industry as a result of the Internet revolution; others see a continuation of trends already under way.

In Kenya, commercial banks are making what seem like huge investments in technology to maintain and upgrade their infrastructure, in order not only to provide new electronic information-based services, but also to manage their risk positions and pricing (Gichuhi, 2012 & Ngugi, 2006). At the same time, new off-the-shelf electronic services such as online retail banking are making it possible for very small institutions to take advantage of new technologies at quite reasonable costs. These developments may ultimately change the competitive landscape in the financial services. A number of studies have concluded that IT has appreciable positive effects on bank productivity, cashiers' work, banking transaction, bank patronage, bank services

delivery, customers' services and bank services. They concluded that, these have positive effects on the growth of banking (Bresnahan, 1997).

Arguably, the most revolutionary electronic innovation has been the ATM (Ganguli & Roy, 2011). Banks with ATM offerings have them networked and this has increased their utility to customers. The ATM has been the most successful delivery medium for consumer banking. ATMs have enabled the customers not necessarily have to go to their branch to do some banking.

Another technological innovation is the various electronic cards, which the banks have developed over the years. Banks have also recognized the internet as representing an opportunity to increase profits and their competitiveness. Similarly telephone banking, has also taken a big leap with its convenience and time. Oloo (2009) and Kasekende (2008) note that the services available with this system are ascertaining credible information about the bank's products, the customers' complaints, bank statements and cheque book request and any other complaints and inquiry.

According to Adera (1995) and Atieno (2001) Equity Bank has witnessed massive investment in information technology. Equity Bank commenced business on registration in 1984. It has evolved from a Building Society, a Microfinance Institution, to now the all inclusive Nairobi Stock Exchange and Uganda Securities Exchange public listed Commercial Bank. With over 7.3 million accounts, accounting for over 57% of all bank accounts in Kenya, Equity Bank is the largest bank in the region in terms of customer base and operates in Uganda and South Sudan and Rwanda. Equity Bank continues to receive both local and global accolades for its unique and transformational business model. The Bank is credited for taking banking services to the people through its accessible, affordable and flexible service provision. Activities carried out at the agency location include Cash deposit ,Cash withdrawal, Account opening Registration of customer to mobile and internet banking, advising customer about agency banking and mobile banking, balance enquiry by customers, bill payment like KPLC and Customer service.

1.2 Statement of the Problem

Technological progress has brought in the speedy processing and transmission of information, easy marketing of banking products, enhancement of customer access and awareness, wider banking networking and regional and global links on an unprecedented scale. IT developments thus played a role in changing the product range, product development, service channels and

type of banking services as well as the packaging of such services with significant efficiencies not only in the banks, but also in the ancillary services to banks. Of noTable importance in the banking sector is the growth of internet banking, a development that came as a result of technological innovations. Internet banking provides an extensive, low cost and convenient financial network that facilitates banking services to customers anywhere and anytime (Alu, 2002).

The internet resulted in improved telecommunication networks which enabled banking transactions to be done on-line. Also, a result of the internet is the integration of e-trading with internet banking and banks' websites, a development necessary for marketing of the banking products. The internet has made it possible to establish low cost financial networking.

Despite the noted roles played by technology advancements in the banking sector, it remains a question of controversy as to whether the technological innovation has influenced the accessibility of banking services especially in the rural areas and to what extent customers are happy with such developments. The controversy exists as a result of the fact that technological developments come with costs attached to them and environmental and social effects to the society at large. Information technology is simply a necessary evil, something that every company has to have in order to keep basic activities running efficiently. However, technology has taken every activity in daily operations, in most firms, to such an extent that any breakdown in technology will have unimaginable consequences. For example, a breakdown of an ATM may result in huge costs to the firm in terms of lost transactions.

Despite the fact that Internet technology acceptance is growing worldwide, banks in Kenya are yet to adopt appropriate Internet technology to enhance accessibility of banking services in Kenya. Several studies have been conducted to ascertain the level of accessibility of banking services in Kenya as a result of technological innovation. But these studies do not address the effects of technological innovation on the accessibility of banking services in Nakuru Town. Therefore, this study investigated the effects of technological innovation on the accessibility of banking services in Equity Bank, Nakuru.

1.3 The Purpose of the Study

The purpose of this study was to investigate the effects of technological innovation on the accessibility of banking services in Equity Bank, Nakuru. The study also evaluated the

perceptions of bank customers regarding the effect of technological innovation on the accessibility of banking services in Nakuru Town.

1.4 The Objectives of the Study

The general objective of the study was to investigate the effects of technological innovations on the accessibility of banking services in Equity Bank, Nakuru. The specific objectives of the study were to find out the effects of agency banking on accessibility to banking services in Equity Bank, Nakuru. The study also sought to investigate the impact of internet technological adoption on accessibility to banking services to determine the influence of mobile banking on accessibility of banking services in Equity Bank, Nakuru. The other specific objective was to determine the level of customer satisfaction with the adoption of Information Technology on the accessibility of banking services in Equity Bank, Nakuru.

1.5 Research Questions

The study was guided by the following research questions:

i. What are the effects of agency banking on accessibility to banking services in Equity Bank, Nakuru?
ii. What is the impact of internet technological adoption on accessibility to banking services in Equity Bank, Nakuru?
iii. How has mobile banking influenced the accessibility of banking services in Equity Bank, Nakuru?
iv. What is the level of customer satisfaction with the adoption of Information Technology on the accessibility of banking services at Equity Bank, Nakuru?

1.6 Significance of the Study

This research study would be a source of useful data for other researchers and banking professionals to understand the influence of technological innovation on the accessibility of banking services to customers in Equity Bank. In addition, this study would provide important information to the bank managers when making decision about adopting new technological innovations in the banking sector. It will also enlighten Equity Bank customers who may be hesitant to embrace agency banking, internet banking and mobile banking as the technological innovation in the banking industry. The researcher also hopes that the study will help gauge the extent to which the adoption of Information Technology has enhanced accessibility of banking services and the level of customer satisfaction. Finally, the findings of the study will supply

useful data to university students and other scholars who wish to carry further research on any aspect of technological innovation in the banking sector.

1.7 The Scope of the Study

The study was conducted within a period of three months, from March – May, 2013. It focused only on the effects of technological innovation on the accessibility of banking services in Equity Bank, Nakuru Town and the findings obtained would be generalized, with caution, to other banks in Kenya. The study was conducted exclusively among Equity Bank customers in Nakuru Town.

1.8 Delimitations of the Study

This study was restricted to analyzing the effects of technological innovation on the accessibility of banking services in Equity Bank in Nakuru. The study was carried out in Nakuru Town, Nakuru County, Kenya. The location was chosen purposely due to the researcher's experience as a financial expert in Equity Bank in the expansive town. The researcher had observed increased expansion and adoption of technological infrastructure not only in Equity bank but also other commercial banks in Nakuru Town. In this study every limited mention was made of other banks. Hence, the study was limited to only Equity Bank, Nakuru Town. The major constraint limiting the study was lack of time to administer the questionnaires. This was because identifying the respondents for purposes of this study was not easy. In addition some of the respondents were not conversant with the various technological innovations and may therefore not be a position to provide reliable date. Other respondents could not give accurate data due to the sensitivity of the information pertaining to technological innovations in the banking industry. However, the researcher ensured that the study was conducted within the stipulated time. In cases where the respondents found it difficult to respond to the questionnaire items, the researcher explained, clarified and translated the questionnaire items to the respondents. Also inaccurate information obtained from the responded was discarded.

1.9 Definition of Significant Terms

The following section presents the definition of terms as used in the study.

Accessibility: The development and integration of systems, tools, structures and processes that facilitate the inclusion of more citizens, irrespective of their abilities or personal challenges as valuable customers and employees of businesses, government agencies and the community (Olalla, 2000).

Agency Banking: This refers to retail or postal banking outlet contracted by a financial institution or a mobile network operator to process clients' financial transactions.

Internet Banking: This refers to banking transactions conducted through the internet.

Mobile Banking: This is a new form of electronic commerce engendered by wireless communications that uses mobile phones.

Small Business Ventures: These are smallest business units which have embraced technological innovations.

SMS Banking: This is a Mobile technology that allows you to request and receive banking information from your bank on your mobile phone via Short message service (SMS) (Boyer et al. 2002).

Technological Innovation: This is the use of new knowledge to offer a new product or service that customers want (Akroush, 2008).

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents an analysis of literature review of information related to the study. This was important because it helped the researcher to examine and familiarize with the existing knowledge regarding the study and to form a framework within which to interpret the research findings. It also presented an analysis of studies conducted on performance auditing by presenting a review of major theoretical issues, empirical evidence, summary and the missing gap.

2.2 Technological Innovation

Technological innovations have been identified to contribute to the distribution channels of Banks. The electronic delivery channels are collectively referred to as Electronic Banking. Electronic Banking is really not one technology, but an attempt to merge several different technologies (Boyer, 2002). Each of these evolved in different ways, but in recent years different groups and industries have recognized the importance of working together. Bankers now see a kind of evolution in their business, partly, because the world has taken a quantum leap in the use of technologies in the last several years (Podpiera, 2008).

Bresnahan (1997) and Dabhokar (1994) claim that in the 1990s internet banking technology was under utilized as business organizations used it only to market their products and services. Joseph and Stone (2003) found that more recently most financial institutions, faced with competitive pressure after the introduction of deregulation in 1983, have rethought their strategies to take full advantage of internet technology. Joseph and Stone (2003) note that the challenge to expand and maintain banking market share has influenced many banks to invest more in making better use of the internet. The emergence of internet banking had made many banks rethink their Information Technology (IT) strategies in competitive markets. It is suggested that the banks that fail to respond to the emergence of Internet banking in the market are likely to lose customers and that the cost of offering Internet banking services is less than the cost of keeping branch banking (Ennew, 1996). The majority of banks in Kenya have taken advantage of Internet technology to establish web sites but the banking industry needs to integrate internet technology into its banking strategy in order to be successful in the global economy. Subjective norm, computer self-efficacy and perceived ease of use indirectly play significant roles in influencing the intention to adopt Internet Banking. Despite the fact that

internet technology acceptance is growing worldwide, banks in Kenya are yet to adopt it. The reluctance of internet technology adoption suggests that managers perceive the costs of its adoption to outweigh the benefits. This can potentially be explained by fear of the consequences of failure in the case of high investment projects (Ennew, 1996) as well as perceived customer dissatisfaction.

2.3 Factors Affecting Technology Adoption

There are several factors that influence the adoption of Information Technology in financial institutions in Kenya and the rest of the world.

2.3.1 Relative Advantage and Internet Technology

Studies on the IT have highlighted the importance of its relative advantage in determining the adoption of new technologies. Rogers (1995) indicates that the rate of adoption of a new innovation is related to perceived advantage. Convenience of services is one measure of relative advantage in the context of Internet technology in the banking industry. In e-commerce, Cameron (1999) highlights the fact that the convenience of shopping at any time is important because customers see that they can save time spent contacting different organizations. Martin (1998) sums up the notion of convenience by stating that despite security issues and a lack of industry standards, e-banking is the best way for smaller companies to combine convenience, top-tier financial service and cash management. He argues that small corporate businesses have been ignored in Internet banking activities.

In the banking industry banks can gain advantage by providing customers with the convenience of being able to perform banking transactions electronically at any time without having to leave home or office. Firms that make innovative use of IT gain a favourable image and hence increase their value in the industry more than those firms that do not do so. This suggests that a bank has a chance to improve its image in this way. Joseph et al. (1999) claim that banks could improve their image in the industry through technological innovation. Internet banking services gives customers greater control over the management of their finances. They associate management of banking services with perceived relative advantage because better management of banking services is an advantage for banks in the industry.

Joseph et al (1999) highlight the importance of management of banking services from the perspective of the banks, suggesting that monitoring of customers' feedback and complaints on

a regular basis would ensure better management of banking services. All this indicates that perceived relative advantage leads convenience of services, innovative use of IT and management of services.

2.3.2 Organizational Performance and Adopt of Internet Technology

According to Zeithaml (2000) perceived organizational performance refers to a manager's perception that Internet technology adoption would improve a bank's performance. If Internet technology could improve performance then the bank would be able to gain advantage in a competitive environment. IT has the potential to affect organizational performance. According to Bhuian (1997) developing countries like Kenya can experience rapid growth in markets and that this growth would probably continue until markets mature and become competitive since business organizations focus on IT in order to improve performance (Kasekende, 2008). This suggests that decision makers in the banking industry may be concerned about tangible benefits/ costs when they decide to adopt Internet technology. Banks need to focus on satisfying customers if they want to be successful on the Internet. Internet could play a major role in transforming the workplace to enhance productivity by reducing operational cost and improving employee relationships through improved service delivery. As the transformation progresses in the workplace the level of sophisticated services also increase (Zeithaml, 2000).

IT has the potential to affect process and hence skill levels. This implies that the adoption of internet technology has implications for how a business organization communicates internally and with their customers and suppliers as well as how they respond to their customers (Proenca & Rodrigues, 2011). In considering the tendency to adopt internet technology, the literature suggests that perceived organizational performance should thus be related to: profitability, market environment and employee productivity (Bresnahan, 1997).

2.3.3 Customer Relationship and Internet Technology

McKenzie (2001) notes that business organizations can improve their performance by developing a good relationship with their customers. Ramaseshan (1994) points out the pressure in the competitive environment of retail banking to innovate and develop new ways to improve customer service. E-commerce plays a major role in the economy by enabling sellers and buyers to create economic value through exchange of information, goods/services, and payments (Bresnahan,1997) and the importance of the customer relationship potential in e-

commerce has been stressed by many authors and specifically in the banking industry (Duncan and Elliot, 2002).

However, the question here is how a bank would enhance its customer relationships through Internet technology adoption. The literature suggests that this should be considered in relation to customer trust, commitment and satisfaction (Mokangi, 2003). From the point of view of a bank manager, customer trust in the electronic channel for delivering banking services relates to customer willingness to accept the risk by putting themselves into a vulnerable position. Keen (1997) argues that in order to extend electronic customer/business relationships organizations need to address the issue of customer trust in this relationship. Kimery and McCord (2002) examined customer trust in electronic retailing (e-retailing) and argued that issues of security and reliability of businesses on the web were an important factor. In their study they identified three types of web assurances: privacy assurance − to assure that merchants disclose and comply with privacy policies, process assurance − to assure that merchants comply with business processes, and technology assurance − to assure that merchants employ secure and reliable technologies.

Sathye (1999) studied the adoption of Internet technology in the banking industry from the perspective of then Australian consumer. His study looked at factors that could influence the adoption of the Internet banking service in Australia and identified six key constructs: security of transactions; ease of use; awareness of Internet services and benefits; cost of services; resistance to change and accessibility of the Internet. Vatanasombut et al. (2004) found that maintaining a customer is more challenging on the Internet, suggesting that the level of perceived customer loyalty affects business organizational success. They argued that the level of competition in e-commerce affects the likelihood of retaining customers in the long run. In their study, they identified three dimensions of customer loyalty: reduction in consumers' search costs; lower barrier to entry; and reduced distinctiveness of firms. Their focus, however, was on how perceived customer loyalty could affect business organizational success and they found that customers were more likely to deal with large organizations than small ones because of perceptions that these large organizations had the capability to offer better services. In a study of customer contact personnel in retail banking services in Australia. Julian and Ramaseshan (1994) argued that to gain competitive advantage in a competitive banking industry, customer service is very important. They suggested that banks would need to address the issue of retaining customers through good service so that the risk of switching banks could be

minimized. Replacing lost customers would be very difficult and costly, they pointed out. Chiou (2004) examined the antecedents of consumer loyalty toward Internet service providers in Taiwan and found that perceived value and trust is a major determinant of loyalty.

Newman (2001) examined perceived services quality in the commercial banks in the United Arab Emirates, emphasizing the importance of service quality to maintain market share. From an analysis of 462 responses to a survey of bank customers they concluded that customers value human skills the most in service quality. Other authors emphasized the importance of quality of service in customer satisfaction. Kotler (2000) highlighted the fact that timely service delivery is important when considering quality of service. Newman (2001) also examined customer satisfaction in the banking industry and found that service quality is important. The literature thus suggests that when investigating perceived customer/organization relationship this should be related to: customer trust, customer commitment and customer satisfaction.

2.3.4 Ease of Use and Internet Technology

The importance of ease of use in determining successful IT adoption has been highlighted Zeithaml, 2000). Davis (1989) refers to perceived ease of use as "...the degree to which a person believes that using a particular system would be free of effort". He noted that this construct is similar to Bandura's (Newman, 2001) self-efficacy which states that judgments of how well one can execute courses of action required to deal with prospective situations". Understanding perceived ease of use is important because it has implications for the design of training intervention to manipulate the perception of ease of use (Rashed, 2001) among users of Internet technology in the banking industry.

The literature suggests that ease of use can be considered in terms of ease of navigation, ease of learning and ease of management. Venkatesh (1999) examined the role of training in creating favourable users' perceptions. He emphasized the importance of perceived ease of use in predicting IT adoption and argued that training could influence knowledge (or awareness about Internet technology) and hence users' perceptions of ease of use. Considering how easy it is to learn to use Internet technology to conduct banking transactions. Zeithaml (2000) stressed the importance of flexibility in system design to facilitate options for customers. Larkey et al. (2002) highlight the importance of searching and accessing Arabic web pages on the Internet in relation to ease of learning.

Kang and James (2004) also highlight concern over two types of accessibility raised by IT users: physical accessibility and informational accessibility. They define physical accessibility as "... the extent to which someone has physical access to the hardware needed to use the system ..." and informational accessibility as "... the ability to retrieve the desired information from the system" (Kang and James, 2004). They found that people with more access to the information were more likely to use these technologies and to benefit from them, but people with more physical access were more likely to perceive the technologies as easy to use. This suggests that when investigating perceived ease of use this can be considered in terms of whether the technology is: easy to navigate, easy to learn and easy to manage (Kang and James, 2004).

2.4 Empirical Review

This section reviews the empirical evidence from research findings, new paper and document analysis on the impact of Information Technology on the baking sector.

2.4.1 New Approach to Banking for Small Businesses

According to The Financial Times Equity Bank is one of the commercial banks that have shaped the economic performance of their respective regions transforming the lives of many people in Kenya including house helps and low income earners who have been able to borrow as little as Ksh. 500 from the Bank (FSD, 2010). Equity Bank is the holder of the 2007 Global Vision Award in Microfinance for initiating a concept of the future that will shape the Global Economy. Equity offers financial services through its wide network in Kenya, Uganda South Sudan and Rwanda supported by Alternate Delivery Channels (ADC) which include Points of Sale (POS), pay and withdraw cash in leading retail outlets and the Internet and mobile banking channels. The bank runs on a Global Robust State (GRS) of the Art Information Technology Computer System supported by Infosys, HP, Oracle and Microsoft. More than 95 per cent of Kenyans earn little from either micro-enterprises or what might be described as *micro-jobs* (Storey, 1994).

But if Kenya is to develop, micro-enterprises must be transformed into large, wealth creating businesses with capacity to create high paying jobs (Ang, 1992). And access to financial services and finance is central to this economic transformation strategy. This is where Equity Bank, the most successful indigenous bank, steps in. Its mission is to create that change. Equity is more than traditional bank. It is a bank that takes risks in order to create positive change for the Kenyan entrepreneur and the country. The bank's business strategy is based on creating

change in provision of banking services. It's all about change. Equity takes risks to grow its business by providing financial services to the traditionally unbanked in the society. It takes risks to develop the entrepreneurs in this group to grow their enterprises into wealth-generating, viable businesses.

Many Kenyans are engaged in micro-enterprises such as hairdressing, radio repairs and wedding card-making. These are entrepreneurs who avoid using banking services. They, in fact, see the traditional bank loan, with its emphasis on collateral, as the beginning of financial problems for entrepreneurs who get it. The result is that even among the bankable 23 per cent of them only 1.8 per cent have bank loans. Access to affordable financial services is a big problem for most Kenyan entrepreneurs (CGAP, 2003). Available statistics show that most banks and micro-credit organizations have been sharing customers, giving the wrong impression of a high percentage of banked Kenyans. In order to change attitudes and profitably provide banking services to this large and untapped group of Kenyan entrepreneurs, Equity Bank has adopted several strategies.

2.4.2 Redefining and Demystifying Banking

Demystifying of banking started with conveyance of new, positive messages to the public who were reluctant to join banks given the past unfriendly experiences (Duncan and Elliot, 2002). Professionalism, integrity, creativity and innovation, team work, unity of purpose, respect and delight for customer care and effective corporate governance are important values in this regard. The values describe a management empowered to understand and create change. Strategy starts with understanding the limitations of traditional banking. Traditional banking has been limited to credit services and this is the source of fear that most Kenyans have towards banks (Flamini, 2008). Equity Bank has changed this by establishing rapport with its customers. Equity has established non-financial services which it considered more urgent for micro and small business owners. They included teaching the entrepreneurs how to find and develop markets for their products, how to brand their products, how to cost their products and book-keeping. There has been a mistaken idea that businesses need only credit to grow. The truth is that eight out of every 10 businesses started in Kenya fail in the first year because of non-financial reasons. In other countries these services are provided by the government. In Kenya, however, the government has not put in place business support structures for entrepreneurs. The need for these structures is underlined by the fact that the strategy brought in a large number of

customers to the bank in less than two years. Over the same time, the bank dispersed loans amounting to more than Sh5 billion to youth and women groups (Akroush, 2008).

2.4.3 De-emphasizing Collateral

The second element of change involves the lending policy itself. The purpose was to de-emphasis traditional collateral that had earned banks a bad name among micro entrepreneurs. Guided by the principle that you must take risk in order for business to grow (Danielsen, 2008), the Equity bank went about creating lendable units by initiating a training programme tailored to meet the different needs and levels of knowledge of our client. Individual entrepreneurs were brought together in groups ranging from 15 to 30 that guarantee each other for loans, thus eliminating the need for collateral.

2.4.4 Increasing Accessibility to Banking Services

In order to encourage use of banking services, Equity Bank has introduced a variety of savings products – a service that industry experts say is a more crucial micro-finance need even more important than loans. The bank has also done away with account opening obstacles such as opening fees, minimum balances, ledger fees, monthly charges and requisition of photos to open an account. In addition, by using technological innovations such as ATMs and points of sale agents, the bank has increased access to its services. The latter is especially useful in remote rural areas outside bank branch network (Anderson, Fornell & Lehman, 1994). Agents are provided with technology that can facilitate withdrawal and deposit of cash. Thus, low income earners and micro-entrepreneurs don't have to travel long distances spending money to reach a bank.

2.4.5 Partnering with Service and Product Providers

To further assist micro-entrepreneurs, Equity Bank is partnering with service and product providers in the sector to ensure proper chain link. If a link is missing in a chain, chances are that a business will not succeed. A good example is its memorandum of understanding (MoU) with the agribusiness firm Amiran in the provision of greenhouses and irrigation technology to farmers in a project targeted to reduce dependency on rain-fed agriculture. Another good example of this approach to banking by the Equity Bank is the Hola Irrigation Scheme. Stalled in 1980s for lack of credit to the poor farmers, Equity Bank initiated a programme to revive the scheme. And for the first time in 23 years, the farmers and villagers are laughing all the way to the bank with bountiful harvests. Appreciation by Kenyans has been overwhelming. Today,

Equity Bank has more than 4.5 million customers, way ahead of its nearest competitor with only a half a million customers.

2.4.6 Mobile Banking

This is a new form of electronic commerce engendered by the growth of wireless communications in Africa. It is becoming the preferred mode of delivering financial services to the unbanked. But there are still policy and regulatory challenges to grapple with. The world is witnessing an unprecedented technological revolution as consumers adopt more sophisticated life styles with the changing times. One such technological revolution is Mobile Banking, also known as M-banking or SMS banking. Mobile banking is the way to go. Studies conducted by various think-tanks reveal that mobile banking is the way to go. A 2008 survey conducted by the UN Economic Commission for Africa (ECA) revealed that the number of cell phones was more than that of bank accounts across East Africa.

The survey also found that only half of South African adults had a bank account, but a third of those without an account owned a mobile phone. The survey further revealed that FinMark, a British-backed non-governmental organization that looks at how financial markets can help the poor, estimated that at least half of all bank accounts in South Africa could be administered through cell phones within the next five years. This underscores the importance of using cellphones to reach the unbanked rural poor. Worldwide, there are fewer than one billion bank accounts, but more than three billion cellphones (the Swedish Programme for ICT in Developing Regions, SPIDER).

According to the German mobile operator Mobilcom, mobile banking will be the killer application for the next generation of mobile technology. And according to a study by the financial consultancy, Celent, 35 percent of online banking households will be using mobile banking by 2010, up from less than 1 per cent today. Upwards of 70 percent of bank centre call volume is projected to come from mobile phones. Mobile banking will eventually allow users to make payments at the physical point of sale (Christopher, 2002). Mobile contactless payments will make up 10 per cent of the contactless market by 2010.

2.4.7 Virtual Banking

In Kenya, two banks have deployed a robust technology to facilitate mobile banking. These are the Equity Bank and Family Bank. Equity was the first bank in Kenya to launch a mobile banking platform known as Eazzy 24/7. It has helped us deliver financial services to the very remote areas with eighty one percent of the transactions currently being carried out on an e-platform. As it is, the rollout of Eazzy 24/7 was the first phase of the bank's journey towards virtual banking. Eazzy 24/7 then rolled out "Benki yangu mkononi" (My bank in my hands). The objective of this product was to bring in convenience, affordability and accessibility to customers. Hence the cellphone is the nearest bank that a customer should have. This product has 18 functionalities including request for a banker's cheque, balance enquiries, among other transactions. The second phase of this technology involve seeking a USSD (Unstructured Supplementary Service Data) gateway, which would enable the bank move to a robust banking system, to drive itself in a more integrated manner. The cost of creating infrastructure on which mobile banking can ride on is enormous. For traditional banks, they would have to change their legacy systems. For Equity there is a modern IT platform that is converged and connected well. With the mandatory registration of SIM cards Know Your Customer (KYC) need now to be implemented in the financial services. This is being supported by the availability of the fibre optic cables to ensure the cheapest and reliable connectivity.

2.4.8 The Future of Mobile Banking

There is no gainsaying that the future is mobile banking, considering the rate at which technological innovations are unfolding. Mobile banking in this region will be as revolutionary and as powerful as the invention of the steam engine and the light bulb in the Industrial Revolution. Family Bank sees the century-old and colonial obsession with gold plated high-street branches being banished to history. In the future, the bank branch will be found in every Kenyan's pocket allowing 24/7 access to financial services. Family Bank believes without a doubt that the future of mobile banking is there to stay.

Mobile banking has contributed to the growth of the EBITDA (Earnings Before Interest, Tax, Depreciation and Amortization) of a number of banks (Burns and Walker, 1991). Mobile banking was first seen as a customer service measure to enhance customer convenience and ease of banking. Today it is a core part of Family Bank's strategy; with e-banking driving not only the bottom-line but also crucially deposit mobilization (Cronin, 2003).

2.4.9 Economic Development

This is not a trivial point because this is the first step in moving people from the informal economy to the formal economy, which in turn, increases the overall formal economy. Migrant remittances are vital for economic development and in most countries (especially in Africa), as much as 80 per cent of remittances are handled through informal channels, the *hawala* network or via semi criminal networks. Thus, money transfer services are an integral part of economic development simply because it enables people that do not qualify for bank accounts a means for cost-effectively moving money. The benefits of M-money are numerous. Besides allowing customers to make payments without carrying huge sums of cash, money transfer services are more or less instant, allowing payments to be made in the village and in time. The distribution cost of banking services in Africa via branches, the ATM network and the Internet is some of the highest cost on the planet. M-banking provides a low-cost means of providing services that in many cases simply mirror what is already available through existing channels, however, in convenient technology.

M-banking ensures efficiencies in the transfer of the money, including security in terms of carrying large sums of cash in electronic format. For people in rural areas, transport is a major component of cost in terms of financial services, and is beyond what is charged as ledger fees. The future is going to focus on continuous innovation in the banking fraternity as it will facilitate the delivery of accessible, affordable and safer financial services to Kenyans, especially those in rural areas. The fibre optic cables will enhance connectivity speeds, lower the cost of transactions and improve efficiencies in the banking and telecommunications sector. The increased capacity and improved services levels will enable banks reach out and provide services to a wider number of citizens. However, customer education cannot be overlooked or underestimated. M-banking provides an opportunity to reach the unbanked, youth market, technical professionals, and a variety of niche markets. In this first generation of M-banking services, the focus is on how to use the technology to gain access, not how to use banking responsibly (Curan and Menter, 2005). Therefore, the next big challenge for M-banking is to teach people how to use M-banking in the context of using banking products and services to make their life better. The second challenge is to thwart the temptation to use M-banking to exploit the un-educated.

2.4.10 Challenges to the Industry

The present challenge to the industry is to increase its ability to self-regulate. Customers need a means to report agents that may be acting in a manner not in adherence to the intent of the money transfer provider. Providers in turn need a means to investigate and correct agents that act to exploit their position in the distribution network such as licensing agents and subsequently revoking their license. Then there are also regulatory challenges which include negotiating different regulatory frameworks for telecoms and finance, particularly the KYC (Know Your Customer) regulations in banking. According to (Peel and Wilson, 1996) telecommunications regulators seem to generally take the position those mobile operators already are licensed to transfer information over mobile networks, and that this license also includes financial information. Regulatory risks pertaining to telecommunication regulation is hence small, given that the operator in question looks after its general license commitments.

The Central Bank cannot regulate telecoms and telecoms cannot in turn regulate banks. They have to agree that here are two separate institutions. What needs to be done is to create a clear boundary between banks and telecoms. Ideally for instance, the banks would own the mobile or e-banking products and telecoms own infrastructure on which these products are launched or delivered and there would be no conflict (Akinci and Atilgan, 2004). What is needed, however, is clear guidelines on consumer protection and competition with the authorities ensuring that the state of mutual dependence between the mobile network operators and the financial service providers benefits the end customer. Issues of access, price and service availability must be standardized and codified into a unified regulatory regime between the two regulators. This regime should then guide and govern the relationship between the mobile network operators and the banks. The issue of regulation will be a point of great debate simply because it controversial. Technically, money transfer schemas do not need a banking license because they do not take deposits. Banks that take deposits have a fiduciary responsibility of trust that is expressly implied by their banking license (Curan et al, 1997).

2.5 Conceptual Framework

This study was based on the following conceptual framework

Independent Variable

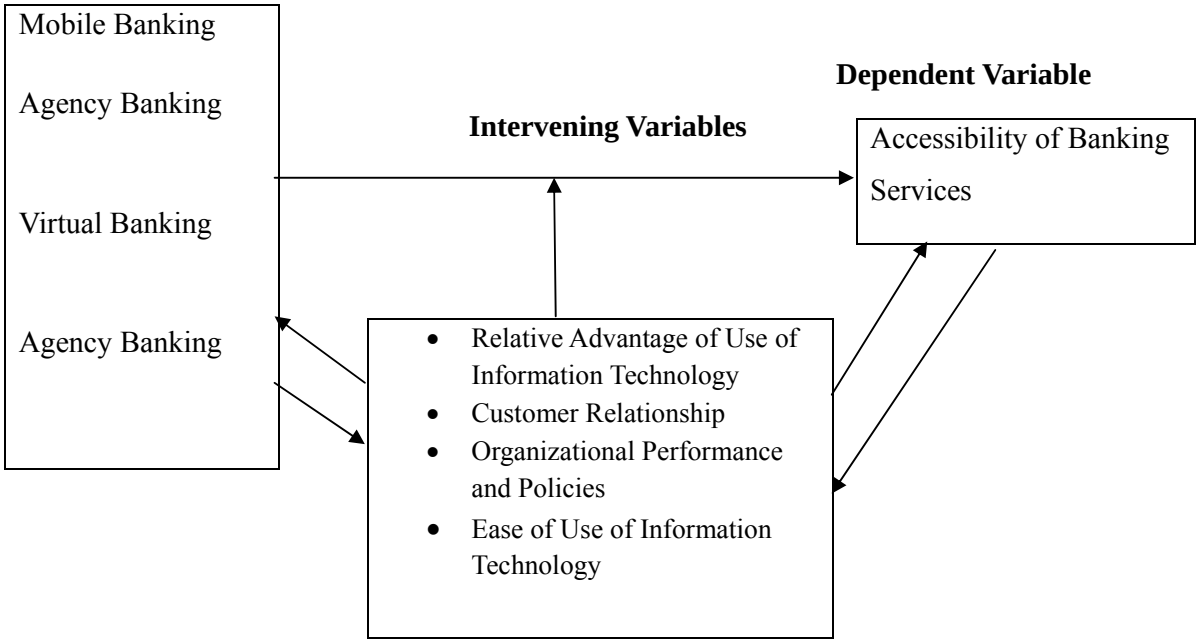

Figure 1: Conceptual Framework

This conceptual framework shows the relationship between the independent variable and the depended variable. The conceptual framework shows that if internet banking, virtual banking, agency banking and mobile banking technologies are introduced they would enhance the accessibility of banking services. However there were other factors that determined the adoption of Information Technology in the Banking sector thereby influencing accessibility of banking services in Equity bank. These included relative advantage of adoption of information technology, organizational performance and policies, ease of use of technology and customer relationship.

2.6 Summary and Knowledge Gap

The analysis of literature has revealed enormous evidence regarding the contribution of technological innovation in enhancing accessibility of financial services in the banking sector. The major technological innovations include mobile banking, agency banking, ATM, Eazzy 24/7 and Internet Banking. For these technological innovations to lead to accessibility of banking services training is needed to the providers of these innovations to make it easy to

penetrate the market. In spite of the rate at which banking innovations were being introduced, it was not clear whether these innovations influenced accessibility of banking services. This study attempted to establish whether technological innovations have resulted to increased access to banking services in Nakuru town.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This is the methodological design within which this research was conducted. The preparation of the research design facilitates a credible study that yields as maximum information as possible. Hence this chapter discusses the methodological procedures that were used in data collection and analysis. It also discusses the research design, location of the study, population of the study, sampling procedure and sample size instrumentation, data collection and data analysis.

3.2 The Research Design

This study was based on a descriptive survey. A descriptive survey method involves seeking to obtain information that describes existing phenomena by asking respondents about their attitudes, behavior and values. This method was appropriate for obtaining factual and attitudinal information for research questions about self report, beliefs, opinions and characteristics of the respondents' present and past behaviours (Mugenda & Mugenda, 2003). A sample of respondents was selected from the customers of Equity bank in Nakuru Town and questionnaires administered to them to gather information about accessibility of banking services due to the introduction of information technology. The findings would be generalized to the population that the sample represented. This design was the most appropriate for obtaining factual information about beliefs, opinion and characteristics of the respondents about the study topic.

3.3 Target Population

The target population for this study were the customers of Equity Bank, Nakuru Town who own small business ventures in Nakuru Town. According to the Municipal Council of Nakuru, a total of 4137 registered small business ventures operate in Nakuru town (MCN, 2011). Out of this number 295 operated bank accounts with equity bank, Nakuru Town.

3.4 Sampling Procedure and Sample Size

The sampling frame was made up of small scale traders operating bank accounts at Equity bank in Nakuru Town. The respondents were identified from the records obtained from the business accounts at Equity Bank, Kenyatta Avenue Branch. The researcher utilized both purposive and stratified random sampling in identifying the sample. To determine the total sample size from the population of 295 traders, the study adopted a formula from Nassiuma (2000) using the co-efficient of variation for estimating a sample size n from a known size, N;

$$n = \frac{NC^2}{C^2 + (N-1)\,e^2}$$

where n = Sample size

N =Population, 295 in this case

C =co-efficient of variation assumed to be 0.3 percent for survey research

e = standard error, assumed to be 0.02 in this case

Substituting these values in the equation the estimated sample size was:

$$n = \frac{295 \times 0.3^2}{0.3^2 + (295 - 1)\,0.02^2}$$

$$= 127$$

From the formula above, the sample size of the study was determined. Since the accessible population of the study was 295, the sample size as per the formula was 127 respondents. Convenience sampling technique was then used to identify 127 respondents based on their availability.

3.5 Data Collection Instrument

The data was obtained through the use of questionnaires and semi structured interview schedules. The questionnaires were used in both pilot and the main study. The questionnaires consisted mainly of closed ended items and a few open ended items. The open ended questions gave the subjects the opportunity to give out their views. The researcher collected the data from the selected respondents after receiving permission from the supervisor, University of Nairobi. Permission also sought from the branch managers of Equity Bank, Nakuru to allow data collection from their customers.

3.6 Research Instrument Reliability and Validity

This section outlines the procedure the researcher used to ensure that the results were valid and reliable.

3.6.1 Validity

Validity is the extent to which an instrument measures what it ought to measure (Mugenda and Mugenda, 2003). The validity of the research instrument was established in order to make sure that they reflected the content of the study. The researcher also went through the instrument and compared them with the set objectives to ensure that they contained all the information that would answer the set questions and address the objectives. The supervisor was also consulted to scrutinize the relevance of the questionnaire items against the set objectives of the study.

3.6.2 Reliability

Reliability is the degree to which an instrument yields consistent results or data after repeated trials (Mugenda & Mugenda, 2003). In order to ensure that the research instruments were reliable, the instrument was taken for piloting with ten customers of Family Bank, Nakuru and the results of the pilot study analysed to see whether they would correspond with the objectives of the study.

3.7 Data Analysis

The data obtained was processed using the statistical package for social science (SPSS) Version 17.0. The findings were coded based on the variables that were studied. Descriptive statistics were used in data analysis. Frequencies, percentages, and cross tabulations were generated to explain the various attributes of the variables studied and to represent the quantitative data.

3.8 Ethical Considerations

During the research process ethical considerations were upheld as follows.

3.8.1 Confidentiality

Confidentiality was strictly observed in the course of this research to prevent respondent's physical or psychological harm. The participants were assured that the information obtained from them would be kept confidential and used only for the purpose of the research alone. The participants were also assured that the data would only be used for the stated purpose of the research and that no undesirable persons would have access to the data.

3.8.2 Privacy of Respondents

The identity and privacy of individuals was also protected. The respondents were asked to supply the data without writing their identity on the research instrument.

3.8.3 Voluntary Consent

The researcher conformed to the principle of voluntary consent where respondents were encouraged to participate in the study willingly. The research participants were informed of all features of the research that were reasonably expected to influence their willingness to participate. The researcher also responded to enquiries the participants made about the research.

3.9 Operationalization of Variables

Technological innovations were the independent variables. Technological innovations included internet banking, virtual banking, agency banking and mobile banking technologies. Accessibility ob banking services was the dependent variable. Accessibility of banking services meant the ease with which technological innovations facilitated access of banking services at Equity Bank in Nakuru Town. Intervening variables were the factors that determined the adoption of Information Technology in the Banking sector thereby influencing accessibility of banking services in Equity bank. These included relative advantage of adoption of information technology, organizational performance and policies, ease of use of technology and customer relationship.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the results of the study and the discussion of the findings. The study sought to establish effects technological innovation on the accessibility of banking services in Equity Bank Nakuru. The study was based at Equity Bank Nakuru and was conducted among holders of accounts with Equity bank. The objectives of the study were:

i. To find out the effects of agency banking on accessibility to banking services in Equity Bank, Nakuru.
ii. To investigate the impact of internet technological adoption on accessibility to banking services in Equity Bank, Nakuru.
iii. To determine the influence of mobile banking on accessibility of banking services in Equity Bank, Nakuru.
iv. To determine the level of customer satisfaction with the adoption of Information Technology on the accessibility of banking services in Equity Bank, Nakuru.

The results are presented in Tables and analyzed quantitatively by use of percentages. The findings are presented according to the questionnaire items and the objectives of the study.

4.2 Demographic Characteristics of the Respondents

The section presents the data obtained from the analysis of the demographic information of the respondents. These included gender, age, whether the respondents held a bank account with Equity Bank or not and the length of time the accounts had been operational.

4.2.1 Gender of Respondents

The researcher sought to establish the classification of respondents according to gender. The results obtained shown in Table 1 indicate that 29% were female while 71% were male. This suggests that majority of the small scale business operators in Equity Bank were male, thus implying that gender equality was not observed in the business representation in the concerned bank.

Table 4.1: Classification of Respondents According to Gender

Gender	Frequency	Percentage (%)
Male	90	71
Female	37	29
Total	**127**	**100**

Source: Research Data, 2013

4.2.2 Age of Respondents

The researcher sought to establish the age of the respondents. The results obtained are presented in the Table below:

Table 4.2: Classification of Respondents According to Age

Age Bracket	Frequency	Percentage (%)
18- 25 Years	15	12
26- 32 Years	38	30
Above 35 Years	74	58
Total	**127**	**100**

Source: Research Data, 2013

The findings as indicated in Table 3 show that 58% of the respondents were aged above 32 years while those aged between 26 and 30 years were 30%. Those aged between 18 and 25 were 12%. The age of respondents was considered important as it would help ascertain the influence of the responsiveness of the respondents to technological innovation and eventual accessibility to banking services.

4.2.3 Operation of Bank Account at Equity Bank

An analysis of whether the respondents operated an account with Equity Bank was made and the results obtained are shown in the Table below.

Table 4. 3: Classification of Respondents According to whether they had an Account with Equity Bank

Response	Frequency	Percentage (%)
Yes	113	89
No	14	11
Total	**127**	**100**

Source: Research Data, 2013

Table 3 indicates that 11% of the respondents did not hold accounts with Equity Bank while majority of the respondents (89%) had bank accounts with equity Bank. The results indicate that majority of the respondents operated a bank account with Equity Bank.

4.2.4 Period of Operation of the Account at the Bank

Regarding the period of operation of the account, the results presented in Table 4 below shows that 60% of the respondents had operated their accounts for a period of 1-3 years while 15% had operated their accounts for 4-5 years. 10% had held their accounts for above 10 years while 7% had operated their accounts for a period of 6 - 10 years. 8% of the respondents had operated their accounts for a period of less than 1 year.

Table 4.4: Classification of Respondents According Duration of Operating Account

Age Bracket	Frequency	Percentage (%)
0-1 Year	10	8
1-3 Years	76	60
4-5 Years	19	15
6-10 Years	9	**7**
Above 10 Years	13	10
Total	**127**	**100**

Source: Research Data, 2013

4.2.5 Compliance and Use of Technological Innovations

Table 4.5: Classification of respondents according to IT Compliant and Use of IT at Equity Bank

Response	YES		NO	
	f	%	f	%
IT Compliant	91	72	36	28
Encouraging use of IT	82	65	46	35

Source: Research Data, 2013

As shown in Table 5 above, 72% of the respondents indicated that Equity bank was IT compliant while 28% pointed that the bank was not IT compliant. This indicates that majority of the respondents felt that Equity Bank was IT compliant. Moreover, majority of respondents (65%) were being encouraged to embrace IT.

4.3 The Rate of Ease of Accessing Banking Services from the Bank

Investigation into the ease of access of banking services revealed the findings represented in Table 6 below.

Table 4.6: Rate the Ease of Accessing Banking Services from Equity Bank

Responses	Frequency	Percentage (%)
High	27	21
Moderate	57	45
Low	43	34
Total	**127**	**100**

Source**:** Research Data, 2013

As shown in Table 4.6 above, on the ease with which it was to access bank services, 21% of the respondents indicated the rate of accessibility was high, 45% indicated the rate of accessibility was low and 34% indicated that it was moderate. Generally, the results showed that accessibility of banking services were moderate. These findings are in agreement with Bresnahan's (1997) position that adoption of IT has moderately influenced the accessibility of banking services. Anderson, Fornell & Lehman (1994) also came to similar conclusion in their study. They observed that by using technological innovations such as ATMs and points of sale agents, the bank has increased access to its services with ATM being useful in remote rural areas outside bank branch network.

4.4 Level of Satisfaction with the Technological Innovations in the Bank

The researcher sought to establish whether clients were satisfied with the adoption of technological innovation at Equity bank. The respondents were asked to rate their responses from highly satisfied to highly dissatisfied. Table 7 below presents the findings.

Table 4.7: Level of Satisfaction with Technological Innovations in the Bank

Level of Satisfaction	Frequency	Percentage (%)
Highly Satisfied	46	36
Satisfied	33	26
Not Sure	6	5
Dissatisfied	29	23
Highly Dissatisfied	13	10
Total	**127**	**100**

Source**:** Research Data, 2013

As shown in Table 7 majority (36%) of the respondents were highly satisfied with technological innovation. 26% maintained that they were satisfied. 5% were not sure while 23% were dissatisfied. Only 10% indicated that they were highly dissatisfied with the adoption of technological innovation in the bans. The higher percentage of respondents who indicated that they were highly satisfied with the adoption of technological innovation in the banks agree with Venkatesh (1999) study which predicted that IT adoption could influence awareness about Internet technology and hence users' satisfaction with their use.

4.4 IT Services Offered by Equity Bank

Regarding the services offered by Equity Bank through IT the following findings were obtained.

Table 4.8: Services offered by Equity Bank through IT

Activity	Frequency	Percentage (%)
Cash deposit	33	26
Balance enquiry	17	13
Issuance of Mini Statements	11	9
Cash payment	45	36
Cash Payment of Loans	4	3
Others	17	13
Total	**127**	**100**

Source**:** Research Data, 2013

As shown in Table 4.8 all the activities identified were pointed out to be available at Equity Bank. For instance 26% of the respondents indicated that cash deposit was done through IT. 13% mentioned balance enquiry while 9% mentioned issuance of mini statements. Cash payment was identified by 36% of the respondents while cash payment of loans was selected by 3% of the respondents. Others were selected by 13% of the respondents. These findings are similar to the results obtained by Atieno (2001) which indicated that IT has enabled banks to carry out many financial transactions such as cash deposit and withdrawals, cash disbursement and cash repayment of loans, transfer of funds, cash payments of retirement and social benefits, cash payment of salaries, balance enquiries, generation and issuance of mini bank statements, loan application collection of documents in relation to account opening and credit and debit application. Dondo (2003) concurs that these services have been used by banks to attract customers through advertisement and sales promotion.

4.5 Technological Innovation and Accessibility of Banking Services

The study sought to find out the impact of technological innovation on the accessibility of banking services. Table 9 below shows the findings.

Table 4.9: Technological Innovation and Accessibility of Banking Services

Response	Frequency	Percentage (%)
Mobile Banking	30	36
Internet Banking	46	24
Agency Banking	27	21
Virtual Banking	17	13
Others	7	6

Source**:** Research Data, 2013

The results shows that 36% of the respondents indicated that mobile banking increased the accessibility of banking services, 24% cited internet banking, 13% selected Virtual Banking and 21% selected agency banking. 6% selected others.

This shows that mobile banking had the greatest impact on accessibility of banking services in Equity bank in Nakuru. It is evident that technological innovation in the banks has helped to deliver financial services to more people through the e-platform.

4.6 Use of IT to Attract Customers to the Bank

The respondents were asked to ascertain how the bank applied IT to attract customers to the bank. This was helpful in finding out whether there were benefits associated with the application of IT in the banking industry. Table 4.10 shows the results obtained.

Table 4.10: Use of IT to Attract Customers to the Bank

No. of Branches	Frequency	Percentage (%)
Lower transaction Costs	55	44
Ease of use	27	21
Longer opening Hours	8	6
Convenience	27	21
Accessibility	10	8
Others	0	0
Total	**127**	**100**

Source: Research Data, 2013

From the Table above, it can be seen that majority of the respondents (44%) were attracted to the use of IT due to low costs while 21% felt it enhanced ease of reach. 6% were attracted due to long hours of opening and 21% felt was convenience and accessible.

4.7 Effects of Mobile Banking on Accessibility of Banking Services

The researcher investigated whether mobile banking in Equity Bank in Nakuru has lead to accessibility of banking services. Table 4.11 shows the results obtained from the study.

Table 4.11: Table showing whether respondents have bank accounts or not

Response	Frequency	Percentage (%)
Yes	102	80
No	25	20
Total	**127**	**100**

Source: Research Data, 2013

Table 4.11 shows that 80% of the respondents pointed out that mobile banking enhanced accessibility to banking services, while 20% of the respondents indicated that it did not influence accessibility to banking services. Majority of the respondents therefore associated mobile banking with accessibility of banking services. Christopher (2002) has also observed that mobile banking will eventually allow users to make payments at the physical point of sale.

This is similar to the observation by a survey conducted in 2008 by the UN Economic Commission for Africa (ECA) which projected that the number of cell phones was more than that of bank accounts across East Africa thus facilitating the use of mobile phones in enhancing financial transaction.

4.8 Agency Banking and Accessibility of Banking Services

The researcher investigated whether agency banking influenced accessibility of banking services in Equity bank in Nakuru town. Table 4.12 shows the results obtained from the study.

Table 4.12: Effects of Agency Banking and Accessibility of Financial Services

Response	Frequency	Percentage (%)
Yes	109	86
No	18	14
Total	**127**	**100**

Source: Research Data, 2013

As shown in Table 4.12, 86% of the respondents said that agency banking influenced accessibility of banking services. Only 14% of the respondents indicated that agency banking did not influence accessibility of banking services. Thus Majority of the respondents noted that agency banking had an effect on accessibility of banking services in Equity bank in Nakuru Town. This is in agreement with Christopher (2003) who maintains that agency banking helps financial institutions to divert existing customers from uncovered branches by providing a complementary and convenient channel which enhances financial performances.

Business Daily (2008) also observes that agency banking reduces transaction costs such as travel for clients by bringing financial services to hard-to-reach and geographically dispersed areas. Thus clients have heartily welcomed the idea of agency banking since they have had to sometimes go through vexing experiences to access banking services due to the poor road infrastructure and high costs. These findings are also in agreement with a research study by Kitaka (2001) which indicated that banks have successfully expanded their outreach by engaging local agents to offer banking services. Kitaka (2001)'s study reported that agency set ups are less costly and more flexible since they reduce the need to invest in staff and physical infrastructure.

4.9 Internet Banking and Accessibility of Banking Services

In regard to the effect of internet banking on the accessibility of banking services, the results obtained from the study are shown in Table 4.13 below.

Table 4.13: Effects of internet banking on accessibility of banking services

Response	Frequency	Percentage (%)
Yes	86	68
No	41	32
Total	**127**	**100**

Source: Research Data, 2013

Table 4.13 shows that 68% of the respondents indicated that internet banking affected accessibility of banking services, while 32% did not associate internet banking with accessibility of banking services. Hence slightly more than half of the respondents have embraced internet banking as a means of accessing banking services in Equity bank in Nakuru Town. Similar conclusion were arrived at by Bresnahan (1997) who fond out that internet plays a major role in the economy by enabling sellers and buyers to create economic value through exchange of information, goods and services, and payments for the goods and services rendered.

4.10Technological Innovations and Increase in Accessibility of Banking Services

The researcher sought to ascertain whether technological innovation has influenced increased accessibility of banking services. The results obtained are shown in the table below.

Table4.14: Technological Innovation and Increase in Accessibility of Banking Services

Response	Frequency	Percentage (%)
Strongly Agree	57	45
Agree	25	20
Undecided	19	15
Disagree	10	8
Strongly Disagree	16	12
Total	**127**	**100**

Source: Research Data, 2013

As Table 14 shows, 45% of the respondents strongly agreed that technological innovations increased the accessibility of banking services, while 20% agreed. 15% were undecided. The study also showed that 8% disagreed while 12% strongly disagreed. This suggests that majority of the respondents agreed (45+20=65%) that technological innovation increased accessibility of banking services.

4.11 Challenges of using Technological Innovations in Banking

The study investigated the challenges facing the application of technological innovation in accessing banking services in Equity Bank. The results obtained are represented in the Table below.

Table 4.13: Challenges facing IT use in Banks

Challenge facing IT in Banks	Frequency	Percentage (%)
Systems Failure	13	10
Exploitation by Agents	28	22
Technophobia	38	30
Lack of Self Regulation	27	21
Others	22	17
Total	**127**	**100**

Source**:** Research Data, 2013

As shown in Table 4.13, 10% of the respondents indicated that systems failure was a major challenge in technological innovation. Technophobia was selected by 30% while 22% selected exploitation by agents. 21% of the respondents pointed out that lack of self regulation affected the application of technological innovation in the banking sector. Others were selected by 17% of the respondents. Bresnahan (1997) noted that theft errors and fraud could occur through agent channels. However, these arguments were based on expert opinion rather than on empirical evidence, nevertheless Bresnahan (1997) recommends taking steps to contain the magnitude of the challenges to manageable levels and also being legally and contractually clear on who bears residue losses when these risks materialize. Akinci and Atilgan (2004) suggest that clear guidelines on consumer protection may ensure that the state of mutual dependence between the mobile network operators and the financial service providers benefits the end customer.

4.12 Factors Influencing the Adoption of Technological Innovation in the Banking Sector

The study sought to find out the factors influencing the adoption of technological innovation in banks. The findings showed that 25% of the respondents indicated that performance of banks influenced the adoption of IT in banks. 17% of the respondents indicated that customer relations influenced the adoption of IT in banks while 36% of the respondents indicated ease of use of technological innovation. 12% selected advantage of use while 'others' was selected by 10% of the respondents as shown in the table below.

Table 4.14: Factors influencing the adoption of Technological Innovations

Response	Frequency	Percentage (%)
Performance of Banks	32	25
Customer Relations	22	17
Ease of Use	46	36
Advantage of Use	15	12
Others	12	10
Total	**127**	**100**

Source: Research Data, 2013

These findings are supported by Anderson, Fornell & Lehman (1994) who reported that when agents are provided with technology that can facilitate withdrawal and deposit of cash, micro-entrepreneurs don't have to travel long distances spending money to reach a bank**.** Venkatesh (1999) emphasizes the importance of perceived ease of use in predicting IT adoption and argued that training could influence or awareness about internet technology and hence users' perceptions of ease of use.

4.13 Influence of Technological Innovation on the Performance of Equity Bank

The Table below shows the results obtained from the investigations on the influence of technological innovation on the performance of Equity Bank.

Table 4.15: Performance of Equity Bank

Technological Innovation and Financial performance of Equity Bank	Frequency	Percentage (%)
High	76	60
Moderate	35	27
Low	17	13
Total	**127**	**100**

Source**:** Research Data, 2013

Table 4.15 shows that 60% of the respondents pointed out that the rate of performance was high while 27% indicated that it was moderate. Only 13 % indicated that the performance was low. These findings agree with the observations by Equity Bank chief Officer that pretax profit of Equity bank rose significantly due to the application of IT in the financial operations of equity bank. Mokegi (2003) also pointed out that the convenience of access to banking services and the extended hours of operation have been the most attractive feature to the customers hence increased performance.

4.13 Experience of Customers with Technological Innovation in Banks

In regard to the interview with clients on their experience with technological innovation, the results show that the respondents believed that the customer's experiences were favourable. This is mainly due to the fact that technological innovation helps financial institutions to divert existing customers from crowded branches. According to Kitaka (2001) this is attributed to the ability of the customers to receive a wide range of financial services such as withdrawals, deposits or pre approved credit lines, simplified current accounts and international remittances. These findings also agree with Kisande's (2008) findings which pointed out that technological innovation provides sufficient business incentives by increasing outreach through a network of agents.

CHAPTER FIVE
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study sought to investigate the effects of technological innovation on accessibility of banking services in Equity bank, Nakuru. The data was collected using questionnaires that were distributed to selected respondents in Equity Bank in Nakuru Town. The data was coded and tabulated, represented and analyzed using descriptive techniques. The results were represented using Tables and figures. This chapter therefore presents the summary of the findings and the conclusions reached at. The chapter also presents the recommendations made and suggestions for further research.

5.2 Summary of Findings

The results show that 29% of the respondents were female while 71% were male. The findings also show that majority of the respondents (58%) were aged above 32 years. Similarly majority of the respondents (89%) had bank accounts with equity bank. 60% of the respondents had operated their accounts for a period of 1-3 years. In addition, majority of the respondents felt that Equity Bank was IT compliant. However, 65% of the respondents indicated that they were being encouraged to embrace IT.

Consequently, most of the respondents pointed out that agency banking, mobile banking, virtual banking and internet banking had led to increased accessibility of banking services in equity bank.

Thus majority of the respondents associated mobile banking with accessibility of banking services. For instance, 80% of the respondents pointed out that mobile banking enhanced accessibility to banking services at Equity Bank.

In regard to the effect of agency banking on accessibility to banking services, the findings showed that majority of the respondents indicated that the rate of accessibility of banking services was high. 86% of the respondents said that agency banking influenced accessibility of banking services. Thus majority of the respondents noted that agency banking had an effect on accessibility of banking services in Equity bank in Nakuru Town.

Regarding internet banking, 68% of the respondents indicated that internet banking affected accessibility of banking services. Only 32% did not associate internet banking with accessibility of banking services. Hence slightly more than half of the respondents had embraced internet banking as a means of accessing banking services in Equity bank in Nakuru Town.

Majority of the respondents agreed that technological innovations increased the accessibility of banking services. However, 30% of the respondents indicated that technophobia affected the accessibility of banking services. Nevertheless, 25% of the respondents indicated that performance of banks influenced the adoption of IT in banks in Nakuru Town with 60% of the respondents pointed out that the rate of performance was high.

The majority of the respondents (44%) were attracted to the use of IT due to low costs. This influenced the level of customer satisfaction with technological innovation in banks. Majority of the respondents expressed favourable attitude towards the adoption of technological innovations in Equity banks in Nakuru town.

5.3 Conclusion

The main purpose of the study was to analyze the effects of technological innovations on the accessibility of banking services in Equity Bank in Nakuru town. The objectives of the study were to find out the effects of internet technological adoption, mobile banking and agency banking and to determine the level of customer satisfaction on the accessibility of banking services in Equity Bank in Nakuru town. Considering the results of the study several conclusions can be made. First, technological innovation has led to increased accessibility of bank services through mobile banking, virtual banking, internet banking and agency banking. As a result of increased accessibility to banking services through technological innovations there have been increased financial activity which include cash deposit, cash withdrawals, transfer of funds, balance enquiry and payment of loans. Through technological innovation customers can receive a wide range of financial services such as withdrawal, deposits, preapproved credit lines, simplified current accounts and international remittances. The study has also concluded that the customers' level of satisfaction with the adoption of technological innovation was high and the customer's experience with technological innovation was favourable. Consequently the extended hours, convenience and accessibility, low costs and perceived ease of use have made the adoption of technological innovation convenient and attractive. This is mainly due to the fact that technological innovation helps financial institutions

to divert existing customers from crowded branches. However, technological innovation in banks has experienced notable challenges including technophobia, exploitation by agents and lack of self regulation.

5.4 Recommendations

Based on the conclusions drawn from the study, several recommendations are made. First Equity bank should open more agency and mobile banking services in the rural areas to reach out to more customers who may not be able to visit banking halls. The bank should recruit and train more agents in order to be able to educate their customers on how the technological innovations work. In addition, basic education on the use of information technology is required by both the agents and the bank customers in order to enhance customers' level of satisfaction with the technological innovations in Equity bank. Given the rapidity with which technological innovations are growing, transparency and disclosures may be necessary especially in regard to financial services that can and cannot be performed by the agents. Moreover, customers should be encouraged to buy high powered mobile phones that can support new information technology software transactions. Finally, Equity bank needs to enhance its capacity to handle large financial transactions through IT in lieu of regular systems failure.

5.5 Suggestions for Further Studies

The study recommends further research in the following areas

i) Effects of technological innovation on the financial performance of commercial banks.
ii) Effects of e-banking on the financial performance of corporative societies.
iii) Impact of e-banking on the financial performance of microfinance institutions.

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APPENDICES

APPENDIX I: QUESTIONNAIRE TO THE RESPONDENTS

I am a student at University of Nairobi. I am carrying out a research on the effects of technological innovation in the accessibility of banking services. Answer all the questions as truthfully as possible. There is no wrong answer. Your frank opinion is highly welcome. Anonymity will be guaranteed.

1. What is your gender? (**Tick Appropriately**).

Male ☐

Female ☐

2. What is your age brackets (**Tick Appropriately**).

18-25 Years ☐

26-32Years ☐

Above 32 Years ☐

3. Do you operate an account with Equity Bank, Nakuru Town? **(Tick One)**

YES ☐

NO ☐

4. For how long have you held the account?

Below 1 Year ☐

2-5 Years ☐

6- 10 Years ☐

11- 15 Years ☐

Above 15 Years ☐

5. Is your bank IT compliant?

YES ☐

NO ☐

6. Do you encourage the use of IT in Banks? **(Tick One)**

YES ☐

NO ☐

7. How do you rate the ease with which it is to access banking services from your bank?

High ☐

Moderate ☐

Low ☐

8. Does your bank offer the following banking services through IT? (**Tick Appropriately**

i. Cash deposit ☐
ii. Cash payment of bills ☐
iii. Generation and issuance of mini bank statements ☐
iv. Balance enquiry ☐
v. Cash repayment of loans ☐

Others (Please Specify) _____

9. The following are some of the technological innovation in the banking industry. Which one has had the most impact in the accessibility of banking services in Equity Bank? (**Tick appropriately**).

	Technological Innovation	**Tick**
i	Mobile Banking	☐
ii	Internet Banking	☐
iii	Agency Banking	☐
iv	Virtual Banking	☐

Others (Please Specify) _____

10. What are some of the activities your bank has done through IT to attract you to Equity bank, Nakuru? (**Tick appropriately).**

i. Lower transaction cost ☐
ii. Ease of reach within areas of residence ☐
iii. Longer opening hours ☐
iv. Convenience and accessibility ☐

Others (Please Specify) _____

11. Does mobile banking affect accessibility of banking services?

YES ☐
NO ☐

12. Agency banking increases accessibility of banking services.

YES ☐
NO ☐

13. Do you conduct financial transactions through the internet?

YES ☐
NO ☐

14. Technological innovations have increased accessibility of banking services (**Tick one to show your evaluation**).

A -	Agree	☐
SA-	Strongly Agree	☐
U -	Undecided	☐
D-	Disagree	☐
SD-	Strongly Disagree	☐

15. What challenges have you faced when using technological innovations in your bank?

Lack of Self Regulation	☐
Systems Failure	☐
Exploitation by Agents	☐
Technophobia	☐

Others (Please Specify) _____

16. Please kindly indicate the benefits of using of technological innovation in your Bank?

_____

_____

_____

_____

_____-

_____

17. Indicate your level of satisfaction with the technological innovations in your bank. (**Tick One**)

Highly satisfied	☐
Satisfied	☐
Not sure	☐
Dissatisfied	☐
Highly dissatisfied	☐

18. Briefly explain how technological innovations can be used to enhance accessibility of banking services in Equity Bank?

_____

_____

_____

_____

_____

_____

19. The following factors have influenced the adoption of technological innovation in the banking sector. Indicate the ones that are true of Equity Bank.

Advantage of Use ☐

Performance of the Bank ☐

Customer relation ☐

Ease of Use ☐

Others (Please Specify) _____

APPENDIX II: INTERVIEW SCHEDULE FOR BANK CLIENTS

I am interested in finding out your involvement in information Technology as a way of enhancing accessibility of banking services. I have a list of questions that would help indicate how IT has enabled you access banking services at Equity bank. Think about your situation and provide me with your free responses.

i. What are some of the forms of IT you have observed being used in your bank?
ii. Do you know how to use the existing forms of IT in your banks?
iii. How easy has IT ensured accessibility of banking services?
iv. What difficulties do you experience when conducting your financial transactions through IT?
v. Do you think Information Technology has improved accessibility of banking services?