FACTORS INFLUENCING EFFECTIVE USE OF AUTOMATED TELLER MACHINES BY BANK CUSTOMERS IN VOI.

BY

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A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF MASTER OF BUSINESS ADMINISTRATION (FINANCE) OF KENYATTA UNIVERSITY.

MAY 2008

Kinuthia Mungai
Factors influencing effective use of
DECLARATION

This research proposal is my original work and has not been presented for a degree in any other university.

Kinuthia Mungai ....................................................

Signature ..........................................................

Date ..............................................................

This research proposal has been submitted for examination with my approval as university supervisor.

Mr. Owuor, S. J. ....................................................

Signature ..........................................................

Date ..............................................................
DEDICATION

To God, in whom I live, move and have my being.
To my parents for their love and support
and to my friend John Okoth Odhiambo
for his persistence in encouraging me to pursue this course.
ACKNOWLEDGEMENT

I wish to express my sincere gratitude to my supervisor Mr. Owuor for his professional guidance offered tirelessly in supervising this work from its inception to its completion and for his support and encouragement throughout my study.

I would also like to greatly thank all lecturers who taught this programme for the knowledge and skills I have gained from it all. My thanks also goes to individuals and institutions who contributed immensely to make this research complete by giving me important information.

My sincere gratitude goes to my friend John Okoth Odhiambo who constantly reminded me that I needed to further my education having seen in me the potential. He led the way by doing his masters in education and I follow suit gladly.

Special thanks go to Thomas Kimeu of Globe Cyber Systems and a dear friend for his tireless effort in proof reading, typing and editing the proposal. I will forever remain indebted to him.

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I would also like to appreciate my principal, Ms. Roselyne Mwalukuku for her understanding and support as I pursue this course.

As for all those who contributed immensely in this proposal, whom I have not mentioned by name, please receive my special and humble thanks.
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<td>ATM</td>
<td>Automated Teller Machines</td>
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<tr>
<td>CEO</td>
<td>Chief Executive Officer</td>
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<tr>
<td>CPU</td>
<td>Central Processing Unit</td>
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<tr>
<td>GDP</td>
<td>Gross Domestic Product</td>
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<td>IBM</td>
<td>International Business Machines</td>
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<td>IMF</td>
<td>International Monetary Fund</td>
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<tr>
<td>KCB</td>
<td>Kenya Commercial Bank</td>
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<td>KPLC</td>
<td>Kenya Power and Lighting Company</td>
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<tr>
<td>NCR</td>
<td>National Cash Register</td>
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<tr>
<td>PC</td>
<td>Personal Computer</td>
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<tr>
<td>PIN</td>
<td>Personal Identification Number</td>
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<tr>
<td>SCB</td>
<td>Standard Chartered Bank</td>
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<tr>
<td>SBI</td>
<td>State Bank of India</td>
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<td>UK</td>
<td>United Kingdom</td>
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<td>USD</td>
<td>United States Dollars</td>
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DEFINITION OF TERMS

Adoption  The acceptance among bank customers of the ATM technology.

ATM       An unattended electronic machine in a public place, connected to a
data system and related equipment and activated by a bank customer to
obtain cash withdrawals and other banking services

ATM card  A card issued by the bank to the customer to facilitate his
transactions from an automated teller machine.

Bank      An institution licensed to accept deposits and advance loans.

Effectiveness The power or capacity to produce the desired result of using the
ATMs for the various uses available other than just cash withdrawal.

Extent    The degree of ATM usage among the bank customers in Voi.

GDP       The market value of all final goods and services produced within a country
in a given period of time

PIN       The secret code which is used to identify the account holder after inserting
the ATM card

SPSS      A computer package used in analyzing statistical data mainly from
research findings (statistical package for social sciences).

SMS banking Use of the telephone to perform bank transactions through the Short
Message Service.
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ABSTRACT

Since the banks introduced the automated teller machines to help in the service delivery as cash dispensers as in the case of Standard Chartered bank in Kenya in 1989 (Ndegwa, 2003), the growth in the use of this facility by other banks has been tremendous. This facility has also been developed from just being a cash dispenser but also capable of offering other services namely balance inquiry, printing mini-statements among other services. As Onyango (2003) suggests, after successful ATM adoption their services should be moved to a higher level for increased customer satisfaction.

The continued investment in automated teller machines has made the need to establish the factors influencing their effectiveness more urgent. The purpose of this study was to investigate factors influencing effective use of ATMs in Voi.

The choice of Voi was necessitated by the fact that it's not only a major transit town but also a town within a rural setting. This gives it unique characteristics of the customers who use the banking services particularly ATM usage. The town has branches of the two leading banks in the country, Barclays and Kenya Commercial Bank from whose customers this research is based on.

The study was to establish the factors that influence ATM usage in Voi. The study was to establish hindrances to machine usage. For example, age, poor training, lack of awareness of ATM technology, machine down times and card retention.

It is generally assumed that most customers use ATMs for cash withdrawal only. This study was to establish whether this is true in Voi and the factors behind it. The study also sought to establish the extent to which the other services offered by this facility are being used.

The study design was descriptive in nature describing the ATM usage level and the effectiveness in service delivery. The questionnaire was the main instrument for data collection. Simple random sampling was used in the research. A sample of 100 customers was drawn from Barclays and KCB. 60 customers from KCB and 40 from Barclays was interviewed. The questionnaires were self-administered. They were filled and collected during the interview.

Data collected was analyzed using descriptive statistics with the help of SPSS program. The research identified the following as factors that influence the effective use of ATMs in Voi. Machine downtimes, number of machines, security, card retention, education and training, age and the withdrawal limit. It was also found out that few people use other services other than cash withdrawal. Most of the people learn how to use the ATMs either through self or friends and the information is quite inadequate.

The researcher recommends that machines should be maintained throughout. The number of machines should also be increased. Proper lighting and additional security be provided to increase the use of the ATM machines. Card retention should also be minimized if not eliminated all together and the retrieval time reduced. Linking up of ATM facilities with other institutions should be encouraged to increase customer access to their deposits and the interconnection costs between different banks be lowered. Customer education and training should also be enhanced. The level of awareness of other services other than cash withdrawal be increased by vigorous advertisements through media, training by bank staff and provision of pamphlets and user guides. It is further recommended that other services such as payment of utility bills, transfer of funds and cheque deposits be installed in the two banks.

It is hoped that this data will be beneficial to both the banks and the customers.
CHAPTER ONE

INTRODUCTION

This chapter looks at the background of the study, the objectives of the study and the research questions. It also looks at the significance of the study and the scope of the study.

1.1 Background

Kenya was predominantly an agro-based economy with the economy revolving around agricultural activities. Kenya achieved a commendable economic growth is the first ten years of independence from 1964. The Gross Domestic Product grew by an average of 6.6%. This was a period of protectionism, industrial promotion and investment. The rates of interest were also safely maintained and checked to avoid inflationary tendencies.

According to the National Development Plan (2002-2008), Kenya’s economic performance declined to an average of 5.2 percent between 1974 and 1979. Between 1980 and 1989, 1990 and 1995 the average growth rate for GDP were 4.1 % and 2.5% respectively. In the year 2001, the GDP was at it’s lowest being -2.1%.

With the foregoing grim situation, the banking industry also had its rough times. In the period of the 1980’s and 1990’s, many banks collapsed, for example, Rural Urban Credit Finance, while others were placed under receivership by the Central Bank. The period of the 1990’s the inflation rate was at its highest levels. This made it difficult for banks to give credit. The government, due to the suspension of loans by the IMF and World Bank also resorted to borrowing heavily at the domestic front.

Given the loss of confidence by the general public of the banking sector, the banks sought ways of enticing their customers and cutting the costs of their operations. The banking sector introduced the use of automated teller machines.
Standard Chartered Bank introduced the first ATM in 1989. Barclays Bank installed its first ATM machine in 1995. This was aimed at minimizing crowding and queues in the banking halls and increase customer services.

Since that time, other commercial banks like Kenya Commercial Bank, Cooperative Bank, Standard Chartered and National Bank of Kenya have installed the automated teller machines. A consortium of 18 small and medium banks also set up an online ATM network known as Kenswitch to provide a shared network for switching ATM transactions among the members banks (The Standard, January 20, 2006). There has also been the introduction of the PesaPoint network which was birthed upon the realization that there was an opportunity within the market, and far too few Kenyans enjoyed ready access to their cash through ATM services either because their banks did not offer ATM’s or they were only placed in a few locations. The company operates an independent network of ATMs across the country which can be used by customers of the banks connected to its service.

The GDP grew by 4.9 % in 2004/5 and about 5.8% in year 2005/6 (Economic Survey, 2006). The growth of the economy has seen the expansion of the banking industry. This has also led to increased competition for customers. This has led to increased use of technology particularly ATMs.

The growing importance of ATMs to provide financial services has elicited various studies on their application on service delivery. Onyango (2003) studied the Adoption and Usage of Automated Teller Machines Installed by Banks in Nairobi and proposes that a further study should be done on a marketing effort that is needed to improve on the usage of ATM services. Kandie (2003) investigated Customer Perception and Expectation of Quality Service in Selected Banks. In his study, he looked at various factors which customers look at and perception on the bank’s service quality i.e. neatness of personnel, safety, visually appealing physical facilities among others. He failed to look at the installation of ATMs as equipments that will increase customer satisfaction and instill in customers a perception of quality service. Ndegwa (2003) looked at factors
influencing ATM usage in Nairobi. She focused more on ATMs as cash dispensers.

Our study seeks to capture factors influencing effective ATM use in Voi, a town smaller in comparison to Nairobi which the other researchers majored in. We shall also seek to find ways of improving ATM usage as proposed by Onyango (2003). The other studies majored in Nairobi, unlike the other smaller towns where diffusion of ATM technology took a little longer. They also looked at ATM usage in terms of cash withdrawal or primarily as a cash dispenser only. Our study also looks at factors influencing effective ATM usage with respect to other services which can be offered by ATMs.

With the ever increasing technology in banking, it is proper for a study focusing on the pertinent issues raised above. A listing of the services offered by the ATM includes cash withdrawal, balance enquiry, mini statement, funds transfer, cheque deposits, cheque book request, statement request, PIN change and mobile airtime recharge (www.kcb.co.ke/ebanking/quickserve).

For the banks, this facility has plugged the hole left by branch and office closures. At the moment, automated teller machines have been installed in major urban centres. For example Nairobi has more than half of all ATMs in the country, with Mombasa having the other bigger concentration.

1.2 Voi

Voi is among the five divisions that comprise Taita Taveta district of the Coast Province in Kenya. Voi town is a major transit town on the Nairobi-Mombasa route both by road and rail. Voi is the main town in the southern area of Kenya before reaching Mombasa, with a developing industrial and commercial center. It is situated on the main Nairobi-Mombasa road, and is the junction for the road heading to the Tanzanian border at Taveta.

There are two full fledged banks. These are Kenya Commercial Bank and Barclays Bank.
Apart from the two bank ATMs, the other ATM is a Pesa point. Other financial institutions include Postbank, Post Office, Kenya Women Finance Trust among other micro finance institutions. (http://www.postbank.co.ke)

1.3 Research Problem
The aim of the research was to investigate the factors influencing effective use of ATMs by bank customers in Voi. Automated teller machines in the service delivery is in limited use. Very few clients have adequate knowledge on how to use the ATMs and those who use the machines partially know the other services that the machines can offer. They thus have a limited use of the machines.

Moreover, the effectiveness of these machines is also cast in doubt. They are often out of order and few in number. Therefore the aim of reducing crowding queues in banking halls is not fully achieved.

These twin issues of increasing awareness in use of ATMs and their effectiveness in Voi should be addressed urgently if the rural districts are to benefit from reduced service time and increased enjoyment of banking services by its customers.

1.4 General Objectives
The general objectives of the study were;

(a) To determine the extent of the use of automated teller machines

(b) To investigate the effectiveness of ATMs on service delivery to banks clients

1.4.1 Specific Objectives
(a) To determine the level of the use of automated teller machines in Voi.

(b) To investigate effectiveness of ATMs in Voi. The extent to which service delivery has been increased.

(c) To establish how ATM use may be enhanced.

(d) To establish whether all services offered through the ATM are being used.
1.5 Research Questions

The following research questions were answered

(i) Are customers using the other services offered by the ATM other than cash withdrawal?

(ii) How often do bank customers use ATMs?

(iii) Are customers informed of ATM implementation and use?

(iv) Have the ATMs been effective in customer service delivery in Voi area?

(v) What should the banks do to improve ATM usage?

1.6 Significance of the Study

The study will be of importance

(i) To the banks to increase the awareness and use of ATMs to its clients.

(ii) To the financial institutions in their effort to enhance the use of ATMs and diversify its uses for other services other than cash withdrawal so as to increase customer satisfaction.

(iii) To inculcate and create awareness to the customers on the use of ATMs.

(iv) Increase the general body of knowledge on ATMs.

1.7 Scope of the Study

The study covered Voi town due to the presence of some banking facilities and its accessibility. The researcher works in the area and is familiar with it. The banks studied were Kenya Commercial Bank (KCB) and Barclays Bank.

The study addressed the extent to which the ATMs are in use, exploring factors contributing to low usage and finding ways of enhancing ATM usage.

1.8 Limitations of the Study

The following are the limitations encountered in the course of the study.

1) It was difficult to control the respondent’s attitudes as they respond to the questions.
2) Some ATM customers refused to participate in the study by declining to take the questionnaire.

3) Because the study involved monetary issues, some people were unwilling to divulge details of their transactions.

5) The use of questionnaires got some blank or unanswered questions.

6) The bank managers were unwilling to give accurate data concerning the number of customers who had ATM cards.

1.9 Assumptions of the Study

The assumptions of the study were:

1) The sample selected was a true representation of the larger population from which it was selected.

2) That the resulting answers from the respondents of the area being studied were a true representative of ATM usage in Voi.

3) The respondents would give honest answers.
CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

2.1.1 Money and the Development of Payment Systems

Money is defined as anything that is generally acceptable as a medium of exchange of goods and services (Cargill 1991). Today’s transactions are done mainly by paper and coin or electronically. In the past the exchange of goods and services was done for other goods and services, trade known as barter. The society’s economy then was based on subsistence farming, hunting and gathering and nomadic rearing of livestock and fishing.

However, barter trade could not adequately serve the needs of the people. The problems of barter trade were overcome by use of money as a medium of exchange with a token value. Some of the articles used as money included cowry shells, gold, silver, salt and other articles of value. The birth of paper money can be traced to the work of goldsmiths who gave out receipts for gold entrusted to them. The depositors would use the receipts to pay for the debts they incurred. The sellers would trust the goldsmiths to produce the gold as payment (Ndegwa, 2003).

Continued use of deposit receipts to pay debts meant that gold tended to be left untouched for long periods at a time and the goldsmiths started to lend it out with interest. This gave birth to banking. They paid interests to depositors to attract more deposits. The gold deposit receipts did not have intrinsic value but they held promise to pay the value in gold. This is the same case with paper money today (Ndegwa 2003).

Money that is not in the hands of the public is kept at the bank. A bank is an institution that accepts deposits from the public and in turn advances loans by creating credit (Jhingan, 1984).
A bank also offers cheques to its customers. A cheque is a demand to pay the bearer or the payee the stated amount of money at a given period. This could be a payment for goods and services rendered. Traditionally, cheques have been commonly used in settling large debts or transferring funds from one account to another (Jhingan 1984).

Banks also issue what is commonly referred to as plastic money or plastic cards. These are credit cards, debit cards and ATM cards (Molyneux, 1990).

A credit card enables payment to be made without the use of cheques. The purchaser of goods and services presents the card in payment and signs the voucher confirming the purchase and the amount due. Those providing the service are reimbursed by the bank and the customer receives a monthly statement showing details of his purchases and amount owing. Credit cards may also be used to obtain a cash advance, interest being charged from the date of the advance until full repayment has been made. When the credit card is received the holder must sign it so that the signature on the sales vouchers can be authenticated. Credit cards underwrite for a fixed amount and for a fixed period the credit of an account holder. Examples of credit cards are Visa, American Express, and Mastercard (Wikipedia Online, 2006).

Unlike credit cards, debit cards are issued to account holders and reflect the actual balances of their accounts. Once a person completes a transaction, the money is deducted directly from his bank account.

The need for access to cash by bank customers on demand necessitated the banks to install automated teller machines which enabled customers to withdraw cash and make deposits even outside the bank’s working hours with the first magnetically encoded plastic card ATM being installed at the Chemical Bank, New York in 1969 (Wikipedia Online, 2006).
An ATM is a computerized electronic device that offers customers banking facilities such as cash withdrawals, deposits, enquiries, bank statements for 24 hours a day. An ATM is usually linked to a main central computer from where they read instructions and when to offer banking facilities to customers.

The Dictionary of Banking Terms (2006) defines ATM as a computer terminal activated by a magnetically encoded bank card allowing consumers to make deposits, obtain cash from checking or savings accounts, pay bills, transfer money between accounts, and do other routine transactions as they would at a bank teller window. Today, bank ATMs do much more than dispense cash in preset increments. Some ATM machines cash checks to the penny, accept envelope-free deposits, and print monthly statements for mortgage, brokerage, or regular banking accounts.

An ATM card is a debit card issued directly by the banks to enable customers withdraw money from their bank accounts. The more sophisticated of the ATM machines enable customers to cash from a range of accounts, make deposits, enquire about balance, make transfers and pay bills, order cheque books and issue statement print-outs (Molyneux, 1990).

The basic function of ATMs is to allow the customer to obtain cash. Others provide a paying service. They can also be used to provide banking information to the customers. Plans to make them customer friendly have been effecteted e.g. greet the person by name, use simpler language and attractive colours on the screen.

ATMs are less costly compared to the manual operation and thus actively developed by the banks.
2.2 Main Review of Past Studies in the Area

2.2.1 Origins and Development of ATMs

The ATM history can be traced to 1966 when a cash dispensing machine came to existence (Molyneux, 1990). There has been a great deal of debate over the history of the ATM, including who the ATMs inventor is. So, to clear up some of the confusion, *Invention & Technology* magazine, in its summer 2000 issue, published an in-depth piece on the ATM’s history. That article had the following timeline.

1960 — ATM predecessor installed: New York’s First National City Bank (now CitiBank) installs a Bankograph in several branch lobbies. The idea is for customers to pay utility bills and get receipts without having to see a teller.

1967 — First cash dispenser installation: The first cash dispenser, made by De La Rue Instruments, makes its debut in a Barclays Bank branch near London. It uses paper vouchers bought from tellers. The machine is called the De La Rue Automatic Cash System, or DACS.

(According to the article written by *Invention & Technology*’s Mike Lee, John Shepherd-Barron — the cash dispenser’s inventor claims that the paper vouchers are actually checks impregnated with Carbon.)

1968 — Card-eating: Barclays and a few other banks introduce a machine that encodes cash on plastic cards purchased from a teller. The problem is that the machine always eats the cards, and customers have to buy new cards if they want to make more transactions.

1969 — First use of ATM magstripe cards: Docutel installs its Docuteller machine at New York’s Chemical Bank. The installation marks the first use of magnetically encoded plastic. Chemical Bank’s ad campaign announces: "On Sept. 2, our bank will open at 9:00 and never close again!"

Other manufacturers get into the game, but Docutel is the first to apply for a patent. Docutel is later credited by the Smithsonian’s National Museum of American History as being the ATM’s inventor. But most people in the industry recognize Docutel’s first machine as the first modern magstripe machine.

Donald C. Wetzel is given credit for developing the Docutel machine, which is initially met with resistance from bankers. Bankers said they were concerned about the machine’s cost, which was about $8,000 more annually than a human teller. The bankers also feared
that customers won’t like having a machine handling their money.

1971 — First true bank ATMs: Docutel introduces its Total Teller, the first true fully functioning bank ATM.

1973 — Proliferation begins: By 1973, 2,000 ATMs — mostly from Docutel— are operating in the United States. They sell for about $30,000 each.

Diebold begins work on the development of its TABS 600 with plans for an off-line prototype.

1974 — Diebold’s first TABS 500 machine, an off-line version, is installed at a bank in Atlanta. Diebold develops the TABS 550, an on-line and off-line version. The flexibility of the machine makes it unique and more marketable to banks. The TABS 600 also is developed.

1978 — The first IBM-compatible Diebold machine is installed at a bank in Indianapolis.

(Source: Jerry Larson, who helped to develop Diebold’s TABS 500, 550 and 600, www.atmmarketplace.com)

Docutel’s ‘Tilly the teller’ at First Atlanta Bank, Georgia was the first attempt to give ATMs a human or user friendly branding. For a pioneering machine, Tilly was more than a cash dispenser as it allowed customers to check their balances, pay bills, make deposits and transfer funds between accounts. Tilly was successful generating transactions of volumes at around 10,000 which is at par with monthly values of ATMs in many cities today. In 1976 Docutel lost the leadership role in machine making to IBM and Diebold which had enormous resources to service the difficult years of mid 1970s. The ATM pioneer was not well placed for the next stage of competition of refining ATM technology rather than demonstrating the viability of ATM concept.

Today world’s largest ATM manufacturer is NCR which claims to make 10,000 ATMs annually at its plant in Dundee, Scotland. It began producing in early seventies and now supplies to institutes like IBM and Diebold. NCR was able to apply resources and expertise that it had gained from successful operations in other business machinery fields to problems of supplying ATMs. These were not only fully secure but also produced a highly competitive edge in offering the latest ATM functions to financial institutions and their customers.
2.2.3 ATMs in Kenya

The first ATM in Kenya was introduced by Standard Chartered Bank in 1989. It installed 12 ATMs in Nairobi, Mombasa and Thika making them the first ATMs in East and Central Africa. The Standard Chartered was the first bank in Kenya to offer electronic banking in line with the corporate’s strategy from the bank’s headquarters in London where ATM facilities had been used for over ten years (Standard Chartered Online, 2006). Barclays followed in 1995 and went on to have the largest ATM network in the country for a long time. Other commercial banks followed suit most notably Kenya Commercial Bank, Cooperative bank, National Bank of Kenya and Equity Bank. Kenya Commercial Bank which started ATM operations in 1997 is now the bank with the largest ATM network in the country. These banks run their own individual ATM networks.

Kenswitch was started in 2002 when a consortium of eighteen small and medium banks joined together to set up an online ATM network to provide a shared network for switching ATM transactions among member banks (CBK, 2003).

PesaPoint Limited is a newly-formed private company registered in March 2005. It is part of the Paynet Group which also comprises Paynet Kenya, EFT Kenya and Paynet Zimbabwe. According to PesaPoint Online (2006), the PesaPoint concept was birthed upon the realization that there was an opportunity within the market, and far too few Kenyans enjoyed ready access to their cash through ATM services either because their banks did not offer ATM’s or they were only placed in a few locations. The simple vision that grew was to provide all banked Kenyans easy access to their funds wherever and whenever it was required whilst at the same time encouraging more Kenyans to bank by providing relevant and convenient ATM locations. The strategy of the business has been to maximize the use of one infrastructure for multiple financial institutions, which will provide economy of scale particularly in marginal yet important areas and yet give the Financial Institutions an opportunity to provide ATM services to their customers while still concentrating on their core business. (www.pesapoint.co.ke)

Postbank is the latest entrant to the ATM service provision in Kenya with its Xpress Cash
ATMs. Postbank Cash X-press ATM Services are offered in partnership with Kenswitch, the company formed by a consortium of banks to provide shared ATM services to the banks' customers. There are over 70 Kenswitch ATMs at present.

The first ATMs were used solely for cash withdrawals. Currently they are used for cash and cheque deposits, balance enquiries, mini statements, utility payments such as KPLC bills, Multichoice and Mobile phone airtime top up.

According to AllAfrica Online (2006), with the growing need to offer quality services at lower cost, Kenya is experiencing an explosion of electronic cash services, including ATMs. And the financial-services-offering gap between large and small financial institutions in the country is closing so fast that soon the service could be fully commoditized. Even the advertisements on ATMs have shifted from emphasizing the status of the users to demonstrating the utility of the machines. For the banks, the ATM has plugged the hole left by branch and office closures.

2.2.4 ATM Machines

An ATM typically is made up of the following devices:

- CPU (to control the user interface and transaction devices)
- Magnetic and/or Chip card reader (to identify the customer)
- PIN Pad (similar in layout to a Touch tone or Calculator keypad), often manufactured as part of a secure enclosure.
- Secure crypto processor, generally within a secure enclosure.
- Display (used by the customer for performing the transaction)
- Function key buttons (usually close to the display) or a Touchscreen (used to select the various aspects of the transaction)
- Record Printer (to provide the customer with a record of their transaction)
- Vault (to store the parts of the machinery requiring restricted access)
- Housing (for aesthetics and to attach signage to)
2.2.5 How ATMs work

Typically, a user inserts into the ATM a special plastic card that is encoded with information on a magnetic strip. The strip contains an identification code that is transmitted to the bank's central computer by modem. On most modern ATMs, the customer identifies him or herself by inserting a plastic card with a magnetic stripe or a plastic smartcard with a chip, that contains his or her card number and some security information such as an expiration date. The customer then verifies their identity by entering a passcode, often referred to as a PIN (Personal Identification Number) of four or more digits. Upon successful entry of the PIN, the customer may perform a transaction. After the transaction is complete, a transaction record is printed, usually consisting of the action taken, date and time, location, any applicable fees, and available balance (Wikipedia 2006).

If the number is entered incorrectly several times in a row (usually three attempts per card insertion), some ATMs will attempt to retain the card as a security precaution to prevent an unauthorised user from discovering the PIN by guesswork. Captured cards are often destroyed if the ATM owner is not the card issuing bank, as non-customer's identities cannot be reliably confirmed. In some cases, a transaction may be performed at
the ATM that allows the customer's PIN to be changed securely.

Most ATMs are connected to interbank networks, enabling people to withdraw and deposit money from machines not belonging to the bank where they have their account or in the country where their accounts are held. This is a convenience, especially for people who are traveling: it is possible to make withdrawals in places where one's bank has no branches, and even to withdraw local currency in a foreign country. Some examples of interbank networks include Kenya's KENSWITCH, South Africa's SASWITCH, Hong Kong's JETCO, Canada's Interac, the Philippines' Expressnet and Nigeria's Interswitch network (Wikipedia 2006).

The top three worldwide manufacturers of ATM machinery and their ATM brands includes the Diebold Opteva series, NCR Personas series, and Wincor Nixdorf ProCash series. There are many other ATM suppliers and distributors. There are no hard international or governmental-compiled numbers totaling the complete number of ATMs in use worldwide. Estimates developed by ATMmarketplace (2006) place the number of ATMs in use at over 1.5 million as of August 2006.

2.2.6 Adoption of ATMs

Several studies have monitored ATM adoption over the last 30 years. In the early 80s, a survey indicated that location convenience was the most important factor to predict propensity of using ATM's (Stanley and Moschis, 1983). This factor became less important as ATM diffusion increased.

According to Adams and Thieben (1991), age is generally considered the most important personal factor to predict ATM's adoption. Usage of ATM's by elderly has never been as high as within other age groups. This is supported by Hatta and Liyama (1991) who contend this finding has been associated with the general resistance towards technology typical of elderly people and to specific difficulties in learning and using new technologies. Specific training programs and design solution have been proposed to lessen this problem.
It was also found out that in the United Kingdom nearly two-thirds of adults are regular cash machine users, with the proportion rising to 90% in the 25-to-34 age band usage is lower as one moves up the age range and along the socio-economic spectrum (Cruickshank, 2000).

In a study conducted on adoption and usage of automated teller machines in Nairobi Onyango(2003), observed that the majority of ATM users were young people which accounted to about 57% of the total ATM users.

Odinga (2005) identifies factor influencing adoption of electronic banking (Atms) and among these are awareness among customers (70% agree it’s important) to complexity of e-products and services (45% agree complexity influences it’s adoption). On security, customers are concerned about their transactions over the internet. There is also reluctance to change and technophobia. Odinga recommends further research on how best to overcome barriers that inhibit adoption of e-banking. He also recommends for effective utilization of e-banking, creation of sufficient customer awareness of availability and benefits of adopting e-banking.

According to Antonella et al (2004), the following are other principal reasons for non-use of ATMs.. These are:
Lack of need - feeling of being organized enough not to require banking services out of hours, not giving enough importance to saving time, and no opportunity due to the lack of personal earnings

Safety concerns-physical safety (fear of robbery) and control of transaction (concern over card security and ATM malfunctioning, fear of spending too much).

Preference for human contact -inclination for dealing with people rather than machines and a general dislike towards technology, resulting in less technology use. This reason is particularly important for elderly people.

Feeling of inadequacy-fear of not been able to use the ATM. This is also aggravated by
the fear of appearing foolish in public as a result of failing to use the machine. This reason is particularly important for elderly people. Another reason for not using ATMs is due to accessibility restrictions (wheelchair users, blind or partially-sighted people and people with reduced upper-limb strength and mobility encounter several difficulties operating ATMs). Recent legislation and standards are likely to alleviate this problem, forcing ATM manufacturers to create technology which is usable by all people, regardless of abilities.

According to Ndegwa (2003) and Onyango (2003), ATM usage was influenced by security concerns whereupon Ndegwa recommended that additional security and installation of well lit lobbies would enhance the security at the ATM and increase the usage. The female customers viewed the service as unsafe more in Nairobi given its insecurity.

Early ATM security focused on making the ATMs invulnerable to physical attack; they were effectively safes with dispenser mechanisms. In some areas, multiple security cameras and security guards are an ubiquitous ATM feature. Critics of ATM operators assert that the issue of customer security appears to have been abandoned by the banking industry.

Kandie (2003) established that the feeling of safety among customers of a bank enhanced their perception of the quality of service. With respect to feelings of safety, a customer would be able to transact using the ATM more freely and use it for more services without fear of mugging or someone stealing his ATM details.

The EastAfrican (October 19, 1998) reported a dispute between Barclays bank and customers who complained that money was siphoned out of their automated teller machine (ATM) accounts. This raised new concerns for consumers of a service which then had transactions exceeding Ksh2 billion every month. One Nairobi-based client claimed to have lost close to Ksh500,000. Another, based in the central Kenyan town of
Meru, filed a complaint over the alleged loss of Ksh 102,000 over a period of months through regular withdrawals they claim they didn't make. Barclays Bank refused to grant refunds, accusing the ATM card holders of negligence. Just as pertinent, however, is the fact that the law is silent on liability for loss in a service. Kenyan banks that offer the service have no specific contract on the use of ATMs and depend on what an insider termed "a relationship based on the existing customary responsibilities and duties of both parties." Another client said the ATM system had left her "broke to the point of borrowing money from friends." Barclays said the withdrawals could only have been made using her card and PIN (personal identification number) "which is only known to her." She could have divulged the number to others who acquired her card and drew on her account, the bank says. Central to her demands is what her lawyers cited as a failure by the bank to stop withdrawals on her account as soon as she reported the loss of her ATM card in mid-January that year. She says the bank did not do this until May 2. Even after she was issued with a new card and personal identification number in February, unauthorized withdrawals continued. On several occasions, moreover, for instance on February 26, withdrawals exceeding the then Barclays' daily limit of Ksh10,000 were made.

Another concern is that with ATMs, a card-thief who knows your PIN can punch it once and enter a request for a bank statement, which the machine processes instantly, revealing how much more he/she can make off with on regular daily withdrawal limits.

Kenyan banks have cameras at ATMs located inside bank lobbies, but these are to ensure a customer is not mugged, rather than to ascertain identity. Street-side machines are manned by guards.

In the findings of Onyango (2003), 49.3% of respondents were of the view that ATMs could not be fully trusted with 15.5% strongly convinced that it's integrity and reliability was questionable.

The studies reviewed have established the factors that influence ATM usage as age,
literacy, training and advertisement as major determinants on usage of ATMs. They have majored in the urban area more so the capital of Kenya where literacy levels, access to ATMs and communication on the use of ATMs is easily diffused. The situation is likely to be different in smaller towns like Voi. The number of banks in Voi is small and the literacy level is lower. Therefore the study seeks to establish influence of those factors on ATM use.

Further to that, the studies looked at ATM usage in terms of cash withdrawals. Our study will endeavour to establish the extent to which the customers use other services other than cash withdrawal. According to the study on ATM adoption by Onyango (2003), 80% of Nairobi bank customers revealed that they had no idea of other services that could be transacted by ATM. The same finding is likely to be encountered in Voi and other small towns.

2.2.7 ATMs and their Impact in Banking

ATMs are less costly compared to human talent and therefore actively installed by banks (Melissa, 2006). Banks have lower or sometimes no charges on ATM withdrawals making it cheaper for clients. This is meant to encourage their clients to use the ATMs. According to Melissa (2006), the banking institution’s first step in determining an ATM strategy is examining member needs.

ATMs and electronic banking reduces paperwork and enables easy access to a lot of information about a particular client within the shortest time possible. Banks are able to process large volumes of transaction. This reduces costs of the transactions because of the economies of scale. ATMs have a faster turn around in dispensing money hence ensuring a faster and quicker service than the human tellers. The customer thus has more time in his hands which he can use for his other personal issues rather than waiting in the bank to be served. Banks can virtually be ‘open’ 24 hours to serve the cash needs of their clients. When Docutel installed its Docuteller machine at New York’s Chemical Bank in 1969, the Bank’s ad campaign announced: “On Sept. 2, our bank will open at 9:00 and never close again!” ATMs free the bank workers from doing routine tasks to attending to more
complex issues and personal client problems making them more client centered (Mellisa 2006).

According to Helmut Stix (2002), use of ATMs reduces the transactional demand for money and hence reduces the supply of money in the economy. In a study conducted in Austria it was found that increased ATM use has significant and substantial effects on the demand for cash. For instance, the regression results showed that individuals who withdraw cash exclusively from ATMs held cash inventories that were on average 42% lower than those who did not use ATMs.

The effect of Industrial action by bank workers can be cushioned by the ATMs. In April 2006, the State Bank of India workers went on strike. The Hindu Business Line (April 2006) reported that in anticipation of the strike, SBI stacked its 6,000-plus ATMs across the country full of cash, which would take care of the requirements for a week in most of the machines. SBI also roped in nine of its partner banks to help customers withdraw cash through an additional network of 8,000 plus ATMs. This meant that an SBI customer could walk into an ATM of any of these partner banks and withdraw money. SBI said it would not charge its customers for using the partner banks' ATMs during the strike period. Usually, there is a transaction fee for customers using other banks' ATMs. This lessened the impact of the strike on the bank's clients.

2.3 Critical Review of Main Issue
2.3.1 ATM – The Other Uses

The World Bank Policy Research Working Paper 4079, (December 2006) states “Though ATM cards can be used for transactions other than withdrawing cash (e.g., transferring funds across accounts), we think of ATMs as primarily facilitating payments by allowing the withdrawal of funds.” This seems to be the main reason for the banks installing ATMs. In a study done in the United Kingdom, it was found that the cost to a bank of a branch-based withdrawal undertaken over the counter was over three times as much as an
ATM withdrawal (Cruickshank, 2000). This explains the enthusiasm the banks have in installing ATM machines and the higher charges associated with over the counter withdrawals.

Although ATMs were originally developed as just cash dispensers, they have evolved to include many other bank-related functions. In some countries, especially those which benefit from a fully integrated cross-bank ATM network (e.g.: Multibanco in Portugal), ATMs include many functions which are not directly related to the management of one's own bank account, such as:

- Deposit currency recognition, acceptance, and recycling
- Paying routine bills, fees, and taxes (utilities, phone bills, social security, legal fees, taxes, etc.)
- Printing bank statements
- Updating passbooks
- Loading monetary value into pre-paid cards (cell phones, tolls, multi purpose stored value cards, etc.)
- Ticket purchases (train, concert, etc.).
- Purchasing postal stamps.
- Lottery ticket purchases
- Games and promotional features
- Donations to charities
- Purchase shopping mall gift certificates.
- ATMs can also act as an advertising channel for companies to advertise their own products or third-party products and services.

2.3.2 Barclays and KCB ATMs’ Other Functions

According to Kenya Commercial Bank, Quickserve, KCB’s Automated Teller Machine offers customers the following services; cash withdrawal (in Kenya shillings and US dollars), balance enquiry, mini statement, funds transfer, cheque deposits, cheque book request, statement request and pin change (www.kcb.co.ke/ebanking/quickserve.asp).

From the above it is clear that the ATM machines can perform other functions apart from cash withdrawal. The question that remains unanswered is whether customers are fully
satisfied when they use the machines for cash withdrawals only. For the banks, won’t they feel the ATMs are being effectively used if customers used the other services on offer and spared the tellers of performing functions that can be handled by the machine. The studies reviewed have established the factors that influence ATM usage as age, literacy, training and advertisement as major determinants on usage of ATMs. They have majored on the urban area more so the capital of Kenya where literacy levels, access to ATMs and communication on the use of ATMs is easily diffused. The situation is likely to be different in smaller towns like Voi. The number of banks in Voi is small and the literacy level is lower. Therefore the study seeks to establish influence of those factors on ATM use.

In addition, the studies looked at ATM usage in terms of cash withdrawals. Our study will endeavour to establish the extent to which the customers use other services other than cash withdrawal. According to the study on ATM adoption (2003), 80% of Nairobi bank customers revealed that they had no idea of other services that could be transacted by ATM. The same finding is likely to be encountered in Voi and other small towns.

Onyango (2003) queries how the ATM services can be moved to the next level or better the living standards of the customers. Our concerns are the other services that if customers accessed easily their satisfaction would be enhanced.

Kandie (2003) quotes Smith and Whitehall (1997) defining service quality as a customer determination not a management determination but based on a customers experience with a service measured against his expectations. Service quality is a moving target. With the ever increasing array of services offered by ATMs, customers expect to use these services but barely use them. Why?

### 2.4 Future Technologies

Manufactures have demonstrated and have deployed several different technologies on ATMs that have not yet reached worldwide acceptance.
Biometrics, where authorization of transactions is based on the scanning of a customer's fingerprint, iris, face, etc. Biometrics on ATMs can be found in Asia.

Cheque/Cash Acceptance, where the ATM accepts and recognize cheques and/or currency without using envelopes.

Other possible technologies include bar code scanning, on-demand printing of "items of value" (such as movie tickets, Travellers Cheques, etc.), dispensing additional media (such as phone cards), co-ordination of ATMs with mobile phones, customer-specific advertising and integration with non-banking equipment among others.

2.5 Conceptual Framework

The extent of use and of automated teller machines is determined by several factors. These factors include availability of the machines, machine up-time, level of awareness and training in use of ATMs by user, age of the user, security concerns by the user among other factors. These factors are the independent variables. The use and effectiveness of the ATM facility are the dependent variables. These factors not only apply in urban areas but also in Voi. For effective use of ATMs and increased use of the same, the banking fraternity should train or increase awareness on the use of these machines (Ndegwa, 2003). They should also locate the ATMs in convenient places for the users. Location convenience is an important factor since it increases accessibility of the facility.

According to Adams & Thieben, K.A (1991), most people who use ATMs are young people. This is because the elderly are not comfortable with new technologies and feel intimidated by machines. Onyango Stephen (2003) established that the largest number of users (57%) of the users were graduates or in Tertiary colleges in Nairobi. Literacy level and age therefore impact on the use of this facility. The same study established that 80% of the users did not use the ATM for other services other than cash withdrawal and that 72.9% didn’t have any other services in mind that would make the use of ATMs more effective. Other factors that may affect level of use of the facility is advertisement. The above factors would determine the extent of use and effectiveness of ATMs. We
conceptualize that they will affect the effectiveness of the facility in service delivery.

Figure 2: The Conceptual Framework

Bank related factors
- ATM availability
- ATM location
- Training/awareness
- Maintenance/Reliability

ATM user factors
- Age of users
- Safety concerns
- Literacy level
- Inadequacy feelings

ATM Transactions

Usage and effectiveness of ATMs
CHAPTER THREE

3.0 Research Methodology

3.1 Introduction
This chapter discusses the research design and data collection methods that was used to conduct the research.

The purpose of this study was to investigate the factors influencing effective use of automated teller machines by bank customers in Voi.

The research was based in Voi Division of Taita Taveta District. It was carried out in Kenya Commercial Bank and Barclays Bank automated teller machine points. It involved getting information from the ATM customers. The study focused on key factors affecting utilization of the ATMS. The study also sought to identify barriers to ATM usage and new ways of increasing its utilization.

3.2 Research Design
The researcher adopted the descriptive research design. Mugenda and Mugenda (1993) says that descriptive studies determine and report the way things are. The major purpose of descriptive research is the description of the state of affairs as it exists. Our study sought to identify the factors influencing effective ATM use. After identifying the factors, the researcher described them in terms of frequency. Our research required quantifiable data which is numerical in nature i.e. whose findings can be generalized to the other areas. This study was therefore descriptive and hence descriptive study design was appropriate.

In our study we described ATM usage level and the effectiveness in service delivery in Voi.
3.3 Target Population
The study was carried out in commercial banks that had ATM network and were located within Voi division. These were KCB and Barclays.

The respondents were 60 ATM customers from KCB and 40 from Barclays. The number of customers having the ATM cards from commercial banks was estimated to be 5,500. These were customers who had ATM cards and used the machines to transact.

3.4 Sample Size
According to Tull (1980) increasing sample size reduces potential sampling error. As sample size increases the sampling distribution becomes clustered more closely around the true population value i.e. the standard error of the mean becomes smaller. When the sample gets large (30 or more) the term \( \sqrt{\frac{1}{n-1}} \) is so close to 1.0 that it can be disregarded and the sample standard deviation used as a direct estimate of the population standard deviation. Therefore a sample size of more than 30 was sufficient to infer its conclusions from.

The rule of the thumb (Mugenda and Mugenda, 1999) is to obtain as big a sample as possible.

A sample of 60 KCB customers and 40 Barclays customers was therefore justified.

3.5 Sampling Design
The researcher used simple random sampling. Simple random sampling has all possible sample units in the population having the same probability of being selected. Inclusion probabilities are by definition equal, and no corrections are necessary. The advantage of simple random sampling is that the research data can be generalized to a larger population. This method allowed the researcher to apply inferential statistics to the data and provides equal opportunity of selection for each element of the population.
60 customers from KCB and 40 from Barclays were interviewed. The questionnaires were self-administered. They were filled and collected during the interview.

3.6 Research Instruments

The research employed both the use of primary data and secondary data. This research relied on the use of questionnaires by the researcher as the major tool for data collection. The questionnaires had some questions adopted and others adapted. This method was chosen as it was hoped that it would help the respondents to respond to questions without much struggle. Questionnaires were designed to collect primary data. A semi-structured questionnaire was used. The questionnaire was divided into three parts. Part one contained questions on factors that influence ATM usage for cash withdrawal and other uses. Part two, on factors hindering the use of ATMs and part three on improving ATM services. Both closed and open-ended questions were used. They were used to collect data on various issues under investigation e.g. A question was designed to document ways in which customers learnt how to use ATMs or the reasons as why they preferred using the counter services.

As for secondary data, a comprehensive and exhaustive research of literature on ATMs was conducted. The secondary sources of data included business journals, books, the internet, newspapers and other publications.

3.7 Data Collection Procedure

The researcher was granted an approval letter from the University to conduct the research study. The researcher also got an introduction letter from the School of Business,
Kenyatta University. This facilitated cooperation from the banks and their clients. This was followed by information to the District Commissioner, Taita Taveta district. After permission was granted, the researcher administered the research instruments for the study. The researcher paid a visit to the participating banks’ managers to inform them of the study and to create some rapport.

Having identified the sampled banks, the following was done to obtain the data. For three days, the researcher collected data from KCB Voi through random sampling in the following manner.

Between 9 am and 11 am – 10 customers (5 in the ATM queue and 5 from the banking hall).
Between 12 and 2 pm – 10 customers (5 from the ATM queue and 5 from the banking hall).

For the Barclays customers, 40 customers were given questionnaires for 2 days in the following manner.
Between 9 am to 10 am – 10 customers (5 in the ATM queue and 5 from the banking hall).
Between 12 and 2 pm – 10 customers (5 from the ATM queue and 5 from the banking hall).

The questionnaires were collected immediately after being filled by the respondents. The days for the data collection were mid month and end month to capture the different periods of the month when ATM usage was likely to be different.

3.8 Data Analysis
Both qualitative and quantitative techniques were used to analyze data that was generated from this study. Data analysis was finalized with the help of SPSS (Statistical Package for Social Sciences).
Descriptive statistics to answer the research questions and objectives in relation to research topic was used. The simplest way to present data according to Brinker (1988), is in frequencies and percentage table which summarizes data about a single variable. The significance of each research question was determined by the number of the expected responses given. For example, if a question like availability of ATMs required a response like, either, adequate, satisfactory or inadequate, then the frequencies of each response were converted into percentages. The figures were then to be used by the researcher to determine the significance of each of those questions.
CHAPTER FOUR

4.0 Data Analysis Presentation and Findings

4.1 Introduction

This chapter deals with presentation and analysis of data collected from ATM users of Barclays bank and Kenya Commercial Bank in Voi town. The data was collected through questionnaires and personal interviews where necessary.

The data has been presented by use of frequency tables and graphs and by descriptive analysis of the various factors that the study set out to investigate.

The study set out to investigate the extent of use of ATMs by the Kenya Commercial Bank and Barclays Bank customers.

The main issues addressed in the study are:

- Factors influencing ATM use in Voi
- Factors hindering ATM use in Voi
- Ways of improving ATM use in Voi

4.2 Questionnaire Responses Data

The response rate was very good. The target sample was 60 customers from Kenya Commercial Bank and 40 customers from Barclays Bank.

All the questionnaires were filled representing 100% response rate. However, some questions in the questionnaires were unfilled, notably the question on ranking hindrances to ATM use.

Table I: Response rate

<table>
<thead>
<tr>
<th></th>
<th>No. of respondents</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>KCB</td>
<td>60</td>
<td>100%</td>
</tr>
<tr>
<td>Barclays</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>
4.3 Demographics of the Respondents

The information on demographic characteristics of the ATM customers are summarized and presented in tabular form.

The demographic items analyzed include sex and age. This was to determine the extent to which the sex and age of the Respondents affect their interaction with the ATM machine and also to some extent measure the diffusion of the ATM technology across the country.

(a) Gender

Out of a sample of 40 respondents from Barclays Bank, 29 were males representing 72.5% of the Respondents while 11 were females representing 27.5% of the Respondents. The females were few and also a bit reluctant to fill in the questionnaires.

<table>
<thead>
<tr>
<th>Gender</th>
<th>Barclays</th>
<th>Percentage</th>
<th>KCB</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>29</td>
<td>72.5%</td>
<td>36</td>
<td>60%</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>27.5%</td>
<td>24</td>
<td>40%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

(b) Table III: Summary of Age categories

<table>
<thead>
<tr>
<th>Age Category</th>
<th>Barclays</th>
<th>Percentage</th>
<th>KCB</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 25 years</td>
<td>6</td>
<td>15%</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td>25-35</td>
<td>14</td>
<td>35%</td>
<td>20</td>
<td>33.33%</td>
</tr>
<tr>
<td>36-46</td>
<td>17</td>
<td>42.5%</td>
<td>19</td>
<td>31.67%</td>
</tr>
<tr>
<td>47-55</td>
<td>2</td>
<td>5%</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td>Above 55</td>
<td>1</td>
<td>2.5%</td>
<td>1</td>
<td>1.67%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>
For Barclays customers, the table reveals that only 6 out of 40 (15%) respondents were below 25 years and only one (2.5%) was above 55 years.

The majority of the respondents from Barclays are between the ages of 25 and 55 years and they represent 82.5% of the Respondents.

For KCB customers, the majority of the respondents were between the ages of 25-35 years representing 33.33%, followed by the ages 36-46 representing 31.67%.

(c) Occupation

Owing to people’s fear of revealing about their incomes, the researcher categorized the occupations into four categories, students, employed, self-employed and other.

Table IV: Occupation of Respondents

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Barclays</th>
<th>KCB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of customers (n)</td>
<td>Percentage</td>
</tr>
<tr>
<td>Student</td>
<td>0</td>
<td>0%</td>
</tr>
<tr>
<td>Employed</td>
<td>27</td>
<td>67.5%</td>
</tr>
<tr>
<td>Self employed</td>
<td>11</td>
<td>27.5%</td>
</tr>
<tr>
<td>Others</td>
<td>2</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

The table reveals that the employed, 27 out of 40 representing 67.5%, constitute the majority of ATM users in Barclays Bank Voi. The self employed were 11 out of 40 (27.5%). The others, a volunteer and housewife constituted only 5%.

The research findings reveal that the majority of ATM users are either employed or self employed. Both categories have a combined 95% of the respondents.

As for KCB customers, the employed represent 75% of the respondents while the self employed constitute 13.33%.

Students and others are a minority for both banks representing less than 10% of the respondents.
4.4 Factors influencing ATM usage

4.4.1 Number of visits made by ATM users to ATM facility

For the Researcher to determine the extent of use of ATM facilities, he sought to know the number of times the respondents used the ATM facility.

Table V: Frequency of visits to the ATM

<table>
<thead>
<tr>
<th>No. of visits</th>
<th>Barclays</th>
<th></th>
<th>KCB</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No. of respondents</td>
<td>Percentage</td>
<td>No. of respondents</td>
<td>Percentage</td>
</tr>
<tr>
<td>Once a month</td>
<td>5</td>
<td>12.5%</td>
<td>9</td>
<td>15.00%</td>
</tr>
<tr>
<td>2-3 times</td>
<td>18</td>
<td>45%</td>
<td>35</td>
<td>58.33%</td>
</tr>
<tr>
<td>4 times</td>
<td>4</td>
<td>10%</td>
<td>6</td>
<td>10.00%</td>
</tr>
<tr>
<td>5 times &amp; above</td>
<td>13</td>
<td>32.5%</td>
<td>10</td>
<td>16.67%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

Figure 3: Graphic representation of Table V

The table and the graph above reveal that 18 out of 40 respondents representing 45% at Barclays use ATM facilities, 2-3 times a month. Also a sizeable population i.e. 13 out of 40 representing 32.5% of the respondents use the facilities more than 5 times in a month. For the KCB customers, the majority of the respondents use the facility 2-3 times a month representing 58.33%.

For both banks, the majority of the respondents use the ATM machines 2-3 times a month.
4.4.2 Most Preferred Service

Table VI: Most Preferred Service

<table>
<thead>
<tr>
<th>Service</th>
<th>Barclays Number</th>
<th>Barclays Percentage</th>
<th>KCB Number</th>
<th>KCB Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counter service</td>
<td>14</td>
<td>35</td>
<td>15</td>
<td>25</td>
</tr>
<tr>
<td>ATMs</td>
<td>26</td>
<td>65</td>
<td>45</td>
<td>75</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

The table shows that most of the Barclays customers preferred the use of ATMs to transact, 26 out of 40 representing 65% of the respondents.

KCB customers prefer ATM transactions over counter services representing 75% of the respondents.

In general ATM use is preferred over counter services.

4.4.3 Training on use of ATM.

Table VII: Training on use of ATM.

<table>
<thead>
<tr>
<th>Source</th>
<th>Barclays Sample</th>
<th>Barclays Percentage</th>
<th>KCB Sample</th>
<th>KCB Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friend</td>
<td>11</td>
<td>27.50%</td>
<td>15</td>
<td>25.00%</td>
</tr>
<tr>
<td>Self</td>
<td>10</td>
<td>25.00%</td>
<td>15</td>
<td>25.00%</td>
</tr>
<tr>
<td>Media</td>
<td>1</td>
<td>2.50%</td>
<td>1</td>
<td>1.67%</td>
</tr>
<tr>
<td>Bank staff</td>
<td>17</td>
<td>42.50%</td>
<td>29</td>
<td>48.33%</td>
</tr>
<tr>
<td>Others</td>
<td>1</td>
<td>2.50%</td>
<td>0</td>
<td>0.00%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

The table reveals that for the Barclays customers, 17 out of 40 (42.5%) of the respondents were taught how to use the ATM by the Bank staff. 11 out of 40 (27.5%) by friends and 10 out of 40 (25%) taught themselves. The media and others account for 5%.
For KCB customers 48% of the Respondents learnt how to use the ATM through a Bank staff. Another 50% learnt how to use the ATM either through self or a friend. This indicates that there is still room for banks to train their customers on the use of ATM in order to increase their usage.

4.4.4 Reasons why counter services are used:
This question required more than one response therefore the total number of responses are more than the sample size for each respective bank.

Table VIII: Reasons why counter services are used

<table>
<thead>
<tr>
<th></th>
<th>Barclays</th>
<th></th>
<th>KCB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
</tr>
<tr>
<td>ATM not working</td>
<td>20</td>
<td>47.62%</td>
<td>50</td>
</tr>
<tr>
<td>Don’t have ATM Card</td>
<td>7</td>
<td>16.67%</td>
<td>8</td>
</tr>
<tr>
<td>Insecurity at ATM</td>
<td>2</td>
<td>4.76%</td>
<td>3</td>
</tr>
<tr>
<td>Like dealing with people</td>
<td>2</td>
<td>4.76%</td>
<td>3</td>
</tr>
<tr>
<td>Others</td>
<td>11</td>
<td>26.19%</td>
<td>6</td>
</tr>
<tr>
<td>Total</td>
<td>42</td>
<td>100%</td>
<td>70</td>
</tr>
</tbody>
</table>

At Barclays, 20 out of 42 (47.62%) responses showed that counter services were used when the ATM is not working.

Another significant response is for others category, with 11 out of 42 responses (26.19%) use the counter services for other reasons notably when banking services are required. 1 response noted when the withdrawal limit is exceeded. 4 responses when the ATM cards have expired without notice. 2 responses, when transactions not available. 2 responses, when loose money is required. One response had no specific reason.

For KCB, the customers prefer counter services when the ATM is not working. 71.43% of the respondents prove this. 8 out of 70 responses representing 11.43% of the responses
prefer using counter services because they don’t have the ATM card. The other significant response is the others representing 8.57% of the responses. Some respondents use counter services because the services they would like are not available at the ATM i.e. payment of fees, when banking or withdrawing large sums of money. Some use counter services owing to the long queues at the ATM machines.

4.4.5 Level of Awareness of other services offer through ATM, other than cash withdrawal

Table IX: Level of Awareness of Other Services

<table>
<thead>
<tr>
<th></th>
<th>Barclays</th>
<th></th>
<th>KCB</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>No</td>
<td>19</td>
<td>47.50%</td>
<td>17</td>
<td>28.33%</td>
</tr>
<tr>
<td>Yes</td>
<td>21</td>
<td>52.50%</td>
<td>43</td>
<td>71.67%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

Results reveal that slightly above half of the Barclays customers, 21 out of 40 representing 52.5% of the respondents, are aware of other services offered by ATMs while 47.5% are unaware of the other services offered by ATMs other than cash withdrawal. Efforts should be made to increase the level of awareness of other services offered by the ATM. This is illustrated by the table and the graph obtained from the findings in the field.

KCB has a higher percentage of customers who are aware of other services offered by the ATM (71.67%).
### 4.4.6 Services used at the ATM

This category required more than one response where necessary.

**Table X: Services used at the ATM**

<table>
<thead>
<tr>
<th>Service</th>
<th>Barclays</th>
<th></th>
<th>KCB</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Frequency</td>
<td>Percentage</td>
<td>Frequency</td>
<td>Percentage</td>
</tr>
<tr>
<td>Cash withdrawal only</td>
<td>6</td>
<td>15.00</td>
<td>9</td>
<td>15.00</td>
</tr>
<tr>
<td>Cash withdrawal and balance enquiry</td>
<td>15</td>
<td>37.50</td>
<td>25</td>
<td>41.67</td>
</tr>
<tr>
<td>Cash with balance enquiry\statement request</td>
<td>11</td>
<td>27.50</td>
<td>16</td>
<td>26.67</td>
</tr>
<tr>
<td>Cash with balance enquiry\statement request\ PIN change</td>
<td>4</td>
<td>10.00</td>
<td>2</td>
<td>3.33</td>
</tr>
<tr>
<td>Total responses</td>
<td>2</td>
<td>5.00</td>
<td>3</td>
<td>5.00</td>
</tr>
<tr>
<td>Balance enquiry &amp; statement request</td>
<td>2</td>
<td>5.00</td>
<td>1</td>
<td>1.67</td>
</tr>
<tr>
<td>Cash withdrawal, balance enquiry &amp; PIN change</td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>3.33</td>
</tr>
<tr>
<td>PIN change / cash withdrawal</td>
<td>0</td>
<td>0.00</td>
<td>2</td>
<td>3.33</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
<td>60</td>
<td>100%</td>
</tr>
</tbody>
</table>

At Barclays bank from the foregoing, 4 out of 40 responses or 10% of respondents use 4 services offered by the ATMs namely, cash withdrawal, balance enquiry, statement request and PIN change. The majority, 15 out of 40 (36.5%) use only two services (cash withdrawal and balance enquiry) while only 11 out of 41 (26.8%) withdraw cash, enquire balances and request for statements.

For KCB customers, only a small percentage, 3.3% of the responses, have ever used four services at the ATM. The biggest number of respondents, 41.67%, only use cash withdrawal and balance enquiry. 26.67% of the respondents use cash withdrawal, balance enquiry and statement request.
4.4.6 Ranking of factors hindering use of ATMs

The researcher sought to investigate and rank some of the hindrances associated with the use of ATMs in the two banks from the most severe to the least severe.

Table 8: Ranking factors constraining use in Barclays Bank

Table XI: Ranking factors constraining use in Barclays Bank

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>17</td>
<td>4</td>
<td>5</td>
<td>4</td>
<td>8</td>
<td>132</td>
</tr>
<tr>
<td>Card retention</td>
<td>3</td>
<td>7</td>
<td>10</td>
<td>7</td>
<td>11</td>
<td>98</td>
</tr>
<tr>
<td>Age</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>7</td>
<td>26</td>
<td>58</td>
</tr>
<tr>
<td>Complex ATM procedure</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>13</td>
<td>11</td>
<td>90</td>
</tr>
<tr>
<td>Machine not working</td>
<td>19</td>
<td>8</td>
<td>1</td>
<td>4</td>
<td>6</td>
<td>144</td>
</tr>
<tr>
<td>Weights</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

The table reveals that the most severe problem is machine not working. It is followed in severity by security and card retention. The Age of the respondents is the least severe hindrance to the use of the ATM facility for Barclays customers. The high number of machine not working makes the ATM facility quite unreliable. There is need to maintain the ATM machine so that it can be working continuously to enhance the customers' use of it.

Factors hindering use of ATMs - KCB

Ranking of factors

Table XI: Ranking Factors Constraining use in KCB

<table>
<thead>
<tr>
<th>Factors</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Security</td>
<td>8</td>
<td>12</td>
<td>10</td>
<td>14</td>
<td>15</td>
<td>161</td>
</tr>
<tr>
<td>Card retention</td>
<td>14</td>
<td>16</td>
<td>13</td>
<td>9</td>
<td>6</td>
<td>197</td>
</tr>
<tr>
<td>Age</td>
<td>6</td>
<td>1</td>
<td>4</td>
<td>9</td>
<td>37</td>
<td>101</td>
</tr>
<tr>
<td>Complex ATM Procedures</td>
<td>5</td>
<td>8</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>144</td>
</tr>
<tr>
<td>Machine not working</td>
<td>44</td>
<td>7</td>
<td>3</td>
<td>1</td>
<td>4</td>
<td>263</td>
</tr>
<tr>
<td>Weights</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>
Findings show that the machine not working is the most severe problem hindering the use of the ATM in Voi KCB Branch.

It is followed in severity by card retention. Complex ATM procedure and security are severe problems but the least severe problem is the Age of the Respondents.

4.4.7 Ways of improving current ATM services

This question sought to find other ways of improving ATM services.

Table XIII: Ways of Improving Current ATM Services

<table>
<thead>
<tr>
<th></th>
<th>Barclays</th>
<th></th>
<th>KCB</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Percentage</td>
<td>Number</td>
<td>Percentage</td>
</tr>
<tr>
<td>Increase machines</td>
<td>28</td>
<td>20.14</td>
<td>45</td>
<td>20.83</td>
</tr>
<tr>
<td>Maintain machines</td>
<td>24</td>
<td>17.27</td>
<td>44</td>
<td>20.37</td>
</tr>
<tr>
<td>User guide</td>
<td>11</td>
<td>7.91</td>
<td>23</td>
<td>10.65</td>
</tr>
<tr>
<td>Customer training</td>
<td>12</td>
<td>8.63</td>
<td>15</td>
<td>6.94</td>
</tr>
<tr>
<td>Increased security</td>
<td>20</td>
<td>14.39</td>
<td>26</td>
<td>12.04</td>
</tr>
<tr>
<td>Proper lighting</td>
<td>11</td>
<td>7.91</td>
<td>5</td>
<td>2.31</td>
</tr>
<tr>
<td>Well labelled machines</td>
<td>13</td>
<td>9.35</td>
<td>14</td>
<td>6.48</td>
</tr>
<tr>
<td>Less time to retrieve cards</td>
<td>17</td>
<td>12.23</td>
<td>40</td>
<td>18.52</td>
</tr>
<tr>
<td>Others</td>
<td>3</td>
<td>2.16</td>
<td>4</td>
<td>1.85</td>
</tr>
<tr>
<td>Total</td>
<td>139</td>
<td>100%</td>
<td>216</td>
<td>100%</td>
</tr>
</tbody>
</table>

From the findings it is abundantly clear that there is need to increase machines and maintain them. The customers also desired to have increased security at the ATM (Build an enclosure other than the open system). The other recommended way of improving ATM service was to adopt the PesaPoint Nil card retention, increase the withdrawal limits as well as put some ATMs in remote area other than in the urban centre.

For both banks, the most recommended ways of improving ATM services by the customers was to increase and maintain machines.
For Barclays, increased security at the ATM was the third most important factor at 14.39% of the respondents. For KCB, the other important factor was less time to retrieve ATM cards at 18.52% of the responses.

There is need for machines to be maintained so that they are 100% effective.

4.4.8 Awareness and use of SMS or Telephone Banking

This question was put in order to assess how many bank customers used or knew about SMS banking. SMS banking provides a wider array of services that would enhance customer satisfaction. These services include balance enquiry, air time top up, payment of utility bills, ordering of checks among others. The table below summarizes the findings.

Table XIV: Awareness and use of SMS or Telephone Banking

<table>
<thead>
<tr>
<th>Responses</th>
<th>Barclays</th>
<th>KCB</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>Number</td>
</tr>
<tr>
<td>Yes</td>
<td>6</td>
<td>15%</td>
</tr>
<tr>
<td>No</td>
<td>34</td>
<td>85%</td>
</tr>
<tr>
<td>Total</td>
<td>40</td>
<td>100%</td>
</tr>
</tbody>
</table>

The findings show that only 15% of Barclays customers have used SMS banking. 85% have not used it. Only 25% of KCB customers have used SMS banking. 75% have not used it. This is illustrated by the table and graph above.

The results would seem to suggest that it would be easier for the Account holders to access the other services e.g. air time top up and payment of utility bills from the ATM machine rather than through the phone.
CHAPTER FIVE

5.0 SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents the summary of the findings, conclusion and recommendations, drawn from the analysed data, and the entire study.

The purpose of the study was to study the factors influencing effective use of ATMs by Bank customers in Voi.

The specific objective that guided this study are:

1. To determine the level of the use of Automated Teller Machines in Voi.
2. To establish how ATM use may be enhanced.
3. To investigate the factors that influence effective use of ATMs in Voi.
4. To establish whether all services offered through the ATM are being used.

5.2 Level of Use of ATMs

The study sought to establish the extent of use of the ATM facility. The significance of it being to establish whether the customers are comfortable using the machines. This would determine whether the machines are fully utilised or there is still capacity that can be optimised.

From the findings it is clear that the ATM machine is not frequently used. The majority of customers use it 2-3 times a month. There is thus a low level usage of the machine.

5.3 Services Preferred by the Customers

The researcher sought to establish the proportion of customers using the counter and ATM services. The aim was to establish whether customers would use counter services for services that can be transacted by the machine.
The findings reveal that the use of ATM is preferred to the use of counter service. However, some customers with ATM cards use the counter services for various reasons namely long queues at ATM points, need to withdraw more money than the limit, expiry of the card among others.

5.4 Customer Training
The study found out that banks rarely train their customers on how to use the ATMs. Most customers learn how to use the machine on their own or through a friend. The media plays a very limited role in customer training on the use of the ATM. Inspite of the above finding, it is noteworthy that bank staff, notably the guards when called upon by the customers to assist in the use of ATMs came in and assisted.

5.5 Customer Counter Preference
According to the study, the major reason why customers use counter services is machine downtimes. These are the times when the machine is not working. This is experienced most during end months and mid months, which apparently are times when ATM use is at its peak.

The other reasons for use of counter services are:

(i) When banking service are required e.g. depositing a cheque
(ii) When the withdrawal limit is exceeded
(iii) When the ATM card is expired or has been retained by machine awaiting replacement or retrieval.
(iv) When the customers require loose money
(v) When the ATM queue is too long.

5.6 Level of Awareness of Other Services
The study sought to establish whether the customers are aware of other services other than cash withdrawal offered by the ATMs.
The findings reveal that in both banks awareness of other services offered by ATMs other than cash withdrawal is above 50%. For Barclays it is 52.5%, while for KCB it is 71.67%.

These findings reveal that there is still more room for increase in awareness. Banks need to increase this level of awareness of other services by engaging in customer training, media advertisements among other marketing strategies.

5.7 Level of Service Utilisation
The study was out to establish the extent of use other services offered by ATMs by bank customers. Apart from awareness of other services, it was imperative to gauge how much the bank customers utilised these other services.

The findings reveal that majority of bank customers use the ATMs merely for cash withdrawal and balance enquiry.

The provision for cheque deposits, transfer of funds and other services are not available for KCB and Barclays Bank customers in Voi.
Bank customers rarely request for bank statements. It is even more rare for them to change their PIN numbers.

5.8 Awareness and use of SMS or Telephone banking
The study sought to establish the proportion of bank customers who have used or know about SMS banking.

This is borne out of the fact that the banking fraternity in its quest to satisfy its customers with an ever increasing array of services at their comfort has provided SMS banking, where transactions such as air time top up, balance enquiry, transfer of funds can be done using one’s phone.

The findings reveal a minority of bank customers have used SMS banking, less than 30% for both banks sampled.
The findings would suggest that customers would prefer the additional services offered through SMS/telephone banking be transacted through the ATM machine rather than through the phone. The fear of additional costs would also be a hindrance to increased SMS banking.

5.9 Factors Hindering ATM Use
The study set out to identify the factors that hinder ATM use in Voi.

It was found out that machine downtimes (not working) was the most severe hindrance. This is in the case of both Barclays and KCB in Voi. The other hindrances are security and card retention for the Barclays Bank. As for the KCB, card retention and security follow machine not working in that order.

5.10 Improvements on the Services Offered by ATM.
A good proportion of customers did not perceive the services offered by the ATM as sufficient for them. They proposed that the additional services they would like offered by the ATMs are

(i) Payment of water bills
(ii) Payment of electricity bills
(iii) Deposit of cheques
(iv) Transfer of funds across accounts for payment of wages, rents etc

The researcher established the following ways of improving/enhancing use of ATMs

(i) maintaining machines
(ii) customer education/training
(iii) inbuilt lobbies for off the wall ATMs
(iv) increased number of ATMs
(v) lower inter bank transaction cost
(vi) increased security
(vii) less time to retrieve captured cards
(viii) user guides to be issued by banks
The study established that the most acute factor affecting use of ATMs is machine downtime. ATMs should therefore be maintained to ensure their effective use by bank customers.

A proposal was made by customers to the banks to adopt the Pesapoint Nil card retention strategy. The Pesapoint system the card is not fully ‘swallowed’ by the machine but it just momentarily slots in and out immediately. So cards can never be captured by the machine. This would reduce the incidences of captured cards and its attendant inconveniences.

5.11 Recommendations

It is very clear that Automated Teller Machines have revolutionised service delivery in banks. They have not only reduced service time but also increased customer satisfaction by ensuring that they are served even after office hours. ATMs have reduced the cost to the banks and also made the customers access their deposits at their own convenience.

From the study conducted, the researcher has come up with several recommendations. These are:

(I) Machine down times\ not working

This occurrence was identified as the most severe hindrance affecting the use of the machine by the customers.

It can be attributed to power outages and machine breakdown. The customers also expressed some doubt as to whether this was a normal incident or was induced for some reasons by the banks.

The findings reveal that customers get discouraged, disappointed and even at times point accusing fingers at the bank management.

The bank should endeavour to maintain the machines and ensure they are working 100% of the time to ensure that customers can access services via the machine.
Where the breakdown is caused by power failure, automatic generators should be installed.

In addition to this, the banks should endeavour and link with other banks so that the customers can enjoy the shared ATM facility and hence enhance their satisfaction to a point where customers are delighted.

(II) Increasing machines

The study reveals the customers desire for increased machines. It was noted with concern that some customers would withdraw cash from the counter even when the ATM is available owing to long queues. The need to increase the machines is happily realised by the banks as can be seen by the KCB now linking up with Pesapoint.

It is also important that customers are made aware of the withdrawal charges at other institutions. This would enhance their confidence as they transact at these institution’s ATMs away from their bank.

It is recommended that withdrawal charges should be lowered between the banks that allow interconnectivity between their ATM facilities.

(III) Security

Security is a critical issue with regard to customers’ use of the ATM. Perceptions of insecurity by the customer scares off the customer thus limiting his ATM transactions.

It is recommended that banks should provide in-house lobbies for the ATM which has a greater sense of security other than the off the wall type.

ATM sites should also be guarded 24 hours to ensure that there is enough security and should also be well lit.
(IV) Card retention

Card retention was also identified as a serious problem afflicting bank customers, notably KCB customers.

This retention is not attributed to incorrect entry of ones PIN but to faulty machines. In addition to this, the retrieved time for captured cards should be reduced. The issue of captured cards is more critical where the capture takes place in another bank’s branch other than the customer’s. The process of getting the captured card is long due to the bureaucratic procedures employed.

The researcher recommends that machines be fully maintained to avoid unnecessary card retention and retrieval of captured cards should be done fast enough to avoid inconveniencing the bank clients.

The researcher further recommends that banks install their machines in such a way where there would be NIL CARD Retention as employed by Pesapoint.

(V) Customer Education

Lack of skills in transacting at the ATMs limits the use of the machines. This is more profound to the elderly, above 55 years of age, whole lack of confidence and training would easily deter them from using the machine.

To increase the use of the machine by all groups, the researcher recommends that the banks initiate thorough customer education both at the ATM lobbies and the banking halls. The education should clearly outline the cost advantages of using the ATMs.

Customer education would also create awareness of the other services offered by the ATM other than cash withdrawal. The findings reveal that the level of awareness is 72% for KCB and 53% for Barclays. There is still room for creation of awareness.

Customer education can also be enhanced by giving booklets and pamphlets outlining and illustrating how the ATM is used, the services offered among other things the bank may deem necessary.

In addition to this, personnel at ATM lobbies, if possible, would greatly help in tending to customer queries.
The media should also be involved in increasing awareness and educating the public on ATM transaction procedures.

(VI) Withdrawal Limit
The researcher found out that customers used the counter services at times when the amount to withdraw exceeded the ATM limit. To cater for this additional group of people it is recommended that the banks increase the ATM withdrawal limit to a point where the minimal balance is required for a savings account holder.

(VII) SMS Banking\Telephone banking
The finding reveals that very few people have used telephone banking being a new phenomenon in the banking industry. The researcher recommends that apart from creating awareness of other services offered through telephone banking, the banks should also avail this service through the ATM.

(VIII) Other services
The researcher recommends that the other services that can be offered through the ATM be installed in the banks studied. These services include payment of utility bills e.g. water and electricity, transfer of funds across accounts e.g. payment of fees, mobile air time top up, cheque deposits among others. This would free up the tellers and enable them perform other jobs. The routine jobs that can be operationalised\computerised would be handled by the ATM. It is not lost out to the researcher that this undertaking would require the customer to spend more time in the machine and therefore increase the prospect of a longer queue. Additional investment on more machines would be required to ensure that both the customers’ quest for quick service and the banks need of cost reduction and profit generation in the long are met.
5.12 Suggestions for further research.

A comparative study on the cost-benefit implications of offering other services other than cash withdrawal offered through SMS banking or through the ATM should be carried out.

Our research could not dwell on SMS banking and our supposition on the need for other services to be readily availed through the ATM might not be practicable.

Another probable area of research is the study of factors that lead to decisions by banks to have interconnectivity of shared ATMs and its effects on the profitability of the banks involved.

A similar study should also be carried out in a more rural setting so that the results of the study can be more generalised and enhancement in the use of ATMs be achieved across the country not only as cash dispensing machines but also providers of other services, which other ATMs in other parts of the world dispense.
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Dear Sir/ Madam,

Re: Research On Factors influencing effective use of Automated Teller Machines by Bank customers In Voi.

I am an MBA degree student at Kenyatta University undertaking the above study as part of my course requirement.

Your bank has been identified as a source of information concerning the factors influencing effective use of ATMs in Voi. The information is to be collected from your customers by use of a questionnaire. This was mainly customers using the ATMs and some in the banking hall. The collected information was treated with the strictest confidence and used only for academic purposes.

I therefore humbly request for your kind permission to collect this information. I intend to give out the questionnaires at mid month and end month. This will be done in a courteous and respectful manner in such a way as not to cause any disturbance to the bank or the customers.

Thanks in advance for your kind support.

Mungai Kinuthia.

MBA Student.
Dear Sir/ Madam,

Re: Research On Factors influencing effective use of Automated Teller Machines by Bank customers In Voi.

I am an MBA degree student at Kenyatta University undertaking the above study as part of my course requirement.

In reference to my study area I have the pleasure to inform you that you have been randomly selected to participate in the above study. Enclosed herein is a copy of a questionnaire which I kindly request you to take a little bit of your time and complete by putting a tick in the appropriate box and providing any other as may be required.

The information you provide in the questionnaire is for academic purposes only and was treated in confidence. This information is meant to contribute to better understanding and increased usage of automated teller machines (ATMs). I wish to thank you in advance for your willingness to participate in this academic exercise.

Thank you.

Kinuthia Mungai
MBA Student.
APPENDIX III
QUESTIONNAIRE

QUESTIONNAIRE FOR KCB AND BARCLAYS BANK CUSTOMERS.
The purpose of this questionnaire is to carry out an investigation on the factors influencing ATM usage in Voi. The information you provide was of greater benefit in improving ATM services. This information is solely for the purpose of the study. It will therefore be treated with strict confidence.
Please answer all the questions by ticking(✓) where appropriate and supplying relevant information in the spaces provided.

SECTION 1
Factors that Influence ATM usage.

1. What is your gender? Male □ Female □
2. What is your age? Below 25 □ 25-35 □ 36-46 □
   47-55 □ Above 55 □
3. What is your occupation? Student □ Employed □ Self-employed □ Others □
4. How often do you use the ATM?
   - Once a month □
   - 2-3 times a month □
   - 4 times a month □
   - 5 and above times a month □
5. Which of the following services do you use most to transact?
   - Counter services □ ATMs □
6. How did you learn to use the ATM?
   - Through a friend □
   - Self □
   - Bank staff □
   - Media □
   - Others (specify) ____________________________
7. When you use the counter services, which of the following are the reasons for your preferred choice? Tick one or more which apply.

- ATM not working □
- Does not have an ATM card □
- I like dealing with people □
- Insecurity at ATMs □
- ATM location not suitable □
- Others (specify) ____________________________

8. Are you aware of other services offered through the ATM other than cash withdrawal? Yes □ No □

9. Which of the following services have you used at the ATM? Tick one or more which apply.

- Cash Withdrawal □
- Balance Enquiry □
- Mini Statement □
- Funds Transfer □
- Cheque Deposits □
- Cheque Book Request □
- Statement Request □
- Pin Change □
- Mobile air time top up □

Section 2

Factors hindering use of ATMs

1. Have you ever had a problem using the other services offered by the ATM apart from withdrawing cash?

- Yes □ No □
2. The following are some of the hindrances associated with the use of ATMs. Please rank these problems from the most severe by assigning numbers (1-most severe to 5-least severe)

<table>
<thead>
<tr>
<th>Hindrance</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
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<tbody>
<tr>
<td>Security</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Card retention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
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<td></td>
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<td>Complex ATM procedures</td>
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<tr>
<td>Machine not working</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Section 3

**Improving ATM service**

1. Are the current services and functions sufficient for you?
   - Yes □ No □

2. If your answer is no, which other facilities would you like to be offered by the machine?
   - Water bill payment □ Electricity payment □
   - Telephone bills □ Others, specify

3. The following are ways of improving the ATM. Please indicate by ticking which ones you would recommend.
   - Increase number of ATMs □
   - Maintain machines □
   - An ATM user guide □
   - Customer training □
   - Increased security at ATMs □
   - Proper lighting □
   - Well labeled machines □
   - Less time to retrieve retained cards □
   - Others, specify
### APPENDIX IV
### RESEARCH BUDGET.

<table>
<thead>
<tr>
<th>Item</th>
<th>Kshs.</th>
</tr>
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<tbody>
<tr>
<td><strong>(a) Cost of Proposal</strong></td>
<td></td>
</tr>
<tr>
<td>Typing and printing expenses</td>
<td>5,000</td>
</tr>
<tr>
<td>Binding</td>
<td>1,500</td>
</tr>
<tr>
<td>Travelling and communication expenses</td>
<td>6,000</td>
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<tr>
<td><strong>Sub total</strong></td>
<td><strong>12,500</strong></td>
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<tr>
<td><strong>(b) Projected cost of project</strong></td>
<td></td>
</tr>
<tr>
<td>Travelling expenses</td>
<td>10,000</td>
</tr>
<tr>
<td>Typing and printing</td>
<td>6,000</td>
</tr>
<tr>
<td>Binding 6 copies @ 1,000/- each</td>
<td>6,000</td>
</tr>
<tr>
<td>Miscellaneous expenses</td>
<td>3,000</td>
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<tr>
<td><strong>Sub total</strong></td>
<td><strong>25,000</strong></td>
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<tr>
<td><strong>Total cost</strong></td>
<td><strong>37,500</strong></td>
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</tbody>
</table>
## APPENDIX V

### TIME SCHEDULE AND PROJECT EXECUTION PLAN

#### Time Schedule

<table>
<thead>
<tr>
<th>Activity</th>
<th>Description of activity</th>
<th>Estimated time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Pilot study</td>
<td>2 weeks</td>
</tr>
<tr>
<td>2.</td>
<td>Adjustment</td>
<td>1 week</td>
</tr>
<tr>
<td>3.</td>
<td>Data collection</td>
<td>2 weeks</td>
</tr>
<tr>
<td>4.</td>
<td>Data coding</td>
<td>2 weeks</td>
</tr>
<tr>
<td>5.</td>
<td>Data analysis</td>
<td>1 week</td>
</tr>
<tr>
<td>6.</td>
<td>Report writing &amp; compiling</td>
<td>4 weeks</td>
</tr>
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</table>

#### Project Execution Plan

<table>
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<tr>
<th>PHASE</th>
<th>DESCRIPTION</th>
<th>Duration in Weeks</th>
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<tr>
<td>I 1st -14th Sept 2007</td>
<td>Pilot study (2 weeks)</td>
<td>1 2 3 4 5 6 7 8 9 10 11 12</td>
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<tr>
<td>II By 21st Sept. 2007</td>
<td>Adjustment (1 week)</td>
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<tr>
<td>III By 6th Oct. 2007</td>
<td>Data collection (2 weeks)</td>
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<td>IV By 30th Oct. 2007</td>
<td>Data coding (2 weeks)</td>
<td></td>
</tr>
<tr>
<td>V By 14th Nov. 2007</td>
<td>Data analysis (1 weeks)</td>
<td></td>
</tr>
<tr>
<td>VI By 14th Dec. 2007</td>
<td>Report writing and compiling (4 weeks)</td>
<td></td>
</tr>
</tbody>
</table>