

**AN EVALUATION OF ADOPTION RATE OF E-BANKING CHANNELS
IN KCB BANK KENYA LIMITED, KISUMU CITY**

BY

ODHIAMBO CHARLES OCHIENG

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DECLARATION

This thesis is my original work and has not been presented for a degree or any other award in any University.

Signature.....

Date.....

Charles Ochieng Odhiambo

PG/MA/0131/11

This thesis has been submitted for examination with our approval as University Supervisors

Signature.....

Date.....

Dr. Leah Onyango

Maseno University

School of Planning and Architecture

Signature.....

Date.....

Dr. G. G. Wagah

Maseno University

School of Planning and Architecture

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DEDICATION

To my parents, Wilson Odhiambo and Jane Auma for your support since childhood and the high value you placed on education, my colleague Zibone Akoth for the confidence you planted in me that we could complete the course despite numerous workplace demands that nearly stopped us from starting and my dear daughter, Slavian for the love and laughter during my study period.

ABSTRACT

Increased demand for banking services has led to more customers visiting the banks. As a result, the banking halls in Kenya particularly KCB Bank experience long queues of customers who wait for up to one hour as opposed to the banks approved queue time of 15 minutes. E-banking has been introduced to improve access and efficiency of banking services yet adoption of the e-banking channels is still very low especially for the more recent channels. The purpose of the study is to analyze the existing levels of E banking and explain why adoption levels are low. The main objective of this study is to evaluate adoption of e-banking innovations in KCB Kisumu branches. Specific objectives include; assess customer subscription to e-banking channels in KCB Kisumu branches; analyze the use of e-banking channels in KCB Kisumu branches and to examine the barriers preventing customers from using e-banking channels in KCB Kisumu branches. The research was conducted in all KCB branches in Kisumu. The research adopted a cross sectional research design. A sample size of 384 respondents was taken from a total target population of 41833 account holders. Convenient sampling method was used. Data collection was by questionnaires and interview schedules. The researcher ensured validity through discussion of the instruments with the supervisors, reliability was done through test-retest method and coefficient of reliability found to be 0.9. Data collected was analyzed through descriptive statistics. The study established varied subscription levels for e-banking channels with ATM and mobile banking leading at 61.21% and 33.33% respectively. It also established that internet banking subscription is at 0.52% which is still very low. Lack of awareness of the channels and their benefits, lack of trust and perceived risk of loss of account security, perceived difficulty of use and performance risk associated with network outages and other errors were identified as the most predominant barriers to adoption of e-banking; 56.55% of the respondents showed lack of awareness, 68.47% expressed fear due to risk of loss of account credentials, 47.71% said the channels are difficult to use while 65.75% said the channels are prone to errors. The study recommends that the bank should boost customer awareness of the available channels, build confidence on the channels through user skills and knowledge enhancement and also assure the customers of their safety and security while using the channels. Areas for further research include, effectiveness of e-banking government policies in mitigating against losses through identity theft; an evaluation of relationship between personal attributes of age, education level and gender on adoption of e-banking and an assessment of the complementary relationship of the various e-banking channels.

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LIST OF ABBREVIATIONS

ATM	: Automated Teller Machine
AVR	: Automated Voice Response
CBA	: Commercial Bank of Africa
CBK	: Central Bank of Kenya
EFTPoS	: Electronic Funds Transfer Point of Sale
EPOs	: Electronic Points of Sale
ICT	: Information Communication Technology
ISP	: Internet Service Provider
KCB	: Kenya Commercial Bank
MD	: Managing Director
MNO	: Mobile Network Operator
PC	: Personal Computer
PIN	: Personal Identification Number
RTGS	: Real Time Gross Settlement
SME	: Small and Micro Enterprises
TV	: Television

WORKING DEFINITION AND TERMS

e-banking : This is an electronic connection between bank and customer in order to prepare, manage and control financial transactions. Electronic banking can also be defined as a variety of platforms like Internet banking (or online banking), telephone banking, TV-based banking and mobile phone banking (Salehi and Zhila, 2008).

Adoption : This is the commitment to and continued use of an innovation. (Okunoye *et al*, 2007)

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The growth in the banking industry has seen more customers procure bank products and services thereby putting pressure on the available resources both locally and globally (Munyoki and Ngigi, 2011). Long queues have been witnessed in banking halls; this has created unsatisfactory customer service. In a bid to address service issues more resources have been allocated to branch expansion and upgrade of core banking IT system, recruitment of more staff and the overall operating costs have gone up.

It is however worth noting that technological revolution has given rise to better and innovative channels through which customers can perform transactions away from the banking halls; banks have had to adopt ICT in the expansion of channels of banking away from the traditional bank outlets, these have taken the form of Automated Teller Machine, Smart Cards, Telephone Banking, Electronic Funds Transfer, Electronic Data Interchange, Electronic Home and Office Banking (Agboola, 2004). ICT revolution has had enormous impact on the integration of information processing and telecommunications technologies, the consequent acceleration of the speed of information processing and transmission, reduction of information processing costs, and increase of the geographical distance over which information can be transmitted (globalization), and the increased speed at which information technologies are spreading among the public (Bank of Japan report, 1997).

Benefits of e-banking to the banks and to the customers include, numerous customers can be dealt with at once, the banks will not have to employ too many clerks and cashiers, their administrative tasks are minimized and expenditures on forms and other bank stationery goes down, which goes a long way to improve their profitability. As far as customers are concerned, their account information is available all the time, regardless of location. They can reschedule their future payments from their bank account while sitting thousands of miles away. They can electronically transfer money from their accounts or receive money in their accounts within seconds (Marfo-Yiadom, 2012).

While e-banking has grown rapidly, there is no sufficient evidence of its acceptance among customers. Robinson (2000) reported that half the people that have tried online banking services will not become active users. This seems to imply that e-banking channels have not been adequately adopted.

This study sought to establish the levels at which e-banking is being adopted and the challenges that prevent customers from adopting e-banking. Since e-banking has been fronted as the solution to improving efficiency of service delivery in the banking sector, it is therefore important to know the level of uptake in order to better plan for improving uptake towards improved efficiency in service delivery.

1.2 Problem statement

Banks in Kenya have acquired e-banking infrastructure to deliver to the customers the convenience of anywhere any time banking cost effectively; this would be through reduced travel time to the bank, avoidance of long queues and associated expenses. The various e-

banking channels are also meant to reduce operational costs hence more profits to the banks. KCB bank in particular has launched mobile banking, internet banking and card accounts for the customers because of the non-funded income the channels generate besides customer satisfaction. Adoption levels are low for the e-banking channels particularly the ones considered as more recent innovations like mobile banking and internet banking, this is due to a number of barriers. This study sought to analyze the levels of e-banking and the, barriers to adoption of e-banking with a view to providing recommendations on how to reduce the barriers.

1.3 Objectives of the study

1.3.1 Main objective

The main objective of this study was to evaluate adoption of e-banking channels in KCB Kisumu branches with a view to recommend ways of improving adoption.

1.3.2 Specific objectives

1. To assess customer subscription to e-banking channels in KCB Kisumu branches.
2. To analyze the use of e-banking channels in KCB Kisumu branches.
3. To examine the barriers preventing customers from using e-banking channels in KCB Kisumu branches.

1.4 Research Questions

1. What are the subscription levels of e-banking channels in KCB Kisumu branches?
2. To what extent are the e-banking channels used in KCB Kisumu branches?
3. What are the barriers preventing customers from using available e-banking channels?

1.5 Scope and Limitations

The study was concerned with adoption of e-banking as a means of decongesting banking halls with a view to delivering associated benefits to both the customers and the banks. It covered four KCB branches in Kisumu City; Kisumu main branch, United Mall branch, Kisumu West branch and Airport branch. There were some limitations which were encountered during the study which included suspicion by some respondents about how their private account details would be handled, some of the respondents were visiting from other towns of the country, some respondents were sent to deposit into other account holders' accounts and limited time for the study. These were addressed by assuring customers of confidentiality with regards to information they would provide and the data would be used solely for the intended research purpose, account holders from other branches and non-account holders who came to deposit into other people's accounts were excused and the next person to leave teller line picked to respond to the questionnaire, limited time was addressed by working even at night to observe strict time deadlines.

1.6 Significance of the study

This study was necessary because adoption of e-banking channels will deliver advantages of convenience, cost effectiveness, wider geographical coverage, anywhere anytime banking to the customers generally in the banking industry. Other commercial banks will also benefit from reduced operating expenses; currently United Mall branch operates on extended working hours which require additional staff and stationery, the other branches of Kisumu Main branch, Kisumu West branch and Kisumu Airport branch have limited parking space; these challenges face bank branches across the country. This study will also help planners in designing

commercial establishments particularly where they require support of e-banking channels. Technology Innovators will benefit by way of knowing the gap in adoption of e-banking hence an opportunity to design a solution towards it. The business enterprises will benefit from improved adoption of e-banking channels as more transactions will be conducted online hence reduction in revenue pilferage associated with cash transactions, there will also be reduced insurance cost as insurance cover for cash collected will be eliminated.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction:

This chapter presents an analysis of documents containing information on adoption of e-banking; the rate of subscription for the e-banking channels, frequency of use of the channels and the barriers to adoption of the channels.

2.2 E-banking channels and their benefits

One of the channels under e-banking is the ATM machine. Rose (1999) cited by Abor, describes ATMs as follows: “an ATM combines a computer terminal, record-keeping system and cash vault in one unit, permitting customers to enter the bank’s book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank’s computerized records 24 hours a day”. Once access is gained, it offers several retail banking services to customers. They are mostly located outside of banks, and are also found at airports, malls, and places far away from the home bank of customers. They were introduced first to function as cash dispensing machines. However, due to advancements in technology, ATMs are able to provide a wide range of services, such as making deposits, funds transfer between two or more accounts and bill payments. Banks tend to utilize this electronic banking device, as all others for competitive advantage.

ATM saves customers time in service delivery as alternative to queuing in bank halls, customers can invest such time saved into other productive activities. ATMs are a cost-efficient way of

yielding higher productivity as they achieve higher productivity per period of time than human tellers (an average of about 6,400 transactions per month for ATMs compared to 4,300 for human tellers (Rose, 1999). Furthermore, as the ATMs continue when human tellers stop, there is continual productivity for the banks even after banking hours.

Telephone banking is another e-banking channel considered as a form of remote or virtual banking, which is essentially the delivery of branch financial services via telecommunication devices where the bank customers can perform retail banking transactions by dialing a touch-tone telephone or mobile communication unit, which is connected to an automated system of the bank by utilizing Automated Voice Response (AVR) technology” (Balachandher *et al*, 2001).According to Leow (1999), tele-banking has numerous benefits for both customers and banks. As far as the customers are concerned, it provides increased convenience, expanded access and significant time saving. On the other hand, from the banks’ perspective, the costs of delivering telephone-based services are substantially lower than those of branch based services. It has almost all the impact on productivity of ATMs, except that it lacks the productivity generated from cash dispensing by the ATMs. For, as a delivery conduit that provides retail banking services even after banking hours (24 hours a day) it accrues continual productivity for the bank. It offers retail banking services to customers at their offices/homes as an alternative to going to the bank branch/ATM. This saves customers time, and gives more convenience for higher productivity.

PC-Banking is a service which allows the bank’s customers to access information about their accounts via a proprietary network, usually with the help of proprietary software installed on

their personal computer”. Once access is gained, the customer can perform a lot of retail banking functions. The increasing awareness of the importance of computer literacy has resulted in increasing the use of personal computers. This certainly supports the growth of PC banking which virtually establishes a branch in the customers’ home or office, and offers 24-hour service, seven days a week. It also has the benefits of Telephone Banking and ATMs (Abor, 2005).

The idea of Internet banking according to Essinger (1999) is: “to give customers access to their bank accounts via a web site and to enable them to enact certain transactions on their account, given compliance with stringent security checks”. Internet banking by its nature offers more convenience and flexibility to customers coupled with a virtually absolute control over their banking. Service delivery is informational (informing customers on bank’s products, etc) and transactional (conducting retail banking services). As an alternative delivery conduit for retail banking, it has all the impact on productivity imputed to Tele-banking and PC-Banking. Aside that it is the most cost-efficient technological means of yielding higher productivity. Furthermore, it eliminates the barriers of distance / time and provides continual productivity for the bank to unimaginable distant customers.

An Electronic Funds Transfer at the Point of Sale is an on-line system that allows customers to transfer funds instantaneously from their bank accounts to merchant accounts when making purchases (at purchase points). A POS uses a debit card to activate an Electronic Fund Transfer Process (Chorafas, 1988). Increased banking productivity results from the use of EFTPoS to service customers shopping payment requirements instead of clerical duties in handling cheques and cash withdrawals for shopping. Furthermore, the system continues after banking hours,

hence continual productivity for the bank even after banking hours. It also saves customers time and energy in getting to bank branches or ATMs for cash withdrawals which can be harnessed into other productive activities.

According to a study done by Arora and Nyangotsi (2009) on Emergence of Information Technology in the Kenyan Banking sector, over 90% of account holders used ATM banking followed by credit and debit cards at slightly over 50%. The most unpopular e-banking channels according to their findings were PC banking, SMS banking, Tele-banking and I-banking/internet banking. They attributed low uptake of these channels to infrastructural problems. As has been discussed above, internet banking, tele-banking and PC banking with the lowest levels of subscription and usage are the channels that are highly associated with cost effectiveness, wider geographical coverage and efficiency.

In Kenya Barclays bank has a commitment to improve service levels to their customers; the bank is able to bring to the customer the latest in flexible core banking technology. Barclays Integrator provides an integrated Corporate and Business Banking solution. The benefits of this technology include access to Account Information. The customer will have access to account information in real time. Accounts across Barclays Africa can be viewed on the same platform. The second advantage is electronic Payment Capability- All payments by the customer may be made electronically offering straight through processing. This applies to Inter Account transfers, EFT payments (same day if the beneficiary account is at Barclays), Local EFT payments to other banks, SWIFT payments, Cross Currency payments, Direct Debit Payments, Recurring Payments, Urgent Payments (RTGS) and Electronic Cheque Payments.

The customer will also have access to historical information which includes access to statements as far back as six months online and will have the capability to print or export account information in the various formats. The system is flexible; it is internet based and can therefore be accessed anywhere at any time, provided the users have the security devices to be provided by Barclays Bank. This implies flexibility in terms of global access; no software is required; automatic upgrades; no site support visits required and it has dynamic & secure password generation. In general, the system offers seamless processing which translates to better customer service and improved response times to queries (Barclays bank, 2012).

National bank of Kenya SIM-ple Banking allows its customers to receive short messages on their mobile phones containing up to-date information about latest transactions on their Accounts, as well as information about new developments on products and services offered by National Bank to its customers. It is the simpler way to access over twenty-three different Banking Services; it's the new Mobile Banking Service from National Bank, offering access to more than three times as many Bank Functions as any other service currently in the market in Kenya. Services a customer can access include checking account balance and paying of utility bills, request for statements, obtain interest and exchange rates, order cheque books, stop cheques, transfer funds, and change ones pin and many more. The customer does this anywhere anytime. The system takes advantage of the SMS function on the mobile phone; every transaction offered on the SIM-ple Banking Service has been given a two-letter code. You just activate your SMS function, type in the code of the service you want, followed by your Account Number and PIN and send the SMS to the National Bank number given. The service will then be executed. (National Bank of Kenya, 2013)

Though Equity bank continues to invest in rolling out brick and mortar branches that are complimented by various delivery channels, the challenge of access to formal financial services remains a big impediment to financial inclusion. Kenyans (especially in remote areas) are forced to travel long distances and spend huge amounts on transport in order to access a branch. In addition to the cost of transport is the time spent commuting to and fro that could have been spent more productively. To curb these challenges, the central bank of Kenya released a legislation that allows commercial banks to contract third party retail networks as agents. Upon successful application, vetting and approval, these Agents are authorized to offer selected products and services on behalf of the bank. This relationship creates an Agency Banking business model.

An Equity Agent therefore, is a commercial entity that has been contracted by Equity Bank and approved by the Central Bank of Kenya to provide specific services on behalf of the bank. This entity shall be equipped with the skills necessary to provide basic banking services according to standards set by the bank. The objective of the bank is to offer the full range of banking services to its customers without their having to visit a branch. This will provide the opportunity to access financial products and services at a location nearest to the customer, thus breaking down certain barriers to financial inclusion such as cost and accessibility. Services one can get at an Equity Agent include application to open a new account, link an existing account to Eazzy 247 which is a mobile banking channel by Equity, apply to reactivate a dormant account, deposit cash into an Equity bank account, withdraw cash from Equity bank account, pay utility bills and purchase airtime from any mobile network operator. (Equity bank, 2013)

2.3 Subscription for e-banking channels

Electronic banking has experienced explosive growth and has transformed traditional practices in banking (Gonzalez, 2008). As per prediction of Maholtra and Singh, (2007) the e-banking is leading to a paradigm shift in marketing practices resulting in high performance in the banking industry. Delivery of service in banking can be provided efficiently only when the background operations are efficient. An efficient background operation can be conducted only when it is integrated by an electronic system. The components like data, hardware, software, network and people are the essential elements of the system. Banking customers get satisfied with the system when it provides them maximum convenience and comfort while transacting with the bank. Internet enabled electronic system facilitate the operation to fetch these results.

E-banking has emerged as a promising new approach to accelerate financial inclusion both globally and locally. By changing the costs and risks of distributing financial services, channels outside the branch have enabled large commercial banks and new entrants like mobile network operators (MNOs) to contemplate reaching large numbers of un-served people. In Brazil, there has been rapid growth of ATM channel to cope with increased demand for the same; the combined ratio of ATMs and branches per 100,000 people grew from 62 in 1999 to 99 in 2009 (Banco Central do Brasil 2009). This happened at the same time as a massive increase in the number of branchless banking agents in Brazil. In South Africa, the growth of ATM banking has been exemplified through *Mzansi* account which is a debit card bank account that is used mainly at ATMs. The country's largest banks designed the account to be affordable and appropriate for the unbanked, and the take-up has been very high: since launch in 2004, more than 6 million accounts have been opened, mostly by people who had never previously had a bank account

(Bankable Frontier Associates 2009). These 6 million customers could have otherwise gone to the banking halls to open and operate these accounts.

More locally in Kenya, no example of branchless banking has done more to stoke enthusiasm than M-PESA, the mobile payment service offered by Safaricom, Kenya's largest MNO. Since its commercial launch in March 2007, more than 7 million people—approximately one in four adult Kenyans—have signed up. Largely (though not only) due to M-PESA, the proportion of Kenyans considered to be formally financially included has almost doubled to 41 percent in just three years (FSD Kenya 2009).

Figure 2.3.1 below shows the results of study conducted in 2015 by World bank on mobile banking registration levels. Developed countries of Canada, France and USA have registration levels of less than 20% which is way too far from the global rate of 40%. It was also shown on the report that developing countries recorded higher levels; these are Nigeria, Kenya and Brazil all recording levels above global rate of 40%.

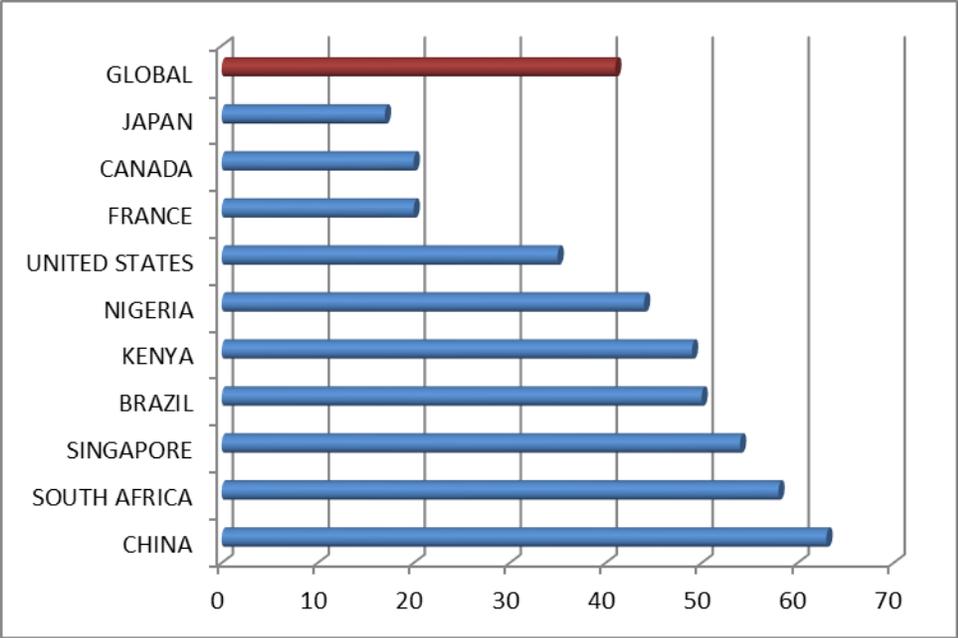


Fig. 2.3.1 Mobile banking registration levels across countries

Source: Compiled by Author from World Bank Report, 2015

A critical look at the possible indicators as to why mobile banking uptake in developed countries is not as high as developing countries established a likely utilization of alternative channels particularly credit cards. Table 2.3.2 below is a summary of regional distribution of credit card ownership; Sub-Saharan Africa lags in credit card ownership at 1.9% of the eligible population, this is the same region with higher number of mobile banking subscription. Country by country analysis reveals more developed countries of USA, United Kingdom and South Africa having over 40% subscription level. Kenya and Uganda are at less than 5%. (Table 2.3.3).

Table 2.3.1 Credit card ownership by region in percentage of eligible population

Region	Credit card ownership in percentage of eligible population (%)
Latin America and Caribbean	18.0
Europe and Central Asia	14.9
East Asia and Pacific	10.8
South Asia	2.6
Sub-Saharan Africa	1.9
Middle East	1.5

Source: Compiled by Author from World Bank Report 2014

Table 2.3.2 Credit card ownership by country in percentage of eligible population

Country	Credit card ownership in percentage of eligible population (%)
USA	57.1
United Kingdom	55.3
South Africa	40.8
Kenya	2.7
Uganda	0.9

Source: Compiled by Author from World Bank Report 2014

Despite the fact that subscription levels are low in Kenya, it is worth noting that from data presented by CBK there has been exponential growth in credit card ownership from the year 2009. The growth has been occasioned by increased awareness among the potential customers, improved internet connectivity by issuing banks (CBK, 2015). This exponential growth has been shown on figure 2.3.2 below.

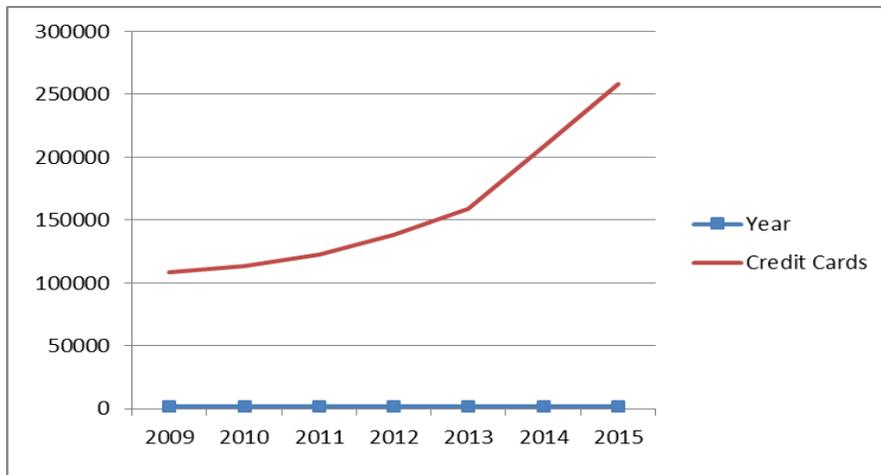


Fig. 2.3.2 Growth of Credit card numbers in Kenya from the year 2009 to 2015

Source: Compiled by author from CBK report, 2015

From a review of KCB bank reports tabulated below the more recent channels of internet banking, mobile banking and credit card have lower subscription levels than ATM banking. These figures appear to be in agreement with findings of other studies earlier reviewed in this study.

Table 2.3.3: Table showing registered customers on e-banking channels by KCB Kisumu branches as at the year 2013- data obtained from internal reports (n=41833)

Branch	Subscription rate as a percentage of the population			
	ATM	Mobile	Credit Card	Internet banking
Kisumu	41.42	19.13	3.36	0.19
United Mall	10.04	6.96	0.37	0.04
Kisumu West	9.50	6.50	0.26	0.01
Kisumu Airport	0.21	0.15	0	0
TOTAL	61.17	32.74	3.99	0.24

Source: Compiled by Author from KCB internal reports 2013

2.4 Rate of usage of e-banking channels

It is one thing having and possessing a banking product and another thing using the product. A research carried out in Ghana in the year 2011 on Customers' Perception of Innovative Banking Products in Cape Coast Metropolis revealed that out of the five products in the study, ATM was used by majority (65%) of the respondents followed by internet banking at 4.3%, telephone banking at 3.5% and credit card at 3.0% (Marfo-Yiadom, 2012).

In another survey carried out in Uganda with respect to the type of e-banking channels used by customers, ATMs appear to be the most widely accepted and highly used electronic delivery tool in Bank of Africa indicating 83.3% of the total respondents. This is followed by Internet banking representing 16.7%. Telephone banking and Electronic Funds Transfer were not indicated as e-banking channels used in B.O.A. This may be because these innovations have been recently introduced in banking industry in Uganda than the other channels (Moya, 2011). This is the trend in developing countries, Kenya being one of them.

The results of a study conducted in Sudan on factors influencing adoption of e-banking show that 84% of the retail banking industry clients use at least one of the e-banking services. Among all e-banking channels, ATM has the highest usage level with 84% retail banking clients using it, followed by phone banking with 18.6% usage level, mobile banking which is used by 12.6% of the clients, EPOS is used by about 9% of the clients, and finally internet banking system was observed to be the least used e-channel with only 6% of clients using it. The results show e-banking usage is associated with client's income, account type, and computer and internet

literacy. High income clients and those who have current account and computer and internet literate are more likely to use e-banking services (Ismail, 2012).

The table below shows a summary of the two studies in Cape Coast Metropolis and Sudan:

Table 2.4.1 Usage levels of e-banking channels as a percentage of registered users

Study	Type& usage rate of e-banking			
	ATM %	Mobile banking %	Card/EPOS %	Internet banking %
Cape Coast Metropolis	65	0	3.0	4.3
Sudan	84	12.6	9	6

Source: Marfo-Yiadom, 2012 and Ismail, 2012

From the cases discussed above it is evident that of the e-banking channels available, ATM channel is used more by the customers followed by telephone banking and internet banking in that order across developing countries. Transactional accounts of Kenya Commercial bank have ATM cards with the benefit of ease of access of customer's funds anytime at the wide network of ATMs located in various parts of the country, mobile banking is still at less than 50% subscription and usage. Internet banking is also at the stage of inception thus very low subscription levels. This is tabulated below:

Table 2.4.2 Active registrations by channel as a percentage of the total number of registered customers of KCB Kisumu Branches in the year 2015 (n=41833)

Branch	Active registration as a percentage of the total registered customers			
	ATM	Mobile	Credit Card	Internet banking
Kisumu	91.36	24.69	42.89	2.53
United Mall	81.41	28.16	27.92	0
Kisumu West	81.04	35.55	32.73	0
Kisumu Airport	94.44	27.87	0	0
AVERAGE	87.06	29.07	25.89	0.63

Source: Compiled by Author from KCB internal reports, 2013

A study conducted by CBK in December 2015 on both credit cards and debit cards showed high levels of usage in both categories of the cards. This sharply contradicts the findings on table 2.4.2 above which show that averagely credit card usage is at 25.89%. This is tabulated below.

Table 2.4.3 Active cards as a percentage of all the cards in Kenya in December 2015

Card type	Active cards as a percentage of total card category in the country
Credit cards	85.18
Debit Cards	86.01
Average	85.60

Source: CBK, 2015

2.5 Barriers to adoption of e-banking Kenya

When an innovation emerges, diffusion unfolds which entails communicating or spreading of the news of the innovation to the group for which it is intended. The diffusion of innovations theory provides explanations for when and how a new idea, practice or newly introduced information and communication medium is adopted or rejected over time in a given society (Okunoye, 2007). Barriers to adoption of e-banking can be categorized in various ways; one way is the three main groups; technological factors, organizational factors and environmental factors (Ayana, 2014). Ayana (2014) pointed out Perceived risk as a fundamental technological factor and while studying factors affecting adoption of e-banking systems in the Ethiopian banking industry established the largest number of respondents agreed that fear of risk is one of the factors that hinder adoption of E-banking system in the country. Similarly, the results also revealed that lack of confidence with the internet security issue is considered as a barrier for the adoption of E-banking channels. These results were consistent with the findings of Ghazi and Khalid (2012); Khalfan *et al* (2006) in which all indicted technological barriers, such as security risk as hindrance factor for the adoption of E-banking.

One of the basic issues related to organizational factor is the availability of financial as well skilled human resource to implement the system. In this study costs related to the use of E-banking instruments and technical or managerial skills required to implement E-banking system were considered. The study revealed that unfamiliarity with the service provided through ATM, Internet banking, telephone and mobile phones, Lack of technical and managerial skills on the use of technological innovation and Lack of skills to implement E-banking system are considered as barriers for the adoption of E-banking system (Ayana, 2014).

In other studies, consumer attitude has been considered one of the factors hindering adoption of e-banking channels; for example, The Technology Acceptance Model (TAM), suggests that prospective users' overall feelings or attitudes toward using a given technology-based system or procedure represent major determinants as to whether or not he/she will ultimately use the system (Davis, 1993). Lockett and Litter (1997) presented a study of the adoption of direct banking services in the UK using a model of the perceived innovation attributes and the personal characteristics of adopters and non-adopters. Their results indicated that the most important perceived positive attribute of internet banking was its 24-hour-a-day availability, whereas complexity and risk of service were the two negative attributes.

The main disadvantages associated with internet banking, however, included its complexity and the security risks involved in using it. Daniel (1998) analyzed the adoption of computer banking through in-depth interviews with the bank personnel responsible for its implementation and development. The main factors influencing adoption included the convenience aspects of the service, ease of use and its compatibility with consumers' existing lifestyles. Attitudes towards new technologies may also be linked to a set of personal characteristics. Howcroft (2002) revealed that younger consumers value the convenience or time saving potential of online and mobile banking more than older consumers.

There are a lot of reasons which hinder the popularity of e-banking services in developing countries in spite of the fact that bankers and customers can get benefit from online banking. The majority of private banks are still lagging behind the online banking channels. According to Pikkarainen *et al.* (2004) the reasons behind banks not using the e-banking services include internet connection which is very important for the customers to start using the e-banking

Services, before using these services the new users need to learn how to use these internet services, therefore one of the key barriers associated with internet connectivity is usability and the knowledge of the user. Secondly, some non-users complain that the face to face banking situation is quite different from doing banking online; there are no social dimensions while doing online banking (Mattila *et al.*, 2003).

Looking at internet security, researchers agree that the security of electronic banking system is an important variable in adoption of technology by the users (Lin & Lu, 2001; Mcknight & Chervany, 2001; Pikkarrainen, Karjaluoto, & Pahlila, 2004). In fact, people in high risk environments need to analyze situations. Since transactions in the electronic banking environment are processed virtually and people are not able to see the process, users' perception of the security of the system may be associated with mistrust (Venkatesh, Morris, Davis, & Davis, 2003).

In a mobile environment, it is necessary to have perceived security and trust in the vendors and the payment system. (Siau, 2004; Mallat, 2007). Other security factors important to the users are anonymity and privacy, which relate to user policies of customers' personal information (Jayawardhena & Foley, 1998; Mallat, 2007). Recent research results indicate that people are concerned about unwanted disclosure of private information, or simply misuse of their information by the company collecting it (Kesh, 2002, Sathye 1999). This dimension of risk includes undisclosed capture of information such as consumers' shopping habits. Thus, privacy risk was particularly salient for e-payments which go hand in hand with e-banking particularly credit card payments.

Other researchers identified nine dimensions of perceived risk: financial, performance, social, physical, psychological, time-loss, personal, privacy, and source (Kim and Prabhakar, 2002). They grasped the effect of perceived risk on accepting technology such as Internet banking by demonstrating that the more perceived risk one has, the less likely he will accept new technology. Researchers found that perceived risk is influenced by trust toward the transaction partner (Jarvenpaa and Todd 1998, Nootboom et al.1997). Jarvenpaa and Todd (1998) also showed that trust works as a mechanism for reducing consumer's perceived risk in Internet banking.

A recent study of Internet banking showed that trust reduces perceived risk and invigorates the usage of online banking service (Yousafzai 2003, Suh and Han 2002). In contrast, Nootboom et al. (1997) found that higher perceived risk decreases the level of trust toward the partner. In addition, Mayer et al. (1995) insisted that it was unclear whether trust comes before perceived risk or otherwise. Whichever the case, it is clear that security is an important concern to mobile/online banking adoption by potential consumers. The benefits of technological innovations can only be fully enjoyed by the banks and their customers if the innovations are known and accepted by the customers. More locally, some of the challenges facing the adoption of e-banking in Kenya include internet security, customers' trust, the speed of service delivery, customers' awareness, continuity of the service, spread of computer use, spread of internet use, difficulty of using online banking by some customers, pricing of internet service, internet infrastructure in the country, cost of maintaining the site, Internet Service Provider monopoly among others (Gikandi, 2010). These challenges affect in varied degrees the ability of the banks

to provide e-banking services efficiently and cost-effectively, they also affect the speed and manner in which the customers accept and use the various e-banking channels.

In a presentation by Awuondo, the MD of CBA in 2006, challenges facing adoption of e-banking in Kenya as security, majority of the customers shy away from e-banking services due to security concerns; according to some analysts, customers still value personalized and responsive services from their bankers. From the same presentation by Awuondo, ignorance was pointed out as another barrier; “on average 30% of bank customers do not even know whether their banks provide online services.” Computer illiteracy among majority of the population is still significantly high especially in Africa thereby acting as a barrier to adoption of e-banking.

Poor and/or lack of technological infrastructure and reliable power supply, lack of proper legislation governing e-transactions and preference to paper money, as opposed to “virtual” cash in transactions are other barriers hindering adoption of e-banking in Kenya. According to a study carried out by Gikandi on adoption and effectiveness of electronic banking in Kenya (2010), internet security was identified as the most important future challenge in e-banking while customer trust, privacy and awareness are being recognized as challenges of great importance. A significant number of banks surveyed rated technical issues such as costs of site maintenance, Internet service provider monopolies, Internet pricing as challenges of less importance in Kenya, findings corresponds to Gupta (2000), who cited Internet security and customer related issues as challenges of extreme importance with technical related issues emerging as less important challenges. This is not surprising because e-banking in Kenya is still developing thus the focus of most banks is on setting up the systems as they give attention to the industry technical issues.

Lack of clear legal regulations in Kenya was noted as being a challenge of significant importance by 90% of the respondents (Gikandi, 2010). This is in contrast with the Gupta (2000) findings, whose study identified legal regulations as not being a future challenge in development of e-banking. The current study has revealed that governments have a major role to play in achieving a secure environment for e-banking activities. In particular, the government of Kenya needs to put in place clear laws, rules and regulations to regulate the banking industry in this era of technology and ensure they are adhered to. The study recommended that in its efforts to achieve this, the government should provide relevant technical training to the regulatory authority to enable them to enforce the laws effectively.

Lack of knowledge about the existing channels and their benefits could be differently looked at from the view point of effectiveness of marketing strategies used by the banks. Promotion is the direct way an organization tries to reach its publics. This is performed through the five elements of the promotion mix including advertising, sales promotion, personal selling, public relations and the direct marketing (Czinkota & Ronkainen, 2004). With the growing importance of the financial sector, pressures are escalating for more effective marketing management of the financial services. The financial services sector is continuing to grow in terms of turnover and profits and thus, has a supreme impact on the other spheres of the economy. Consequently, there is currently growing interest in applying marketing techniques and tools in financial services (Meidan, 1996). In spite of major changes on the market of financial institutions, there are indications that banks have not yet successfully embraced the marketing philosophy or achieved levels of its implementation consistent with satisfied customers.

Financial institutions are realizing that their established promotion practices are inadequate for new market conditions as levels of customer defection in the sector grow. Traditionally, banks have tried to reach out to everyone in the community, but recent research proposes that banks should aim to identify and serve micro-segments (Dawes & Brown, 2000). The role of promotion has been redefined into managing long-term relationship with carefully selected customers, including construction of learning relationship where the marketer maintains a dialogue with an individual customer (Dawes & Brown, 2000). Due to this fact, the personnel are one of the most important resources of a bank.

The effort to promote banking business is quite a distinguished affair. At present, it has become very tricky due to the changing trends of the industry, increasing competition and efficiency of regulatory environment, and the financial system. The complexity in the banking services is also an issue of vital importance. This is the time when banks are offering new and innovative services; frequently in the market. The content of promotional tools should help the customer in making most valuable decision. This can be firmly said that well designed promotional strategies are very important to promote banking services effectively. In marketing any product or service, customer satisfaction has been given prime importance. Promotional packages are very important for financial service industry (Ananda & Murugaiah, 2003). Thus the orientation of banks should be with a much wider focus in relation to customer and market needs, and the consequent marketing strategies. The challenges put forth by the changing environment have to be effectively tackled to identify the consumer needs and providing valuable services through product innovation (Raman, 2006).

Kristina (2006) recommends that promotional strategies should be designed as per the nature of services to be promoted. The advertisers should seek a narrative approach to communicate the service experience rather than a logical, argumentative approach. Location convenience, speed of service, competence and friendliness of bank personnel are also the most important points with maximum value in banking services (Laroche et al., 1986). It has been generalized in studies that services marketing is more challenging than the advertising of tangible products (Ray & Suchetana, 2006). While formulating marketing strategy, a bank should focus attention on; consumer sovereignty, attitude, responsiveness and personal skills of bank staff, revitalizing the marketing department, top management support to the marketing department and participation of marketing personnel in key bank decisions (Kumar, 1991).

Advertising is any paid form of non-personal communication about an organization, good, service or idea by an identified sponsor (Berkowitz et al., 2000). Advertising is a highly public mode of communication. It is a persuasive medium that permits the seller to repeat a message many times. It provides opportunities for dramatizing the company and its products through artful use of print, sound and color. Advertising, unlike personal selling is impersonal. It carries a monologue message to the audience from an identified source (Owaga, 2002). In recent years the role of advertising in the banking industry in both personal and corporate markets has expanded dramatically and the financial services industry is now one of advertising revenue. In developing advertising strategy, the bank must first ensure that it conforms to overall marketing strategy (Channon, 1985). Sales promotion consists of short-term incentives to encourage purchase or sales of a product or service (Kotler & Armstrong, 2005). Used in conjunction with advertising

or personal selling, sales promotions are offered to intermediaries as well as to ultimate consumers.

Coupons, rebates, samples and sweepstakes are a few examples of sales promotions. The advantage of sales promotion is that the short term nature of these programs (such as coupon or sweepstakes with an expiration date) often stimulates sales for their duration. Offering value to the consumer in terms of a cent-off coupon or rebate provides an incentive to buy. Sales promotions cannot be the sole basis for a campaign because gains are often temporary and sales drop off when the deal ends (Berkowitz et al., 2000). Trade Promotions may also be offered when bank services such as consumer finance are provided through third parties like retailers or automobile distributors. Within banks, incentives are being increasingly offered for superior performance. Many banks now offer bonuses for meeting sales objectives or other incentives such as contests, free goods and holidays. Promotions attract deal-oriented consumers who are likely to switch banks rather than new long term accounts (Channon, 1985). Public relations is building good relations with the company's various publics by obtaining favorable publicity, building up good corporate image, and handling or heading off unfavorable rumors, stories and events (Kotler & Armstrong, 2005).

Publicity is a non-personal, indirectly paid presentation of an organization good or service. It can take the form of a news story, editorial or product announcement (Berkowitz et al., 2000). The key objective of publicity is to obtain editorial coverage, as distinct from paid space in media seen by the bank's desired customer base. Public relations are more of a background activity and are designed to enhance the banks position with specifically targeted audiences (Channon, 1985).

Personal Selling is a face to face presentation and promotion of products and services. There is a direct interaction between the firms' sales employees and customers (Thuo, 2008). Personal selling has traditionally been the principal communicable channel in the banking industry, although until recently the concept of selling financial services was very poorly developed. Nevertheless, the branch delivery system and the branch manager in particular were seen as the key to client interface (Channon, 1985).

Direct marketing consists of direct connections with carefully targeted individual consumers to both obtain an immediate response and cultivate lasting customer relationships (Kotler & Armstrong, 2005). It is the use of consumer-direct channels to reach and deliver goods and services to customers without using marketing middlemen. These channels include direct mail, catalogs, telemarketing, interactive TV, kiosks, websites, and mobile devices. It is one of the fastest growing avenues for serving customers (Kotler, 2003). Viral Marketing has emerged in modern marketing practice. It is a term used to describe a whole set of aggressive promotion. It includes paying people to say positive things about a firm's products via word of mouth, emails, blogs, and mobile phones. It also involves setting up multilevel selling schemes where individuals get commissions for directing friends to certain outlets, products, and websites (Thuo, 2008). The intervening variables involve other factors that have a direct or indirect effect on performance.

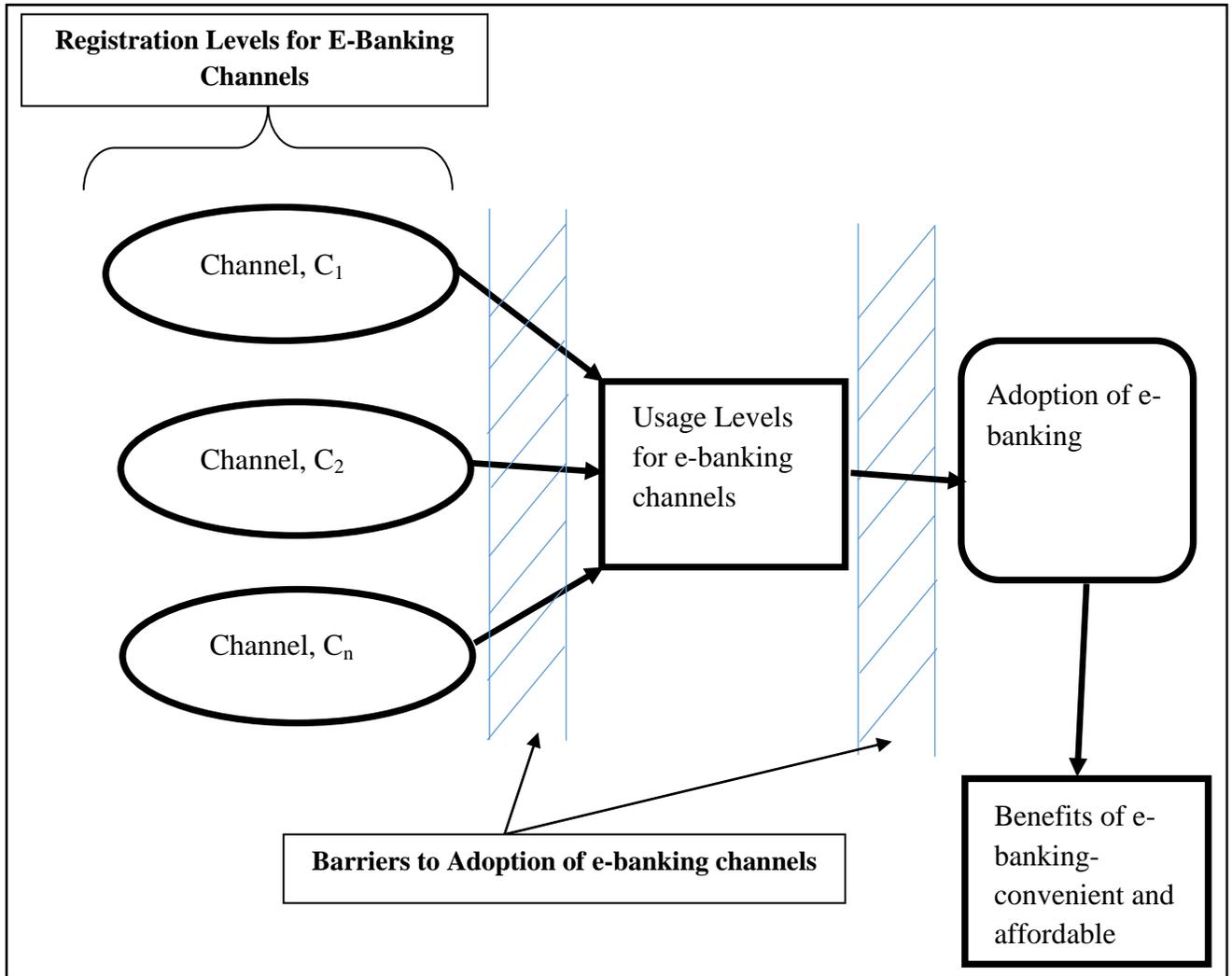
For any business entity, organization, non-for-profit and public sector to attain its objectives it should reserve no efforts but to deliver satisfactory benefits to its clients. Companies nowadays strive to beat competitors by providing and delivering competitive advantages through

innovation. Introduction of new products, services, and innovative ideas to target market, should be accompanied by heavy promotional activities to create awareness that inevitably aids the adoption of new product/service. Creating awareness is vital in generating acceptance by customers/ clients. There are several other dimensions needed to be focused on, especially in the field of e-banking such as security, accessibility issues. Banks could enhance the promotion of banking services by implementing awareness programs to their current and potential clients on the benefits and using e-banking. To boost e-banking usage, there is a also need to increase the number of ATMs and EPOS with equal distribution within and between geographical regions of the country to make them more accessible to clients. Moreover, as the e-banking services are still limited, there is a need to launch more e-channels such as online payments of utility bills, credit cards, E-mail/SMS alerts for e-transactions, etc. Banks have to set customer problems management system to resolve the issues regarding erroneous transactions (Ismael, 2012).

KCB has rolled out various marketing media advertisements and corporate social responsibility activities aimed at creating awareness and eventual subscription for the various e-banking channels, the bank also has a 24-hour contact center meant to address customers' issues within and outside banking hours. Additionally, the bank runs in the banking halls through video demonstrations how to perform transactions on the e-banking channels particularly the more recent ones like mobile banking and internet banking. The barriers to effective adoption of e-banking apparently still appears persistent going by the low levels of registration and usage of the various channels. Alternative solutions should be developed to address the barriers in a bid to help improve adoption of e-banking to the benefit of customers in terms of efficiency, convenience and cost effectiveness among other benefits, the banks on the other hand could

leverage on more transactions outside the traditional banking hours, this will lead to more commission and reduced operational costs and staff costs.

Figure 2.4 Conceptual framework



Adopted and modified from (Kundi and Shah, 2009)

Subscription for e-banking channels directly determines their usage. Adoption is the subscription for and continued use of e-banking channels; this means that both subscription and usage are required to indicate that adoption has taken place. Adoption is adversely affected by various barriers like lack of trust among the customers, perceived risk of loss of account credentials and challenges in performance efficiency. If the barriers are adequately mitigated then both the banks

and the customers will enjoy the advantages associated with e-banking which include cost-effectiveness, less time spent banking and anywhere banking among others.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents detailed research design, population and sample, data collection procedures and data analysis procedures.

3.2 Study area

This study was done in Kisumu city. Kisumu city has a wide range of commercial activities taking place in the estates of Manyatta, Nyalenda, Nyamasaria, Obunga, Otonglo and the Central Business District. The activities include Shops and retail services which are found across all the estates, manufacturing and distribution stores which are found west of the city, hardware and auto spares stores majorly found along Obote road and professional or technical services like hospitals, colleges and consultancies and the small scale traders who are cobblers, fish mongers, butchers, grocers, boutique owners and motorbike riders. These are the businesses served by the financial services companies like insurance companies, banks and microfinance institutions. Some of the banks and microfinance institutions include KCB bank, Equity bank, Cooperative bank, Family bank, K-Rep bank, DTB, Barclays bank, Standard chartered bank, Eco bank, Bank of Africa, CFC Stanbic bank, Faulu bank, Jamii bora bank, SMEP and Rupia microfinance. KCB bank has four branches in Kisumu city. (Planning Directorate-Kisumu County, 2013).

The figure below is a map of Kenya showing location of Kisumu city.



Figure 3.1 Map of Kenya showing location of Kisumu

Source: Kisumu County Planning Directorate 2013

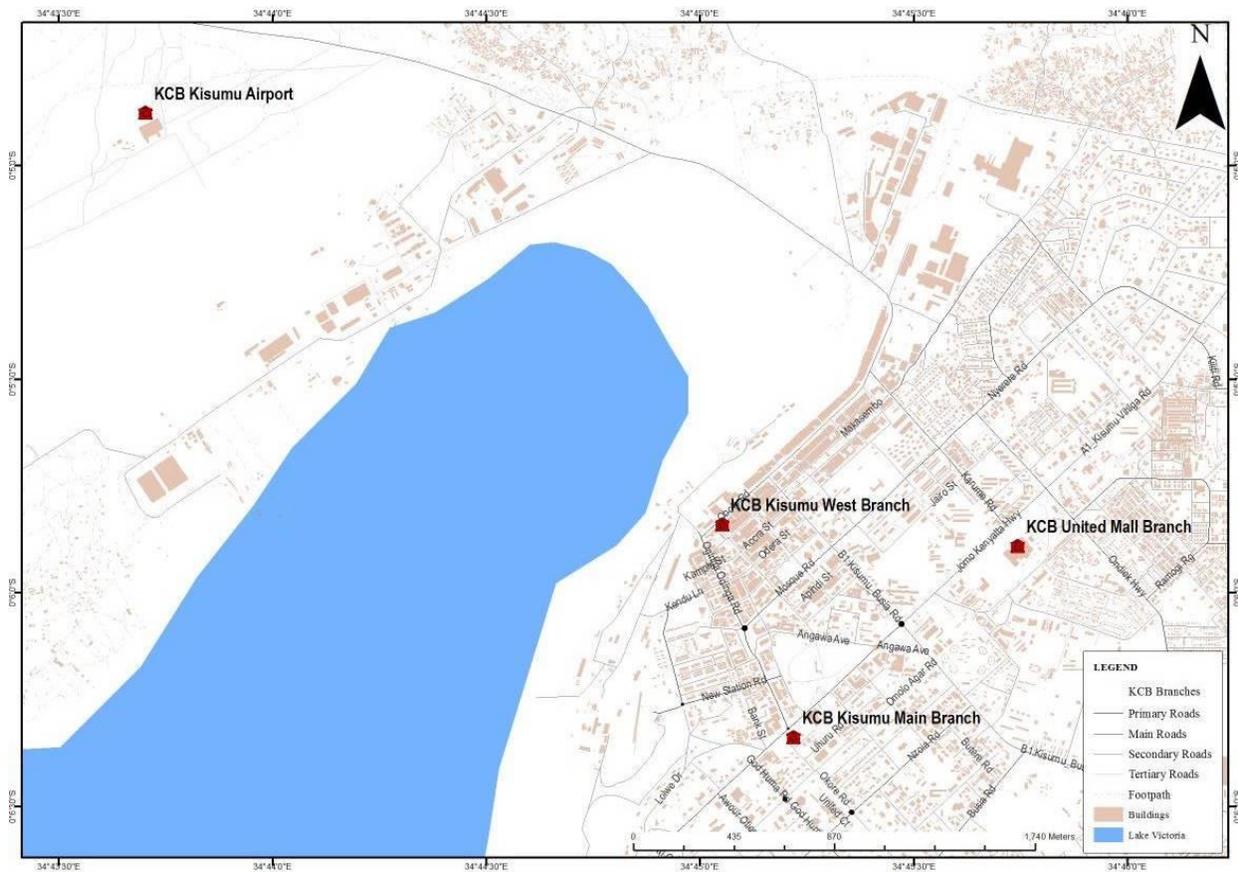


Figure 3.2 Map of Kisumu City showing KCB bank branches

Source: Planning Directorate-Kisumu County 2017

3.3 Research design

The study was conducted through cross-sectional survey design. The study was concerned with the various e-banking channels; mobile banking, internet banking, ATM banking and credit cards. The study sought to establish subscription and usage levels, barriers to adoption and how the channels can be promoted to help decongest banking halls conveniently and cost effectively. According to Croswell (2003) such issues are best investigated through cross-sectional survey design. The design ensures rapid data collection and is appropriate for identifying attributes of a

larger population from a small sample. KCB bank group has a large customer base (1,470,012 account holders as per half year 2012 results) with regional presence in six countries of Eastern Africa, roll out of e-banking channels has been across all the branches and a study involving one branch would give insights that can be generalized to the entire bank group. Mugenda and Mugenda (1999) explains that cross-sectional survey design generally provides quantitative or numeric descriptions of some part of the population, this can give trends and can be analyzed to reveal how independent variables can be manipulated to affect the dependent variables. Questions are asked at one point in time either personally in an interview or impersonally through questionnaire about things not easily observable such as memories and future plans.

3.4 Study Population

The study population was all the customers drawn from all the branches of KCB in Kisumu; Kisumu main branch, United Mall branch, Kisumu West branch and the Airport branch. KCB branches in Kisumu have a customer base of 41833 account holders; this is according to the official half year 2012 results. For the purpose of this study no special attention was paid to the individual sectors of micro-banking, SME banking, mortgages, institutional banking or any other since e-banking channels apply to them all.

3.5 Sampling procedure

In determining the sample, the following formula was used,

$$n = (Z^2 pq) / d^2 \text{ (Kothari, 2004)}$$

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

z=the standard normal deviate 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.

Assumptions: since there was no estimate available for the proportion in the target population assumed to have the characteristics of interest, 50% was used as recommended by Fisher *et al.* z-characteristic was taken as 1.96 at the accuracy level of 0.05, thus

$$n=384.$$

The sample of 384 respondent customers was distributed proportionately among the four KCB branches in Kisumu as tabulated below:

Table 3.1 Table showing distribution of respondents among the KCB Kisumu branches

Branch	Population	% of total population	Sample
Kisumu Main	28276	67.59	259
United Mall	6772	16.18	62
Kisumu West	6667	15.94	62
Airport Branch	118	0.29	1
TOTAL	41833	100	384

Source: Compiled by Author

Both convenient sampling and purposive sampling were used. The sampling frame included all the customers with accounts at any of the KCB branches in Kisumu City. Convenient sampling was used to get information from the account holders; a total of 384 subjects was generated. Every 10th customer leaving the teller line was picked and requested to give response to the

questionnaires, a record of the customers approached was kept to guard against repeat responses. Purposive sampling technique was used to generate a sample of key informants who were majorly key customer service bank officials; these were picked one per branch giving a total of four respondents. Purposive sampling is used where only groups or individuals with relevant information are selected. According to Mugenda and Mugenda (1999), Peil (1995), Oso and Onen (2005), purposive sampling technique refers to a technique where a researcher targets a group of people specially picked for some unique purpose, it allows the researcher to use cases that have the required information with respect to the objectives of his or her study. It is preferable because it helps to collect typical and useful information only, besides saving time and funds (Mugenda and Mugenda, 1999; Peil, 1995; Oso and Onen, 2005).

3.6 Data collection

This study collected both primary and secondary data through the use of various data collection techniques.

3.6.1 Secondary data collection

The secondary data was collected through a review of literature from sources such as research articles, books, newspapers, internet and bank internal reports. This technique helped generate data on barriers to adoption of various e-banking channels like mobile banking, agency banking and internet banking; penetration level of the various banking channels and customer satisfaction levels.

3.6.2 Primary data collection

A number of tools were used to get primary data as outlined below:

1. Questionnaires:

These contained both structured and unstructured questions. The questions helped the researcher to get data on consumer attitudes about the various channels available to them to do their banking; knowledge of the existence of the various channels; perceived and real benefits the customers enjoy by using alternative banking channels, barriers to effective adoption of e-banking channels and how often the customers use e-banking channels. This tool was used particularly due to the fact that it permits high levels of confidentiality thereby ensuring observance of ethical standards in research; in the banking industry information about customer accounts should be kept strictly confidential (KCB code of ethics handbook), the tool also saves on time, minimizes interviewer bias and can be used to collect information from a large sample (Orodho and Kombo, 2002).

2. Key Informant Interviews:

Interview schedules were used to collect information from key bank staff in the KCB branches. These interviews helped the researcher to get information on the performance of various channels, efforts in place to promote the use of various channels, system barriers hindering effective service delivery through the various channels. Interviews give in-depth information about particular cases of interest to the researcher; it saves time and ensures high reliability of the information gathered (Orodho and Okombo, 2002).

3.7 Data collection procedures

Quantitative and qualitative data was collected from a sample of three hundred and eighty-four (384) respondents from the target population of forty-one thousand eight hundred and thirty-

three (41833) customers. Questionnaires were administered to customers while Key Informant Interviews were conducted by the researcher to get information from key staff from the branches.

3.8 Reliability and Validity of instruments

Validity being the appropriateness, meaningfulness and usefulness of specific inference made from test scores, instrument validity was ascertained in a number of ways which included, discussing the questionnaire with the colleagues in the department, there after adjustments were done before submission to the supervisor who assessed the face validity. The instruments were then pre-tested after which the content validity was measured (James Key, 1997). This helped to assess the appropriateness of sentence construction, comprehensiveness of instruments and language clarity. Comments were received on the acceptability of the instrument vis-à-vis, length and the privacy of respondents. These comments were helpful in designing the final instrument that would be used to generate data.

Reliability of an instrument is a measure of the degree to which the research instrument yields consistent results or data after repeated trials; it was established by test-retest whereby the instruments were administered twice to a group of respondents. The second test was administered two weeks after the first one. The responses for each of the questions were coded in ordinal scale for ease of application of Spearman's rank order correlation formula. The coefficient of reliability was found to be 0.9 which is relatively high hence reliable instruments (Appendix 3). The research instruments were then revised accordingly before they were finally administered.

3.9 Data Analysis and Interpretation

Data collected was cleaned by eliminating unusable data, ambiguous answers were interpreted and verification of contradictory data from related questions done. Using a pre-designed coding scheme, the data was coded and entered into the Statistical Package for Social Scientists (SPSS). The quantitative and qualitative data was subjected to descriptive analyses to determine descriptive statistics such as mean, frequencies, percentages and mode; the researcher found percentage rate of subscription and usage by the customers for various e-banking channels versus total number of respondents, this was compared with the data available in the KCB data base and Central Bank of Kenya statistics; the barriers hindering effective adoption of e-banking channels were analyzed using measures of central tendency particularly the mode to establish the most prevalent barrier, this was supported by calculating percentages of customers affected by each of the barriers. Cross-tabs were generated to compare level of education with understanding of IT security policy so as to find out if there is any significant relationship with an aim of proposing suitable promotional campaigns to improve subscription and adoption. Narrative descriptions of qualitative data were done particularly on perception and attitude related data which include perception of pricing, efficiency of the system and ease of use of the e-banking technologies. The results were presented in form of tables, charts and narrative descriptions.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents results and discussions of the study objective by objective. The main objective of this study was to evaluate adoption of e-banking in KCB Kisumu. Its specific objectives were to assess customer subscription to e-banking channels in KCB Kisumu branches, analyze the use of e-banking channels in KCB Kisumu branches and to examine the barriers preventing customers from using e-banking channels in KCB Kisumu branches.

4.2 Rate of subscription for e-banking channels

This section of the report addresses the first specific objective of the study and will attempt to provide answers to the following research question; “What are the levels of subscription to e-banking channels in KCB Kisumu branches?”

Subscription levels of e-banking channels has direct influence on adoption of the channels; high rate of subscription together with high usage rate contribute towards high adoption rate. Mobile banking, internet banking, credit and debit cards, ATM banking were studied to establish their levels of subscription; data was collected by use of questionnaires that asked the respondents to state whether or not they are registered on the e-banking channels. Data collected was used to address the objective of assessing the rate of subscription of e-banking channels.

The table below shows a summary of registered customers on various e-banking channels for the various KCB branches in Kisumu.

Table 4.2.1 Table showing registration levels for e-banking channels by customers of KCB Kisumu branches as at June 2013- field data (n=383)

Branch	Response rates expressed as a percentage of the sample			
	ATM	Mobile	Credit Card	Internet banking
Kisumu	158	74	13	1
United Mall	38	27	2	1
Kisumu West	38	26	1	0
Kisumu Airport	1	1	0	0
TOTAL	235	128	16	2

Source: Compiled by Author (2013)

From Table 4.2.1 majority of respondents are registered on ATM banking, the lowest number of respondents are registered on internet banking. Investigation on ATM banking registration levels in other parts of the world revealed that it is taking a lead among other e-banking channels; In Cape Coast Metropolis, 65% of the account holders are registered on ATM banking (Marfo-Yiadom, 2012), In Uganda 83.3% of the account holders are registered on ATM banking (Moya, 2011) and in Sudan 84% of the accountholders are registered on ATM banking (Ismail, 2012). An analysis of bank internal reports for the year 2013 for registration of various e-banking channels showed that ATM banking has more customers registered on it standing at 61.17% of the total customer base of the study area.

ATM banking is the oldest of all the e-banking channels having been invented in the 1960s, the customers have lived with it long enough to understand its convenience and advantages. According to an interview with customer service consultants, it emerged that the bank has simplified and incorporated ATM application on the account opening form thus automating

ATM card order, another factor that encourages registration for ATM banking is its fair cost of service; comparatively ATM withdrawal is cheaper than over-the-counter withdrawal at thirty-three shillings and two hundred and twenty shillings respectively.

Internet banking is lagging in subscription levels, this finding is supported by various other studies that have been conducted in other parts of the world; the use of internet banking is increasing in Asian countries but it is still quite low (ACNielsen, 2002). Due to these low adoption levels, the transformation of banking services from the traditionally known physical branches commonly referred to 'bricks and mortar' to the modern way through information and communication technology systems better known as 'clicks and mortar' is yet to be realized (Bradley & Stewart, 2002). Customers in some countries have ranked internet banking as less important than other channels such as ATM or telephone banking (Aladwani, 2001; Rotchanakitumunai & Speece, 2003; Suganthi & Balachandran, 2001). In developing countries of Ghana, Uganda and Sudan where Kenya belong, subscription level of internet banking is at 4.3% in Ghana (Marfo-Yiadom, 2012), this e-banking channel is at 16.7% in Uganda according to a study that looked at ATM banking and internet banking only having assumed that mobile banking and credit cards channels are underdeveloped (Moya, 2011). In Sudan internet banking is at 6% registration level. More locally, internet banking registration studied across the banking industry in Kenya is negligible (Financial Sector Deepening Report, 2011). KCB bank in particular has a registration level of 0.24% against a target of 50% of all eligible accounts as per KCB Bank Internal Financial Report, 2013 (Table 2.3.3).

The low registration levels for internet banking could be attributed to internet security as identified to be the most important future challenge in e-banking, this is assessed against

increased cyber-crime activities. Customer trust, privacy and awareness are also recognized as challenges of great importance. A significant number of banks surveyed rated technical issues such as costs of site maintenance, Internet service provider monopolies, Internet pricing as other challenges though of less importance in Kenya (Gikandi, 2010).

Mobile banking comes in at position two in subscriptions with 128 of the respondents confirming registering for mobile banking services (Table 4.2.1). This is a third or 33.33% of the sample size. Mobile banking is a relatively new channel in the banking industry; it is however rapidly growing because the mobile phones are readily available. Interviews carried out with the branch staff established that there is deliberate effort by the bank to grow non-funded income through alternative banking channels; it is more affordable for the bank to offer services through mobile banking platform compared to the traditional brick and mortar model hence the growth witnessed.

A study by World Bank in 2015 on financial inclusion established that the growth of mobile banking users is in an exceptionally rapid phase. Adoption levels are highest in developing countries making 60-70% in China and India rather than developed nations such as the USA, Canada and United Kingdom. Adoption levels within individual countries show wide variation, even across similar economies. According to the same report, the global average registration is 40%, Kenya is at 48% registration rate for mobile banking (Figure 2.3.1). KCB Bank rate of registration for mobile banking is lower than the national figure; the national figure could be boosted by the mobile money revolution of mpesa.

Mobile banking as an innovation offers convenience of anywhere anytime affordable banking to the customers. The customers are relieved of the transport expenses and the high over-the-

counter transaction charges. They are also given an alternative to avoid the long bank queues. With just about 33.33% of the customers registered on mobile banking, banking halls are still full of customers, the customers do not benefit from the stated advantages and the banks still incur high stationery and staff costs.

This study established that only 16 of the respondents have credit cards (Table 4.2.1). This figure represents 4.17% of the sample size. It is significantly small considering that the world is generally moving towards e-marketing, a phenomenon that derives its success from the success of e-banking channels particularly credit and debit cards. From an interview with bank staff, one of the strategies of ensuring more customers get credit cards is by way of prequalification; the relevant department checks the profile of each customer against preset conditions and develops a pool from which they are contacted to come and fill necessary documents. The bank staff further reiterated that it is through prequalification and to a smaller extent through direct marketing that most cards are sold. Despite that effort to increase uptake of credit cards, the rate of subscription is still very low. This fairly agrees with the findings of a World Bank study on Financial Inclusion carried out in the year 2014 which shows that only 1.9% of eligible persons in the sub-Saharan Africa have credit cards (Table 2.3.1). From the same World Bank Report on Financial Inclusion, global index of credit card ownership is at 15.1%, this is quite higher than the figure registered by the study area.

From table 2.2.2 it is evident that credit card has been embraced in the developed countries more than in the developing ones. As high as 57.1% of the eligible population in the US has credit cards while just below 5% of the eligible population in Uganda and Kenya have the cards. By end of the year 2015, Central Bank of Kenya reported 257752 credit card holders out of about 19

million eligible persons; this is just about 1.36%. According to KCB internal reports of 2013, credit card ownership position stood at 3.99% of the total customer base.

The use of credit card is expected to give the customer a soft revolving credit facility that he uses and replenishes after an agreed period of time, it also offers the customer a safe way of carrying value for money hence reducing the risk of lose to pickpockets The banks benefit by earning interest, decongesting banking halls and reduced related stationery and staff costs. Unfortunately, the benefits mentioned can not be adequately enjoyed by the customers or the banks because of the low levels of registration for credit cards. The customers still flock the banks to withdraw cash to use in buying goods and services that they could otherwise easily buy using credit cards or any other e-banking channel.

In conclusion therefore this study established that registration levels for e-banking channels in KCB Bank Kisumu branches is generally low. This prevents the customers, the banks and other stakeholders from enjoy related benefits.

4.3 Frequency of usage of the e-banking channels

This section addresses the second specific objective of the study. It will seek to provide answers to the following research question; “to what extent are the e-banking channels used in KCB Kisumu branches?”

Since adoption is acceptance and continued use of a given service, this study investigated how frequently registered customers use the channels they are registered on because usage of e-banking is as important as registration/subscription for the channels. Data was collected by use

of questionnaire that asked the customers to respond to the question of how often they use e-banking channels.

The figure below shows a summary of the findings about frequency of use of the e-banking channels by the KCB Kisumu customers who have registered for the channels.

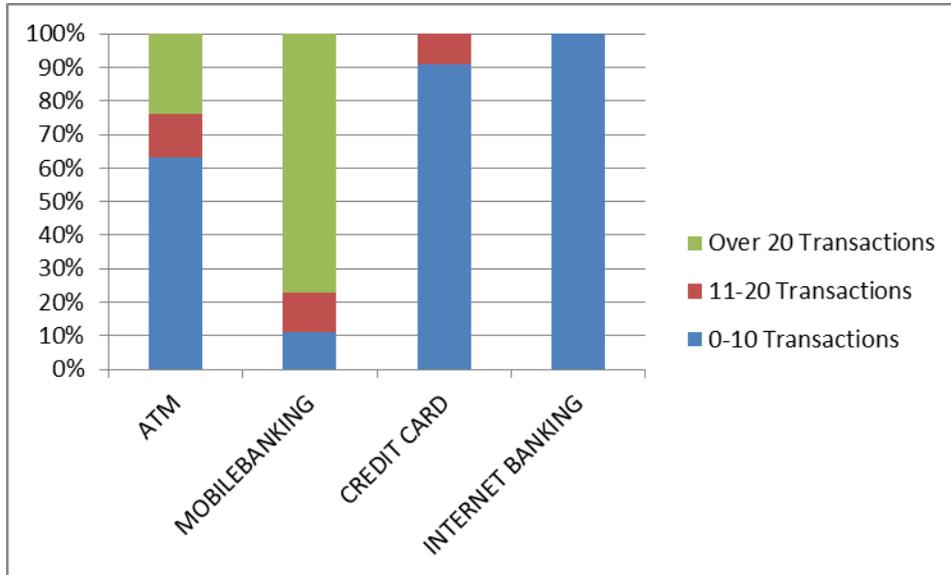


Figure 4.3.1: e-banking channels usage by the customers of KCB Kisumu branches in 2013 expressed as a percentage of registered customers

Source: Compiled by Author, 2013

The pattern displayed above is such that the channels studied generally showed low usage levels of up to 10 transactions per month. More specifically, all the customers registered on internet banking perform between zero to ten transactions per month, credit card transactions are also low with 91% of card holders using the cards up to 10 times a month. ATM banking. It was observed that mobile banking leads in the number of transactions falling in the bracket of over 20 transactions per month. Over 20 transactions per month implies at least one transaction per

working day by the customer, this could be balance enquiry, funds transfer, cash withdrawal, bill payment or even informational service like FOREX enquiry.

Convenience of anywhere anytime banking brought about by mobile banking has enabled the customers to do a number of transactions which include airtime purchase, bill payment, funds transfer to other KCB accounts & mobile money service providers and balance enquiry; these transactions they do on a daily basis hence the high percentage of over 20 transactions per month. The customers majorly use credit cards for shopping which they do once in a while during the month. Internet banking has not yet picked up hence the low levels of usage.

This study established higher usage rate for mobile banking users, this is in contrast to bank internal report contained in table 2.3.2 that showed more customers frequently using ATM channel. This deviation could be attributed to focused strategies in place to promote mobile banking. Comparing the findings of this study with other countries in sub Saharan Africa reveal that with regards to mobile banking usage KCB Bank Kisumu branches are performing better with Cape Coast Metropolis at 0% and Sudan at 12.6% (Table 2.4.1)

ATM usage is second to mobile banking. This implies that the queue is being transferred from the banking hall to the ATM machine; this potentially perpetuates time wastage by the customers. Most of the ATM machines are situated either near the mother branch for ease of servicing and replenishing of cash or near shopping centers to attract users. The cost of transport to these centers adds to the supposedly low transaction rate hence the net effect is an expensive transaction. Furthermore, the risk of lose of cash to thieves still exists.

From the findings of this study, high frequency of usage of mobile banking contributes to decongesting banking halls; this is demonstrated by the ability of the channel to support a wide number of transactions albeit cashless. The transactions can also be done cheaply and faster without the customer having to travel to the bank or to meet the other party in the business transaction, consequently the bank can cut on operational cost related to stationery and staffing.

Credit cards are meant to reduce queue time by as much as 100% because they can be used to transact online businesses at the comfort of the customer. They are also a source of revolving credit to the customer. Relatively low usage levels imply that more customers still go to the bank branches to either get cash to transact with or apply for short term credit facilities like salary advance. This low rate leads to high cost of accessing bank services by the customers and indeed high cost of operations by the banks. It is however worth noting that a survey conducted by the Central Bank of Kenya on active cards in Kenya show that 85.18% of credit cards held by customers are active (Table 2.4.3), the disparity could be attributed to effort by other banks and card issuers to promote their cards.

Internet banking has the least usage level according to this study. It is another innovation like mobile banking that was launched to help in delivering services to the customers away from the banking hall, however apparently, the industry is not benefitting much from it because few customers if not none transact using this channel.

4.4 Barriers preventing customers from using e-banking channels

This section addresses the third specific objective of the study. It will seek to provide answers to the following research question; “What are the barriers preventing customers from using available e-banking channels?”

This research identified the barriers as lack of awareness of the channels and their benefits, lack of trust and perceived risk of loss of account security, perceived difficulty of use and performance risk associated with network outages and other errors. The finding for each of the identified barriers are summarized on the tables below.

A five point Likert scale where 1= Strongly Disagrees (SD), 2= Disagrees (D), 3=Not Sure (NS), 4= Agrees (A) and 5= Strongly Agrees (SA) was used to measure respondents' statements concerning identified barriers to use of e-banking channels.

Table 4.4.1: Customers lack awareness of the channels and their benefits. (n=384)

Channel	Lack of awareness by respondents (%)
ATM banking	1.70
Mobile banking	32.89
Credit cards	92.66
Internet banking	98.97
Average	56.55

Source: Compiled by the Author, 2013

From the table above, this study established that generally there is lack of awareness of e-banking channels and their benefits; averagely, 56.55% of the respondents expressed lack of awareness. However, it is notable that ATM banking is most known by the customers with only 1.70% showing lack of awareness. Internet banking is the least known with 98.97% of the respondents showing lack of awareness. ATM banking is the oldest of the e-banking channels, various studies carried out by Marfo-Yiadom, Moya and Ismail between the year 2011 and 2012 in various countries showed that ATM subscription ranked highest among the channels

considered in terms of awareness of the channels. This could be attributed to the age of the channel. Only 32.89% of the respondent expressed lack of knowledge of mobile banking and its benefits. Conversely, 67.11% of the respondents are aware of mobile banking, this supports the fact that this channel is second to ATM banking in registration levels. It is also observable that internet banking and credit cards which are least known by the customers are equally the ones with least subscription level.

Table 4.4.2 E-banking is risky and untrustworthy (n=384)

Scale	Respondents' reaction as a percentage of the sample
Strongly Disagrees	11.81
Disagrees	17.22
Not Sure	2.50
Agrees	38.94
Strongly Agrees	29.53
Total	100

Source: Compiled by the author, 2013

From table 4.4.2 above, majority of the respondents agreed or strongly agreed that e-banking is risky and untrustworthy. It is difficult to implement channel migration because some of the customers do not trust the channels like internet banking arguing that their accounts may be compromised by activities of cyber-crime hence making ineffective channel migration as a strategy of promoting e-banking, this was according to responses received from the bank staff on effectiveness of strategies adopted to promote e-banking channels. The high percentage denoting lack of trust and at the same time portraying the e-banking channels as risky. The effect of

perceived risk on accepting technology such as Internet banking acts in such a way that the more perceived risk one has, the less likely he will accept new technology (Kim and Prabhakar, 2002).

This therefore implies that few customers will register for and use e-banking channels.

Table 4.4.3 E-banking is difficult to use (n=384)

Scale	Respondents' reaction as a percentage of the sample
Strongly Disagrees	3.05
Disagrees	47.40
Not Sure	1.84
Agrees	40.06
Strongly Agrees	7.65
TOTAL	100

Source: Compiled by Author, 2013

High number of respondents at 47.71% expressed their feeling that e-banking technology is difficult to use, this has the potential of hindering adoption of the various e-banking channels. According to bank staff interviewed, the bank has tried to address this barrier by availing brochures to be studied by the customers. The bank has also trained its staff to adequately address concerns on how to use the various channels.

Table 4.4.4: E-banking channels are inefficient in performance (n=384)

Scale	Respondents' reaction as a percentage of the sample
Strongly Disagrees	11.92
Disagrees	13.47
Not Sure	8.87
Agrees	53.83
Strongly Agrees	11.92
Total	100

Source: Compiled by Author

From table 4.4.4 a total 65.75% of the respondents confirmed technological inefficiency as one of the barriers to adoption of e-banking. This encompasses system down time, errors resulting from mistyping and the less user-friendly technologies. With this high response rate confirming inefficiency, there is a commensurate high likelihood that the customers would still go to the banks for services they would otherwise get from the e-banking channels.

Banks have adopted various techniques and strategies for eliminating the barriers and promoting adoption of e-banking. These include inter-channel promotion for example encouraging sign-up for mobile banking on the ATM screen, or inclusion of a QR code at the bottom of the transaction receipt. The use of a QR code appeals to the more advanced smart phone users while being a perfect way to electronically link to the appropriate app. The customers may decide to scan the code immediately or do so later when they reference the receipt to balance their account.

Another very inexpensive, yet effective method of promoting mobile banking using QR codes is on customer statements or on the envelopes of standard customer communication. Chase bank

does this very effectively, automatically directing customers to the correct app store for their device. In addition, statement inserts are a low-cost way to reinforce statement messages or branch promotions as done by SunTrust.

Another strategy is through branch communication where bank employee engages the customer, the benefit of any branch-based promotion is the ability to have dialogue with the customer around the advantages of using the e-banking as well as providing a great opportunity to answer any questions or address any concerns the customer may have. An email campaign is another great way to target online banking customers or customers doing a large number of balance inquiries monthly. Other channels of communication include web banners, SMS alerts, social media and traditional media.

The strategies identified above can be used to help educate the customers on the available channels and their benefits and how they can access services away from the banking halls, they can also be used to dispel fears and clarify doubts by the customers.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the summary of the findings, conclusions reached and the recommendations as per the response from bank customers.

The purpose of this study was to investigate adoption of e-banking in KCB Bank-Kisumu branches.

5.2 Summary of findings

The first objective of the study was to assess customer subscription to e-banking channels in KCB Kisumu branches. The study established that 61.21% of the customers of KCB Kisumu branches subscribe to ATM banking; this is fairly in line with global trends as established by various studies. This high rate of subscription has been driven by its benefit of low cost and deliberate effort by the bank to simplify application process. Mobile banking subscription at 33.33% is fairly lower than the global index of about 40% as established by World Bank studies. It is a relatively new e-banking channel but rapidly growing due to increased mobile phone ownership by the customers and increased demand for financial services. Credit card subscription stands at 4.17% in KCB branches in Kisumu against a national rate of 2.70% and a global rate of 15.1%; this is fairly low. Internet banking lags at 0.52% in subscription rate.

The second objective of the study was to analyze the use of e-banking channels in KCB Kisumu branches. The study established that frequency of usage varies from channel to channel; mobile banking usage is highest with about 78% of the respondents doing transactions at least once per day, internet banking is the least used with about 100% of all the transactions falling between 0-

10 transactions per month. Credit card usage is equally low at 10% of customers performing between 11-20 transactions per month; however, this sharply differs with CBK finding that 80-85% of credit cards are active signaling higher usage rate.

The third objective of the study was to examine the barriers preventing customers from using e-banking channels in KCB Kisumu branches. The study established the barriers as lack of awareness of the channels and their benefits, perceived risk and lack of trust, perceived difficulty of use and performance risk. Averagely 56.55% of the respondents reported lack of awareness of the channels and their benefits; ATM banking is the most popular with 98.30% of the respondents confirming knowing the channel and its benefits, mobile banking followed at 67.11%. Credit cards and internet banking are least known as channels and their benefits are equally not well known. Only less than 10% of the respondent confirmed knowing credit cards and internet banking.

High rate of 68.47% of the respondents reported that e-banking is risky and untrustworthy thereby affecting channel migration efforts by the bank. Technological inefficiency or performance risk was also adversely identified as a barrier affecting adoption of e-banking with 65.75% of the respondents considering it so. They cited system down time, and error prone transaction process as major players in perpetuating performance risk.

5.3 Conclusion

It has been argued in this study that e-banking has a lot of benefits compared to the traditional brick and mortar model; the customers benefit from the convenience of banking anywhere, anytime affordably and faster, the banks benefit from reduced staff costs and other related operational expenses. From the summary of findings above, registration levels for the various

channels are low and the usage levels are equally generally low. This study thus concludes that adoption level for mobile banking, internet banking and credit cards is too low to deliver the intended benefits; their frequency of use is equally low thereby causing no significant effect on decongesting banking halls. The prevalent barriers identified in this study must be addressed swiftly to boost adoption levels particularly of mobile banking, credit cards and internet banking.

5.4 Recommendations

Based on the findings of this study, the researcher came up with a number of recommendations that if implemented would boost adoption of e-banking.

- 1) To improve the low subscription and usage levels which are currently at less than 50% for mobile banking, credit cards and internet banking the bank should carry out increased awareness campaign through SMS alerts, face to face brief to the customers who visit the bank and through other mainstream media channels to inform the public about the available e-banking channels and their benefits.
- 2) Due to the low trust levels the bank should highlight corporate policies related to e-banking services in their marketing communication messages in order to assure their customers that they are protected while using any form of e-banking channel.
- 3) To address the perceived difficulty of use, the bank needs to increase the confidence of their customers as well as develop their skills and knowledge in using e-banking services by ensuring the customers are adequately taken through a hands-on-practical orientation on how to use the channels. This will help customers to be more familiar with the e-banking services as exemplified in the developed countries such as the United Kingdom, USA and Canada thereby resulting in improved registration levels and continued usage of

the channels by the customers to benefit from the convenience of affordability, service anywhere and anytime.

5.5 Areas for further research

Further research will be necessary in the following areas:

- 1) Effectiveness of e-banking government policies in mitigating against losses through identity theft.
- 2) An assessment of the complementary relationship of the various e-banking channels.

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APPENDICES

Appendix 1: Questionnaire to be filled by customers of the KCB branches in Kisumu
DEMOGRAPHIC INFORMATION: *(select the correct response by marking in the correct box for each of the questions below)*

1. Gender

Male Female

2. Age

Less than 18 years 18-35 yrs 36-55 yrs above 55yrs

3. Academic qualification

No education Primary school Secondary school
 Post Secondary education

SUBSCRIPTION FOR E-BANKING CHANNELS BY ACCOUNT TYPE:

4. (for the type of account you hold, select by marking with an (X) the e-banking channel you are subscribed on)

E-BANKING CHANNEL	ACCOUNT TYPE				
	Savings A/C	Salary A/C	Loan A/C	Card A/C	Business A/C
Mobile banking					
Internet banking					
ATM banking					
Credit/debit card					

5. Do you have an account with another bank?

Yes No

If your response to question 5 above is 'No', skip question 6 and 7

6. Are you registered on any of the other bank's e-banking channels?.....(specify)

7. How do you like the other bank's e-banking channels compared to those offered by KCB?.....
.....(explain)

KNOWLEDGE/ INFORMATION ABOUT AND USE OF E-BANKING CHANNELS:

8. Do you know about KCB e-banking channels?

Yes No

(if your response to question 8 above is 'Yes' proceed with question 9)

9. How did you know about the channels?

Internet Television Radio Print media
 KCB SMS alert Word of mouth

(On a scale of 1-5 respond to statements 10-13 below)

Scale: 1-Strongly Disagrees 2-Disagrees 3-Not sure 4-Agrees 5-Strongly Agrees

10. E-banking transactions are expensive

1 2 3 4 5

11. E-banking channels are trustworthy

1 2 3 4 5

12. E-banking channels are easy to use

1 2 3 4 5

13. E-banking channels are efficient in performance

1 2 3 4 5

On a scale of 1 to 5 rate the extent to which you agree with the following statements in questions 14-18

14. E-banking channels can be accessed anywhere anytime with appropriate devices

1 2 3 4 5

15. E-banking eliminates queuing time in the banking halls

1 2 3 4 5

16. E-banking makes business transactions easier through faster settlement of financial transactions

1 2 3 4 5

17. E-banking minimizes risk of loss of cash to thieves and pickpockets

1 2 3 4 5

18. With e-banking customers are able to avoid penalties of late payment of bills and loans

1 2 3 4 5

19. Comment freely in the space below regarding your comments for the attributes of question 14-18

.....
.....

20. From the list below, select (by ticking in the adjacent box) the services you usually access through e-banking channels

Cash transactions

Account/mobile funds transfer

Payment of bills

Online purchases of goods

Informational services (statements, balances and FOREX rates)

Instructional services like stop orders

21. How often do you use the services selected above?

Once in a while

Often

Very often

22. Do you sometimes go to the bank for the services in question 20 above?

Yes

No

23. If your response to question 22 above is 'Yes', explain why?

.....
.....
.....

USABILITY OF E-BANKING TECHNOLOGY AND USER SUPPORT

*Rate the extent to which you agree with the following statements by circling your rating, 1-
least agrees while 5-most agrees*

24. E-banking channels are easy to use

1 2 3 4 5

25. The e-banking channels are fast enough

1 2 3 4 5

26. e-banking systems are stable and transactions rarely fail

1 2 3 4 5

27. In case an e-banking transaction fails it takes a short time to reverse/ rectify

1 2 3 4 5

28. There are enough fliers and media clips explaining how to use the e-banking channels

1 2 3 4 5

29. 24-hour contact centre satisfactorily solves customer issues related to e-banking

1 2 3 4 5

30. Customers usually visit the bank to have their issues regarding e-banking addressed

1 2 3 4 5

31. E-banking applications are compatible with most devices

1 2 3 4 5

32. On the space provided below, comment freely on your experience while using the e-
banking channels you are subscribed on.....
.....
.....

THANK YOU

Appendix 2: Interview schedule for customer service consultants of the KCB branches

1. Which measures have you put in place as a branch to promote adoption of e-banking channels?

.....
.....
.....
.....
.....

2. Have the measures stated above proved effective in increasing the numbers of registered customers?.....

.....

3. If the answer to Qn. 2 above is No, what do you think can be done to have near 100% customer registration on the various e-banking channels?

.....
.....
.....

4. If the answer to Qn. 2 is Yes, what strategies are in place to motivate customers to use the various e-banking channels they are registered on?

.....
.....
.....
.....

5. How frequent do you receive customer complaints or concerns about the following areas regarding e-banking channels?

- a) System stability
- b) Errors due to the customers' inability to use the services well
- c) Charges
- d) Unavailability of certain necessary services

6. How do you handle such feedback or complaints to avert future complaints or to improve adoption of e-banking?

.....
.....
.....

7. In your own opinion, how do the customers prefer e-banking to traditional banking?
(Briefly support your answer)

.....
.....
.....
.....

8. Are there any challenges in disseminating information about the various e-banking
channels? (State).

.....
.....
.....
.....

Appendix 3: Results for reliability test for the Questionnaire

Question	Correlation, r
1	1
2	1
3	1
4(a)	0.721
4(b)	0.663
5	1
6	0.921
7	0.809
8	1
9	0.912
10	0.8
11	0.901
12	0.827
13	0.799
14	0.61
15	0.832
16	0.811
17	1
18	0.722
19	1
20	1
21	1
22	1
23	1
24	0.908
25	0.96
26	0.9
27	0.996
28	0.807
29	0.905
30	0.998
31	0.907
32	1
Average	0.900272727

Note: 1. For questions 6, 7, 19, 23 and 32 that required the respondent to comment freely, if left blank assumed the ordinal number '1' and if given a comment assumed ordinal number '2'

2. For purposes of this analysis, question 4 has been split into two, which is 4(a) for the e-banking channels and 4(b) for account type.