ADOPTION AND USAGE OF AUTOMATED TELLER MACHINE SERVICES INSTALLED BY BANKS IN NAIROBI
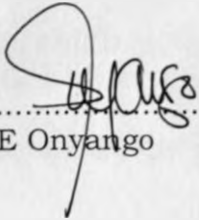
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A MANAGEMENT RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTERS IN BUSINESS ADMINISTRATION, FACULTY OF COMMERCE, UNIVERSITY OF NAIROBI

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DECLARATION

This project is my own original work and has not been submitted for a degree in any other university.

Signed .... Date .... 16|12|2004 ....
Stephen E Onyango

This project has been submitted for examination with my approval as the university supervisor.

Signed .... Date ..... 16|12|2004 ....
Dr. Raymond Musyoka

ACKNOWLEDGEMENT

To the Almighty God for his grace for without it this work would not have been possible.

To my wife, children, family and friends for their encouragement and support: God bless you.

To Dr R Musyoka, my project supervisor: thank you for your guidance.

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ABSTRACT

After decades of its introduction in the developed world Automated Teller Machine services cannot be said to be fully appreciated and used by residents in the City of Nairobi. This study therefore sets out to establish its acceptability, adoptability and usage after its introduction as an alternative to over-the-counter banking service.

This research was carried out by the use of an exploratory survey as studies on adaptation and usage have not been carried out before. Questionnaires were administered through judgemental sampling and its findings analysed with the help of the SPSS Computer package.

In summary its result was that the adaptability of Automated Teller Machine services is good. Concerns were however raised on the limited range of service offering that is currently being made available to its customers by the Banks, the security around its usage, the trust about correctness and likely fraudulent transactions and also the numbers and spread of the Automated Teller Machines within and without the city. Grey areas and information gaps also exists on the range of services currently available that the residents of Nairobi can enjoy from the Automated Teller Machines,

Recommendations have therefore been made which includes inter alia the increase of the range of service offerings beyond what is currently available, eradication of customers ignorance on what is being offered and how they can benefit from the full utilization of what is currently available, improving customer convenience through numbers and location spread of the machines and making the physical environment more pleasant and secure. Suggestions for further study were also made. research could be undertaken on how these machines could be used to contribute towards further improvements of living conditions and standards of Nairobians both within and without the operations of the banking industry which pioneered their introduction and on how to improve upon the unfavourable perception of insecurity, distrust, and the unavailability of the service at customers demand.

CHAPTER ONE
INTRODUCTION

1.1 Background

Over the years the Banking industry has been making and declaring huge profits. This has continually attracted many new entrants into the industry thereby creating and provoking intense rivalry and competition which as a consequence become a major challenge to individual member's survival. Globalisation also opened gates for new competition particularly in the area of trade finance. This rivalry explains the beehive of activities seen within each Bank as they all aim and strive to outdo each other. This is done by either attracting an entirely new custom or through the easier way of dipping hands into competitors' basket. The result is usually an increased share of the limited market which is available and thereby increased profitability. The Central Bank of Kenya's monthly review for March 2003 estimated the industry's total market size to have been Kshs 469.4 billion. This was shared out amongst 48 Banks, 3 Non Bank Financial Institutions, 2 Mortgage Firms and 4 Building Societies (Economic Review 2003). Increasing rapidly and adding to this seemingly congested industry and the tight competitive situation are substitute organizations and associations such as co-operative societies, foreign exchange bureaus, money transfer organizations, shylocks and unlicensed moneylenders, merry go rounds and so on.

Besides it being limited, the market faced the threat of the effects of the economic downturn that was and is still being experienced in the country. The Gross Domestic Product (GDP) averaged 1.0% between 1998 and 2002 down from 4.1% in the 1980s. The population living

below the poverty line averages 55% even as of today (Statistical abstract 2003). This is how it was in 1989 when the Automatic Teller Machines were first introduced in Kenya.

At that same time, the Banks were operating in an industry that was experiencing and grappling with the effects of deregulation. There had been a shift in the government policy towards the freeing the operations of the Banking Industry. Exchange Control was done away with. Controls in the management of the cost of money such as regulated interest rates were removed. As was to be expected, the Banks jumped into the bandwagon at the opportunity it created of increasing their short term profits. They took undue advantage of the freedom without much regard as to the effects that such moves would have on them in the future. To cite an example, the Banks raised their lending interest rates to an average of 30% up from 11% (Statistical Abstract, 2003). This did not go down very well with the general public and businesses who craved for government action against the Banks to reintroduce regulate interest rates. One such attempt was through the 'Donde' Bill 2000 which was sanctioned by parliament. To deal with this situation, the government acted indirectly by reducing its demand and the utilization of locally provided funds. The Banks therefore found themselves in a situation of declining interest rates on Treasury Bills which to them meant that they could not only, no longer earn from their previous lucrative safe investments but that they in turn had to reduce the interest they charged their customers for the money they lent.

Further, the Banks had to take cognisance of the changing customer needs that were increasingly being influenced by customer sophistication, changing lifestyle, the insatiable desire for convenience and the demand for value for the services the Banks offered. These changing customer needs arose in response to the changes in the social

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and demographic factors in the Bank's external environment. These included *inter alia*, the gradual increase over the years of the number of higher-level educated persons, a literacy rate of 86.3% in 1995, a population age mix of persons between the ages of 15-64 averaging 56.1 %, urban migration increasing to an annual rate estimated to be about 17% of target town population (worldfactbook2002.kenya.htm) and a notable rapid inward transfer of western culture into the country. In addition, there was an observed increase in criminal activities in the country especially those involving mugging and robbery. 19,150 cases were reported in 1998 (Economic Survey, 2003). Many went unreported. This insecurity made the Bank customers feel unsafe to withdraw and carry cash around that they did not immediately need. Inevitably all these and other unmentioned social factors put together, culminated in additional pressure on the banks to explore for an even better, safer, cheaper and more efficient banking services than what existed.

Internally, the Banks had to examine such parameters as their operating costs, the limitation of their existing premises and the efficiency and effectiveness of their existing service delivery processes as a means of building on their strengths and turning round their weakness into strength. To respond to these challenges that threatened their existence the banks had to gear up their primacy drivers which included the improvement of customer access to their services, increase the offering of new and / or improved products and services, provision of products and services offered by their competition, increased customer loyalty, the attraction of new customers and the reduction of customer attrition. This brought about service and marketing innovations. Amongst the many options that were considered, the Automated Teller Machine service was one that was introduced. For even with the then relatively expensive computer technology, the cost of processing withdrawals or deposits via

an Automated Teller Machine was proving to be less than the cost of employing and training tellers to do the same work (Wenere, 2002).

1.2 Development of Automated Teller Machines

Automatic Teller Machines, also commonly referred to as ATMs, are electro-mechanical equipments that dispense cash, allow customers to obtain their account balance and request for account statements without the necessity of face-to-face interaction with the employees of the service provider or human tellers. In addition, they also, *inter alia*, facilitate deposits of cash and cheques into customers' bank accounts, ordering of chequebooks, and payment of invoiced or utility bills, acceptance and effecting of money transfer instructions. These machines, the world over, are used almost exclusively by banks and financial institutions and allow their customers to conduct financial transactions 24 hours a day and have an alternative deliver channel to the traditional over-the-counter method which has time restriction.

According to Bellies (2002), in 1968, Don Wetzel, an American product-planning executive at Docutel, a firm in the United States of America, conceptualised the idea of an Automatic Teller Machine as he lined up over a long time waiting his turn to be served at a Dallas Bank. Together with his colleagues Tom Barnes, a mechanical engineer and George Chastain, an electric engineer, they invented and patented the first successful Automated Teller Machine to be used in the United States of America. It took five million dollars to develop this Automated Teller Machine. A working prototype was built in 1969. In 1973 Docutel installed the first American Automatic Teller Machine in New York.

However Don Wetzel was not the first or the only one with that idea in the world. The need for Automatic Teller Machines would appear to have been universal in the developed world at that time. Many inventors worked independently in different parts of the world and without knowledge of each other's efforts to contribute to the invention and development of the Automated Teller Machines. Barclays Bank claims to have installed its first cash dispenser in June 1967 in the UK (Retail Banking Research Limited, www.rbridn.demon.co.uk, 2002), a claim that would make it be the first successful Automated Teller Machine in the world. Be that as it may cash dispensers were installed in France, Sweden and Switzerland in about the same period. Japan is said to have installed its first Automated Teller Machine in 1973, the same year that America did. In each of these countries, domestic manufacturers designed and manufactured the Automatic Teller Machines that were installed.

The first Automatic Teller Machines to be put into use operated very differently from today's devices as they provided cash dispensing services only. They could not take in deposits, transfer money between accounts, and offer cash advances to credit cards and such other services. There were no magnetic cards. Customers were issued with paper vouchers, which were fed into the machines and which the machines retained after dispensing a single currency note. The variation was the use of thin plastic cards instead of paper vouchers; these were also retained by the machines but were subsequently returned back to the customers through the post after processing, so that they could be used again and again. The retention of these vouchers or cards was necessary as these first generation Automatic Teller Machines operated off-line. As the machines lacked connectivity with the banks' account databases, cash was not withdrawn automatically from accounts. The fact that those machines could neither check if funds were available in the accounts nor

whether the vouchers or cards being used were either stolen or lost by their owners, made the use of Automated Teller Machines a privileged and exclusive service offered only to those with good banking records.

The next major step came in 1972, when Lloyds Bank in the United Kingdom installed the first on-line machines, which had been developed by IBM. These Automated Teller Machines were linked to Bank's account databases through telephone lines allowing communication between them. They used plastic cards with a magnetic stripe, which identified customers' account. Consequently, the banks did not need to process the cards physically and it could be returned to the customers by the machines at the end of the transactions. These became known as the second generation Automatic Teller machines. They proved cheaper to operate and were more reliable.

Subsequent developments saw the introduction of more versatile machines that offered a whole wide range of services other than dispensing cash. Security features were introduced through use of personal identification numbers (PIN). Reliability of the machines progressively improved and note-handling capabilities became more refined and simplified. The price per machine continued to fall. The current cost ranges between USD 15,000 and USD 20,000 (Retail Banking Research Limited 2002).

Since their introduction about thirty years ago, Automatic Teller Machines have gradually become the electronic face of banking for a lot of customers. It has become a worldwide phenomenon. According to the Retail Banking Research Limited (2002), over one million machines had been installed by 1999 in both developed and less developed countries. The Banking Industry had invested over USD 30 billion in buying these

machines and much more in installing and running them. Today Asia-Pacific leads in numbers. Europe, and North America, followed at some distance. Next is Central and South America. Africa is the continent in which the machines have had the most modest impact; it is only in South Africa that their numbers are substantial, otherwise there are several African countries which have no machines at all.

Automated teller machines can be said to have several benefits. What stands out most to the customers is the convenience they offer. For example cash and other financial services can be available 24 hours. The banks gained mainly from additional custom, reduction in operating costs, and decongestion of banking premises.

1.3 Automated Teller Machines in Kenya

Enquires made by this researcher established that the Standard Chartered Bank installed the first Automatic Teller Machine in Kenya in 1989, which is some 15 to 20 years after the developed world. They were followed by Barclays bank of Kenya ltd in 1995. Other large and medium size Banks such as Kenya Commercial Bank, Co-operative Bank of Kenya, NIC Bank and CFC Bank subsequently followed. A population of approximately 179 machines had been installed countrywide by March 2003. The most recent and interesting development in the Automated Teller Machines services in Kenya has been the joining up of forces by 22 smaller banks, in November 2003, in a shared up electronic financial switch that facilitated the interconnection of shared Automated Teller Machines (East African Standard 18th November 2003).

Initially the leaders installed them as part of their strategic moves towards obtaining sustainable competitive advantage over their

competition. It was to enable them achieve their objective of profit maximization. Aosa (1992) did argue that strategy is the creation of a fit between the external characteristics or environment and the internal conditions of an organization so as to solve a strategic problem arising from a mismatch between the two. The external environment consists of all forces or conditions that affect organizations strategic options and define their competitive situation (Perce and Robinson, 1997). These forces or conditions are beyond influence of the organizations. When external circumstances change organizations have to strategically respond to the changes (Thompson et al, 1997). Laggards on the other hand joined in later in the installation of Automated Teller machines as they would rather that their customers did not start contemplating or even think of Banks with Automated Teller Machines services for fear that their next logical step would be to move their accounts.

1.3 Statement of the problem

The years of the 1990's saw a lot of changes in the Kenyan economy. Most of them relate to the external environment with which organizations have to interact, as it is where they get their inputs and it is also where they release their outputs after transformation (Ansoff et al, 1990). Automated Teller Machines were introduced in Kenya in response to these changes in environment. Today, after 15 years of their existence, the growth in their installation seems to be continuing as a means of attracting more customers, in cutting operational costs, modernizing banking services, extending the hours of service availability and so on.

According to Zeithaml and Bitner (2000) consumer resistance was noted when Automated Teller Machine services were first introduced in the

world necessitating tremendous marketing effort to communicate the benefits of the new service and to educate people in its use. They attributed this to the fact that people were sceptical of computer technology as many bank customers had no experience with computers and that some feared that the machines would either steal their money or cards or make errors. People had to learn what they had always viewed as a personalised service delivered by a human bank teller could also be delivered reliably through technology. Kenya would not be expected to be any different.

But despite the above issues no study would appear to have been conducted by the Banks, stakeholders or other independent parties to examine the attitude, adoption and usage of Automated Teller Machine services in Kenya or even Nairobi following their introduction. A knowledge gap would appear to exist. There are no meaningful hypotheses either that have been formulated or appreciated. Shimba (1993) did some research work on the aspects of planning in the financial sector in Kenya. This study only focused on the planning practice. Ndegwa (1996) looked at Banks and Financial institutions in Kenya from a marketing perspective concentrating his efforts only on service quality. It did not include any aspects of the Automatic Teller Machines. Gathoga (2001) researched on the competitive strategies applied by commercial banks. Her factor analysis revealed that the key issues that impacted most Banks were increased competition and the threat of substitute services. She concluded that strategy formulation was very important to the survival of Banks and/or their profitability.

This study therefore seeks to examine:

1. What is the perception and attitude of the residents of Nairobi on the services of the Automated Teller Machines installed by the Banks?

2. What are the factors that influence the diffusion of Automatic Teller Machine Services, its adoption and usage?

1.4 Objectives of the study

1. To establish the perception and attitude the residents of Nairobi have on Automated Teller Machines services installed by the Banks in Nairobi.

2. To identify factors influencing the adoption and usage of Automated Teller Machines services in Nairobi.

1.5 Significance of the study

1. To the Banking industry

This will enable them establish the extent of achievement of the purpose for which Automatic Teller Machines were introduced and offer information for further strategy formulation and enhancement to their competitive advantage.

2. To other Service industries

This may enable them see the effects of strategy formulation and implementation in the face the challenges brought about by changes in the environment they operate in. It may also encourage the adoption of Automated Teller machines within their industry setting.

3. To Scholars

This study will provide another practical example on the effects of the formulation of strategic marketing plans and their implementation to meet the challenges they face from the changing environmental factors as they pursue their objectives. It will also generate and allow for formulation of specific hypothesis and thereby offer scholars basis for further research.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter examines the meaning and nature of services, marketing of services, the financial services and Automatic Teller machines as services, adoption and usage of service innovations and lastly the influences on adaptation of new services.

2.2 Meaning and nature of services

A broad definition of any service is one that defines it to include all economic activities whose output is not a physical product or construction, but that which is generally consumed at the time it is produced and that which provides added value in forms that are essentially intangible concerns to its first purchaser (Quinn and others, 1987). Bitner et al (1995) described services as deeds, processes and performance. Another definition of service was provided by Kotler et al (1996) as any activity that one party can offer to another which is essentially intangible and does not result in the ownership of anything. There are other definitions but the very existence of a variety of definitions can often explain the confusion or disagreements people have when discussing services and when describing industries that comprise the service sector of the economy (Zeithaml and others, 2000). It is not surprising therefore that more often than not the words services and goods are used interchangeably in general conversation. This is further aggravated by the fact that the success of goods manufactured is

virtually dependent on the service they provide (Zeithaml and others, 2000).

There however exist differences between services and goods but the distinction is somewhat artificial. Intangibility does represent the most critical difference between them. Unlike goods, services cannot be readily displayed, seen, tasted, felt or touched. There are no tires to kick, no samples to taste and no test drives available. The buyer will not know with certainty the ultimate results of what he or she has bought beforehand. This characteristic of service alludes to the fact that consumers will always find it difficult to evaluate service and may result in them perceiving a service as risky. It also makes it almost impossible to protect services through patents and to determine its actual production cost hence they are often thought of as harder to price that goods. The distinguishing of services from goods can be said to evolve from a continuum based on the level of tangibility; with those most tangible and those least tangible being found on the two opposite extremes (Shocktack, 1997). To compensate services for this lack of intangibility companies have created or developed strong visual symbols or stressed the professionalism of their staff with promises of successful service outcomes.

Goods are usually produced in locations far removed from the customers and totally under the control of the manufacturing firm. Service production more often than not requires the presence and almost inevitably the active participation of the consumer and sometimes of other consumers. This characteristic of service is referred to as inseparability. Physical goods are produced, then stored, then later sold and consumed. Services on the other hand are first sold before they are simultaneously produced and consumed. This means that service cannot be separated from the provider.

Riddle (1996) identifies three basic types of service production. Firstly there is co-production, where the provider and the consumer work together, then there is isolated production where part of the service is produced outside the consumer's presence and lastly self service, where consumers independently use equipment provided by the service provider to produce the service they require.

Depending therefore on the attitudes, corporation and so on of the service provider and that which the consumer brings to the service encounter, the results can be very satisfying.

Another distinction is variability or heterogeneity. Intangibility alone would not be such a big problem if consumers could be sure that the service they are to receive could just be like their last successful experience or that which their neighbours were so pleased with. Services are performances often involving cooperation and skills of many individuals and are therefore unlikely to be the same every time. Service providers have good and bad days or they may be less focused at different times of the day. Quality of services therefore depends on who provides the service as well as when, where and how it is provided. Standardization and quality control are difficult because of service's inherent heterogeneity (Berry1980). Both the providers and the consumers, being human beings, are affected in the delivery or consumption of the service by factors such as energy levels, frame of mind, and moods. As noted earlier, services are simultaneously produced and consumed and therefore they do not offer the opportunity for correction. Additionally, no two consumers are precisely alike, each will have unique demands.

Lastly, in differentiating services and goods, it is realised that services cannot be stored and later used. They are time dependent and are performed in real time that is they are produced and consumed simultaneously. This characteristic is referred to as perishability. The provision of service on demand has lead to the need for shorter distribution channels (Batesion, 1977). However Evans and Brown (1983) noted that with the development of high standards in technology and equipment, it is becoming easier to lengthen these channels.

According to Lovelock, (1984), the difference between goods and services is threefold. First the nature; goods are objects, devises, things and so on in contrast to services which are performances acts or efforts. Secondly is the customers involvement in production; customers create the service product either by serving themselves (fast food restaurant) or cooperating with the service provider (hair salon) as compared with goods whereby the consumer in not present in its production (cars). Last is quality control; whereas in services consumption takes place as the service is being produced thereby making it difficult to manage quality, it is relatively easier in goods, as consumption is done much later following production.

2.3 Marketing of Services

Essentially, a product is anything that is offered to customers for acquisition or purchase. Defined in this way, the term embraces physical objects, personalities, services, places and ideas. In the fundamentals of marketing anything, cognisance of the existence of the marketing mix variables, that is Product, Price, Place and Promotion or the 4P's, ought to be taken into account whenever discussing services and goods. Price,

from the marketing perspective, is the value placed on goods or services by the customers at some point in time. Place refers to when and where the service is made available to the consumers or to the distribution channels. Place is not particularly a real issue for most services (Lovelock and others, 1988). Promotion is in basically marketing communication which includes advertising, public relations and personal selling.

However, apart from those traditional 4 P's, Booms and Bitner in 1981 found it necessary that 3 other Ps be added to the marketing of services. The first additional P is people as many services require personal interactions between customers receiving the service, those waiting to receive the service and the firm employees. These interactions strongly influence the customers' perception of service quality. The second is physical evidence. This is the tangible component of the service experience usually comprising of anything physical such as the surroundings in which the service is provided. It consists of cues as the 'servicescape', that is, the ambience, background music, layout of the facilities and so on which can have profound effect on the impression customers' form about the quality of service that they receive (Bitner, 1990). Promotional materials, written correspondence also provide tangible evidence of the firm's professionalism. The last of the additional 3 P's is the process involved in service production. Because customers are often involved in the production of services, the flow and progress of the production process is important for services. The pace of the process and the skill of the provider become quickly apparent to the consumer and are fundamental to his or her satisfaction with the service purchased.

Having said all that, satisfaction remains the key element in understanding the marketing of services. According to Wells and Prensky (1996), customer satisfaction is the feeling or the attitude of the

customer towards a service or product after its use. It is a result from the comparison between a person's expectation about a service and the actual performance of the service. Satisfaction comes from the Latin words *satis* meaning enough and *facere* meaning to do or make. It is a state that may include contentment, surprise, pleasure or relief (Oliver, 1989). This feeling is very important because of its impact on repeat usage of the service and in the conveying of positive messages to other would be customers. What matters in service satisfaction, therefore, is quality as perceived by the consumer. If he or she perceives it as bad then it matters little that the quality may be good. A customer who is dissatisfied may not only reverts to the alternatives available whenever a similar need arises but may also resort to negatively influencing others. Perceived quality is rational whereas satisfaction is a feel reaction (Wedbrock et al, 1978).

The satisfaction process begins with expectation or the array of possible outcomes that reflect what might, would, should or had better not happen and is affected not only by experience but also by word of mouth, advertising and personal limitations (Westbrook et al, 1978). A comparison is then made between the expected quality and the perceived quality which could result in either positive or negative expectancy disconfirmation, a powerful predictor of satisfaction (Oliver, 1980). Expectations have a direct effect on perceived quality: the higher the expectation the higher the perceived quality.

2.4 Financial Services

Financial Services offered by the Banking Industry, just as with other services, have been described as processes or experiences rather than physical objects which can be possessed (Lovelock, 1981).

Notwithstanding the characteristics of services previously described in 2.1 above, Bateson (1977) suggested that intangibility of financial services could be seen as double edged for it is both impalpable and difficult for consumers to grasp mentally. This is explained by the contractual nature of financial services which binds the consumer to rules and regulations that is neither considered by the consumer in advance nor easy for it to be comprehended. It creates difficulties in pre-purchase evaluation therefore encouraging consumers of financial services to evaluate them on basis of trust on what the provider purports will be experienced by the consumer and whatever recommendations that are obtained from friends, relatives, associates and so on. According to Dick and Basu (1994), attributes such as reliability and confidence play a big role in building and maintaining loyalty. Inseparability in financial services has made its production and marketing an interactive process (Gronoos,1978) with the front line employee playing a boundary spanning role and the consumer a partial employee role (Bowen and Schneider, !988). Intensive competition within the banking industry has continually put emphasis on increasing efficiency. The existence of variability in the services provided by the financial sector creates uncertainty that the service providers may not be able to provide a consistency of service in satisfying consumer needs consequently perceiving financial services as being highly risky. Standardization and quality control are difficult because if it's inherent heterogeneity (Booms and Bitner, 1981). Perishability of financial services requires that consumer needs are satisfied whatever time the need arises. This makes paramount the necessity to forecast demand and plan capacity utilization.

Unique to financial services, however, is the implicit responsibilities on financial organizations in the management of customer's funds and the

nature in which these financial transactions are supplied. This is referred to as fiduciary. According to Lewis and Chiplin (1986) the buyers' point of view depends on what exactly is being promised and the likelihood of such a promise being delivered. Based mainly on trust and promises, customers may find it difficult to evaluate the services provided by a particular financial services provider in the absence of full and comprehensive information. Even if so provided adequate comprehension by the consumer may not be possible, leaving them dependent on trust and expectations. It is therefore important that financial institutions built customer confidence and trust. With the increase in financial transactions, the dynamism of the industry has shown that experience and credence are only but the bare requirements expected by the consumer (Zeithamal, 1981). Another unique aspect of financial services is the two way information flow over an extended period of time.

Marketing financial services has developed slowly. In the 1970s marketing departments were found in small scale and were synonymous with advertising and public relations (Newman, 1984). Increasingly, however, and more so in the 1990s, the strategic element was becoming more prominent to include such activities as sponsorships and enriched sales force (Ennew et al, 1995). This has been in response to the changing financial environment. Previously financial markets were enclosed and characterised by functional and regulatory restrictions, both domestically and internationally. Few people changed their banks unless there were serious problems. Increasingly, with the advent of liberalization and competition, there has been greater need to identify and satisfy consumer needs. To do this the expectations and motivation of financial consumers have to be understood. These expectations include the highest standard of service, the development of an evolving range of services and the avoidance of their perceived risks.

Financial service consumers find it extremely difficult to evaluate the organization to entrust the management of their financial possession. Murray (1991) wrote that little effort has been devoted to developing and understanding consumer behaviour particularly the information search and the decision making process. Confidence, trust, image relationship building have been considered important factors but in making choices size, location, convenience, ease of transactions, professionalism of service personnel and availability of loans would normally carry the day (Gronoos, 1990).

Quality of services is important to all financial service consumers as it is an ingredient of customer satisfaction. It will depend on the customers experience within delivery or the service encounter when the customer interacts with the financial services provider and the physical evidence. A fruitful encounter solicits adoption. In studying this Bitner (1990) found that within the banking industry, outside customers' satisfaction must start from satisfying the inside customer or the employee. This would entail provision of necessary and appropriate tools, motivation, adequate authority and so on to satisfy the customer during the encounter. Also, because of the characteristics of service, the designing of service is of a great challenge to accurately describe or communicate financial services. Shostack (1992) pointed out that four difficulties as oversimplification, incompleteness, subjectivity and biased interpretation. Despite this, it is necessary for the financial institutions to give a clear picture of their service design so that customers will be able to better consider their needs with the constraints of the service offer thus being realistic in their expectations. Trust in the service will also be created as customers observe the process to which they are a part of (Lovelock et al, 1977)

One of the outcomes of the decision making process for financial consumers is adoption and the subsequent loyalty. Linton in 1993 wrote that customer loyalty could be built from competing through customer service by providing high service standards. He also wrote that it could be from improving front office functions and personalised service, offering customers greater choice through such initiatives a modifying services and packaging related services, building relationships and providing support, matching financial services to customer needs, increasing customer convenience by extending say opening hours, putting services close to customers by the way of home banking and automated teller machines in convenient locations and by using and giving customers the benefits of technology

2.5 Automatic Teller Machines as a service

Automated Teller Machine services has all the characteristics outlined as specific to services namely intangibility, inseparability, variability and perishability. In its marketing, this service fits into the marketing mix variables of the 4Ps, that is, product, pricing, place and promotion besides the other 3 service specific Ps of physical evidence, people and process as has been discussed above. Its core service is the instant access to cash, account balances, and other banking services. Gronroos in 1994 had analysed service to have a secondary component as well which would consist of such attributes as branding, quality, tangible evidence, features, processes, accessibility. These in the Automated Teller machine services are exhibited in the reputation of the banks offering the service, the brand names given by the various banks, the level of customer satisfaction, the plastic cards used to access the

service, the continuous availability of service and the spread of the service outlets.

2.6 Service innovations, their adoption and usage

New services are essential elements of dynamic economies and are critical activities for the marketer. As new and better services are developed and launched into the marketplace their fate is determined by votes of consumers through their consumption or rejection. Innovation has been defined as an idea, a practice, a service or product that is perceived to be new to relevant individuals or groups. Whether or not a given service is an innovation is determined by the perception of the potential target market and not by an objective measure of the technological change involved (Hawkins et al 1998). Nevertheless, innovations have been categorised into three types. In the first category, that is, the continuous innovation, adoption requires relatively minor changes in consumer behaviour or that the resultant changes arising from the innovation are relatively unimportant to the consumers. In the second category referred to as dynamically continuous innovation, the changes are considered major but are only moderately important to the individual. In the last category, that is the discontinuous innovation, the changes in behaviour are major in the area of significant importance to the consumer. The introduction of Automated Teller Machine services in Kenya can be seen as the Banking Industry's innovation in service provision.

New services or innovations are perceived to be attractive by individuals in terms of the following characteristics (Rogers 1983). Relative advantage: This is the degree to which innovation is seen as more

satisfying than others in terms of such attributes as economics, prestige or convenience to the user. The greater the perceived relative advantage of the innovation, the more rapid will be its diffusion. Compatibility: This is the extent the innovation is perceived as being consistent with existing values, past experience and needs of the potential adopters. Diffusion is rapid when there is no conflict. Complexity: This is the degree to which to which an idea or innovation is considered difficult to understand or use by the potential consumer. Those that are easily understood are taken up faster than those that require training or the development of new skills. Trainability: This refers to the extent to which the new product or service can be sampled or experimented with. Those that can be divided and can allow trial in small amounts are more easily adopted as to do so will allow reduction in uncertainty. Observability: This is the extent to which the results of the innovation can be seen thus stimulating peer discussions through evaluation and encouraging trial. If considered unattractive a negative attitude will result creating a barrier or a resistance to the adoption or consumption of a service.

Innovations are also perceived by consumers to have risks. Jocoby and Kaplan 1972, classified these risks as:- Physical risks such a being injured when using a service. Psychological risk such lowering consumer's self-image. Performance risks that result in the inability to use the service. Financial risk or the loss incurred financially by using the service. Time-loss risk which or the loss of time when using the service.

Innovation of services has to be spread out because it is this spread that determines the success or failure of any new service that is brought to the market. This process of communicating innovation over time amongst the members of a social system is known as diffusion of innovation (Rogers 1983). It is a group phenomenon, that is, it involves

the adoption process of many individuals. Communication in that definition refers to the process in which information on new ideas products or services are created and shared out. Diffusion of innovation has therefore been looked at as the manner in which innovations spreads out through the market place with the spreading being taken to mean a purchaser behaviour in which the purchase of an item is done with some degree of regularity (Antil, 1988). Generally this process of diffusion follows the simple pattern of relatively slow growth in adoption, then rapid growth and finally a period of slow growth. However, it is normally desirable to secure the largest amount of adoption within the shortest period of time. The pattern and the rate of diffusion is not only explained by individual's behaviour but also through the influence of the social systems in which the individual claims membership and which form behavioural patterns of norms representing information of what is acceptable and what is not acceptable (Katz,1961). Amongst the most notable influences in these social systems are opinion leaders and the word of mouth communication (Rogers 1983).

Apart from the diffusion process, a group phenomenon that deals with how innovation spreads among many individuals, there is the individual phenomenon which is the sequence of stages through which an individual passes from the first time he or she hears of a service to his or her finally adopting or rejecting it. This second phenomenon is known as adaptation and is influenced by the degree to which an individual consumer continues to notice a stimulus over time. It becomes the reason for the acceptance and continued use of a service. The process of adaptation would ceases when consumer no longer pays attention to the stimulus because it is has become so familiar and therefore the consumer has become habituated. For a stimulus to continue being noticed consumers require increasingly stronger doses of that stimulus.

According to Solomon et al (1996) adaptation is influenced by the intensity of the stimulus. The less intense the stimulus the quicker it habituates. It is also influenced by duration of the stimulus, the discrimination factor (simple stimulus tends to habituate because they do not require attention to detail), the exposure to the stimulus (frequently encountered stimulus tends to habituate as the rate of exposure increases) and the relevance of the stimulus (unimportant or irrelevant stimulus habituates as they fail to attract attention of the consumer).

There are various models that have been developed to show those stages that the adaptation process follows. The basic model however starts with Awareness. This is the stage when the potential consumer finds out about the existence of a service but has very little information and has no well-attitudes about it. Then it is followed by comprehension. The consumer at this stage has sought out and is with knowledge and understanding of what the service innovation is about. Attitude follows next. Here the potential consumer develops favourable or unfavourable behavioural predisposition towards the service. It is in this stage that termination of the adoption process is first likely if attitudes are not favourable. After attitude comes Legitimation. At this stage the consumer becomes convinced that the service should be adopted. The consumer has predicted upon favourable attitudes towards the innovation and he or she may use the information already in memory as well as other additional information in order to reach a decision. Trial then follows. It is possible that the consumer tries out the product or service to determine its utility. Trial may take place cognitively, whereby the service is used vicariously in a hypothetical situation or it may be that it is actually used in a limited or a total way, depending on the nature of the innovation. Lastly comes adoption. This is the finality stage where the

consumer determines whether or not to use the service in a full-scale way. Continued use of the service fulfils the adoption process.

It should be noted that some consumers will not complete the process meaning that the innovation will not have been adopted. Several factors have been identified to be responsible for this failed process. These include selective exposure, selective perception, selective retention, complacency, suspended judgement, peer-group pressure, laws regulating the use of the innovation, alternatives available being equally good, innovation not being available or the innovation being surpassed by another innovation (Zaltman and Stiff 1973).

Characteristics that encourage adoption are encompassed within the same factors that encourage rejection. Ram and Sheith described these characteristics the Valve Barriers which occurs when a service lacks the relative advantage or uniqueness in the consumer's perception and can therefore be easily substituted, the Usage Barriers which occurs when innovative products and services are not compatible with the existing consumer practices or habits thus resulting in negative attitude towards them and a resistance to using them and lastly the Risk Barriers which is when the consumer perceives innovations as being of physical, economic, social or a performance risk if adopted.

Because all people will not all adopt an innovation at the same time, consumers have been classified on basis of time of adoption (Mcarthy, 1977). There are Innovators. These are consumers who are venturesome and are eager to try new ideas and are therefore the first to adopt new services or products. They have more risk capital, both material and social and can therefore afford to take risks. They are normally well educated, with their information source transcending beyond the local community, come from well-established families and are cosmopolitan.

Then there are the early adopters. They are the second group to adopt. This group is more socially integrated locally and the greatest degree of opinion leadership in most social systems. They are usually leaders in the community and above average in education. However they would normally watch the innovators and adopt when the innovations appear successful. Early adopters are followed by the early majority. These are the next and are the most deliberate of all the adopter categories. They would consider the innovation for some time before adopting thus adopting innovations just before the average members of the social system, putting them in a crucial position to legitimise new ideas for others. They are normally slightly above average in age and education and rely heavily on informal source of information. Then comes the late majority. This group can be said to be sceptical about innovations and may yield only due to economic necessity or increasing social pressure. They would adopt after the average consumer. They are normally average in education, social status and income and rely more on informal sources of information and influence. Lastly are the laggards. These are the last group to adopt an innovation. They are usually traditional bound and suspicious with decisions based on what they have done in the past. The length of adoption for this group is quite long and when it does finally come it is likely a new innovation has superseded the previous one. Laggards are usually the least educated, lowest in status and income.

The above categories and descriptions may however vary for different services but they do serve as a helpful framework for understanding and managing an innovation. Having noted that, it should also be said that not all consumers pass through the adoption process at the same speed. This rate of adoption is the relative speed at which innovation is adapted. The rate can be measured by the number of individuals or groups that adopt an innovation in a specific period of time. It is explained by the

perceived attributes that are seen by the potential consumers that makes the service acceptable.

2.7 Influences on the adoption and usage of services

Adoption and usage of innovations is dependent on the consumer buying behaviour when faced with a buying situation. Consumer buying behaviour can be looked at as that process of selecting, purchasing, using and disposing of services or products by individuals or groups over time in order to satisfy their needs or desires. The issue therefore that is core in understanding the behaviour of the consumer when encountering an innovation is the decision making process through which the individual undergoes, with the ultimate end result being either to adopt or reject.

Decision making has been described by Sproles and Kendall (1986) as the mental orientation characterising a consumer's approach to making choices. The stages involved in decision making starts with problem or need recognition, then information search, evaluation of alternatives, the making of a choice and then finally the behavioural outcome. The amount of effort that goes into this process depends on the nature of the need or the problem that is being addressed by the consumer. Where it is perceived to carry a high level of risk or it is viewed to be very important or valuable, the search for information is usually robust and time consuming that will result in a lot of data being collected which must each be analysed and evaluated in detail. Gobbott et al (1999) calls this a high level customer involvement. Involvement is described as a social psychological construct of different individual variables, identified as a causal or motivating factor with direct consequences upon consumers'

purchase and communicating behaviour. The opposite is true for habitual decisions where the risk is perceived to be minimal and therefore consumers spend little or no effort in seeking information or evaluating the alternatives.

Most economists assume that customers are economic men, that is, people who would know all the facts and logically compare choices in terms of cost and value to be received to get the greatest satisfaction from spending their time and money. Most marketers however think that the buyer behaviour is not as simple as the economic man concept suggests. Instead they contend that this process of choosing or selecting between alternatives is influenced on the one hand by the psychological factors that is, those factors that are internal to the consumer. These are primarily perception, motivation, personality, attitudes, memory and emotions. On the other hand but simultaneously with these psychological factors, decisions would be also influenced by those factors that are external to the individual. These will be in existence when the information on a new service is being sought and when the alternatives available are being evaluated. These are basically cultural influences, demographics, social classes, reference and family groups, values, beliefs and status.

These individual components are here under briefly explained. Psychological factors are examined first, followed by environmental factors. Not all factors are examined, only those that were considered by the researcher to be most relevant to this study.

Psychological Factors

The first factor in this category is perception. This has been described as the process by which an individual selects, organizes and interprets

stimuli into a meaningful and coherent picture. It is the way in which stimulus, both message and image is interpreted once the consumer attention has been successfully drawn to a particular product or service. Perception has far reaching implications in consumer behaviour. One example would be the way the consumer perceives risks or the subjective expectation of loss or negative consequence (Peter and Ryan, 1976) associated with adoption of an innovation. Customers are more inclined to avoid mistakes than to maximize utility in adopted products or services (Mitchell, 1998)

Inside the consumer of a service there is a driving force that impels him or her into action. This force is known as the motivating factor and has been used to describe the process that causes people to behave as they do. It would normally start with an unfulfilled need or a state of felt deprivation of some basic satisfaction which the consumer would wish to satisfy. Once activated a state of tension is developed that makes the consumer attempt to reduce or eliminate it either consciously or subconsciously by partaking of a product or service. It also results in consumer learning because of the changes that occur in the consumer's knowledge and behaviour. Because successful marketing depends on repeat purchase behaviour the provision of positive reinforcement becomes a crucial matter (Nord and Peter, 1980). Individual motivation will affect which needs consumers regard as important and therefore the priority in which they should be satisfied.

Consumers' decision making and thereby adoption is also influenced by personality. Personality is the inner psychological characteristics that both determine and reflect how a person responds to his or her environment. It has been linked to differences in susceptibility to persuasion and social influence (Kassarjian and Robertson, 1990). Traits related to personality include extraversion, self esteem, dogmatism and

aggression. Personality can be broken down into those specific qualities, attributes, trait, factors and mannerisms that distinguish one individual from another individual. Apart from its being the essence of individual differences, it is consistent and enduring. It can however change in response to some abrupt event or over time as part of a gradual maturing process. It is this uniqueness in personalities that make each individual responds differently to innovations. Consumers are known to buy products or services that are consistent with their self concept, that is the overall perception and feelings that one has about oneself (Sirgy, 1982).

Attitude is one of the other main internal influences. Baron and Byrne (1987) defined attitude as a very relevant element of the consumer psychology and as a lasting general evaluation of people, objects or ideas. It is also said to be an expression of inner feelings that reflect whether a person is favourably or unfavourably predisposed to some object. Attitude is inferred from what people say or what they do (Schiffman, 1996). It is lasting because it tends to endure over time and generally because it applies to more than a momentary event. Attitudes have two basic characteristics: Firstly, they are learned or developed over time through family influences, peer group influence, available information, experience and personality and secondly they are relatively consistent with behaviour although they are not necessarily permanent. There are specific situations that may cause consumers to behave in ways seemingly inconsistent with their attitudes.

Daniel Katz's pragmatic approach suggests that attitudes exist because they serve some functions for a person, that is, they are determined by a person's motive. He described these functions as Utilitarian; whether the service results in pleasure or pain, Value-expression; what the consumption of a service says about the consumer as a person, ego-

defence, the need for protection from external threat or internal feelings and knowledge and the need for order, structure or meaning.

Consumers who expect to deal with a similar situation in the future will be more likely to start forming attitudes in anticipation of the event. Individual's commitment to attitude at the lowest level is compliance. It helps the individual to gain rewards or to avoid punishment from others. This level is superficial as it is likely to change when the person's behaviour is no longer being monitored by others or when other options become available. The next level is Identification; that is when the attitude is to be similar to other people such as film stars or the group to which the individual belongs. At the highest level the commitment to attitude is integration. This is when it becomes a part of the individual's value system. It is difficult to change it when this level is reached by the individual.

Also, internal to consumers is the ability to store information after it has been acquired and to retrieve it from memory when required. Memory processes are of considerable importance because to a large extent consumer's act on the basis of their cognitions or the knowledge that is stored and retrieved as it influences how incoming stimulus is interpreted.

External Factors

Now, turning to some of the external influences that affects decision making, culture has been considered the key factor. It was described by Solomon in 1996 as the lens through which people view products and services; that is an accumulation of shared meanings, rituals, norms, traditions and so on. Schiffman in 1996 on the other defined it as the

sum total of learned beliefs, values and customs or overt modes of behaviour that serves to direct consumer behaviour of a particular society. A consumer's culture determines the overall priority he or she attaches to different activities. A service that provides benefits consistent with those desired by members of a culture group at any point in time has a better chance of gaining acceptance.

Culture has the following characteristics (Schiffman, 1996); - It has an invisible hand; its impact is so natural and automatic that its influence on behaviour is usually taken for granted such that it is only when we are exposed to other cultural values that we become aware of our own. Culture satisfies needs as it offers direction and guidance in all phases of human problem solving by providing 'tried and true' methods of satisfying physiological, personal and social needs. Culture continues to be followed so long as they yield satisfaction. Culture is learned. Culture is shared that is it is viewed as a group custom that links members of a society and last. Culture is dynamic.

Culture is a complex concept. It includes specific knowledge, beliefs, morals, laws, and customs shared by a society. Terpstra (1978) observed that the consumption of a product or a service was not a function of income alone but also a function of many cultural factors or the distinctive life style of people.

Beliefs play a critical role in the shaping of human behaviour. A belief is that descriptive thought that a person has about something. They maybe based on real knowledge, opinion or faith and may or may not carry an emotional charge. Beliefs make up services or brand images that influence buying behaviour or adoption.

Consumer's demographics also affects decision making. Different age groups obviously have different needs and wants. Perkins (1993) wrote that although people in the same age group would differ in many other ways, they tend to share the same set of values and same cultural experiences that the carry through out their lives. The same is equality true of gender and the different family structures and income groups.

Another external factor that influences decision making is the social class in which the consumer belongs. Social class is looked as the division of members of the society into a hierarchy of distinct status classes relatively ranked in terms of such parameters as wealth , prestige and so on, such that members of each class have relatively the same status and that members of all the other classes have either more or less status (Schiffman, 1996). Oslon (1993) noted that identification into a social class is influenced most strongly by level of education and occupation and is affected by social skills, status aspirations, community participation, cultural levels and family history.

One of the behavioural outcomes of social class is lifestyle. Zablock and Kanter (1976) defined lifestyle as a pattern of consumption that reflects a person's choice or how he or she spends time and money. Looking at it in an economic sense, they explained that lifestyle represents the way one would elect to allocate income both in terms of relative allocation to different services or products and to specific alternatives within the categories. Each lifestyle is somewhat unique and it does not stay still. Lifestyle traits are more concrete than personality traits and are more directly linked to acquisition, use, disposition of goods and services (Kassarjian and Robertson, 1990).

Interpersonal influences play a big part as diffusers. Feisk and Price (1987) describe these interpersonal influences to consist of reference

group's opinion leaders and market mavens. A reference group is any group where a person belongs for whichever reasons or one which he or she admires and which they would want to be a part of. The effect of these groups to an individual's decision making could be informational when desiring to make informed choices or reduce uncertainty. It could be utilitarian in nature where the individual wishes to comply with the expectations, real or imagined, of others in order to achieve acceptance, peer approval or rewards, or to avoid rejection, peer disapproval or punishment. It could also be out of desire to enhance self concept through identification with others. Opinion leaders influence consumer behaviour through word of mouth communication. They are viewed as experts or well versed individuals of the services being touted and therefore serve as intermediaries between source (media, advertisements and so on) and the consumer. Market mavens on the other hand are consumers who seem to be adorned with and are ready to share their comprehensive knowledge of the generally available services and products, where to shop them and any other facets of the Market.

In concluding this analogy, it can be said that decision making will result in a consumer behaviour outcome, which is the adoption and usage or rejection of the service that was intended to have satisfied a need. The final behaviour outcome could be however in the form of post purchase doubt about the appropriateness of a decision. This is referred to as the cognitive dissonance. It would normally occur over major choices, that is, those considered important, perceived as high risk or involving long – term commitments caused by imbalance of information because each alternative has attractive features. Dissonance may affect post purchase attitudes, change consumer's behaviour and cause additional information seeking. To reduce it, a regular program of follow-up communication may be deemed necessary to discourage doubt and reinforce conviction about the new service's strength.

2.8 Conclusion

In concluding this review, it can be said that the key issue in adoptions of any service is the satisfaction of the consumer needs, desires and expectations. Failure to satisfy these would lead to rejection, inconsistency in adoption and usage and the lack of customer involvement in any service innovation. If fulfilled however, consumers will quickly adopt and will continuously and more frequently use the service. The assumption being made is that satisfactions is linked to positive evaluation and re-use behaviour.

CHAPTER THREE
METHODOLOGY

3.1 Introduction

This section outlines the methodology that will be used in carrying out the study in order to meet the objective.

3.2 Research design

An exploratory survey has been used in carrying out this study. Churchill (1991) wrote that exploratory studies are important in increasing the researcher's familiarity with the problem, in gathering information about practical problems, in clarifying concepts, in formulating a problem for more precise investigation and in establishing priority for further research. According to Boyd (1989) a formal design is conspicuous by its absence in exploratory studies. It is characterised by its flexibility with respect to the ways used to gain insight and develop hypothesis.

Studies on adoption and usage of Automatic Teller Machine services in Nairobi have not been previously conducted. As such a great deal of information and knowledge is lacking. The researcher, in using exploratory survey has been able to gain insight, generate possible explanations and formulate specific hypothesis (a statement on how two or more measurable variables are related). This method has also allowed for the much needed flexibility required to obtain useful data for analysis and interpretation.

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3.3 Population

The population targeted by this study has been residents of the city of Nairobi who are holders of personal bank accounts. These are people who are in a position to have gained knowledge on the services offered by Automated Teller Machines installed by the banks and would therefore out of choice make a conscious decision to adopt and use the service.

3.4 Sample frame

The Nairobi Central Business District which is adorned with multiple banking institutions was used as the research location. It was selected in order to be able to catch demographically well spread respondents who would be said to be representative of the Nairobi's urban population where Automated Teller Machine services are available. It also has a cosmopolitan population with inhabitants from all walks of life and of divergent levels of wealth spread across the extremes.

3.5 Sample and Sample design

According to Luck and Rubin (1987) it is of paramount importance to choose a large enough sample which would provide a relatively precise estimate of the population values yet it would not dissipate the limited research funds available on a sample that is too large or unnecessary. A trade off between added information and the added costs had therefore to be done. With this as a guide, a total of 150 questionnaires were administered. Statistically this sample size is acceptable as it conforms to the widely held rule of thumb that a sample size should not be of less than 30.

Judgemental sampling was used in order to increase the chances of covering the whole range of phenomenal issues related to the research subject. This method being a non-probability sampling design carries with it the fact that the probability of any particular element being selected will be unknown. By using this method the researcher gave himself the advantage of setting his own selection criteria that would in his own personal judgement, be of good representation of the population under study. It offered an improvement over convenience sampling in so long as the basis of the selection was sound and valid (Quee, 1999). This leeway is important in exploratory studies particularly where the target population is vast and the sample perceived to be sufficient for a meaningful study is relatively small.

3.6 Data collection

Primary data was gathered through the use of a questionnaire, see appendix. This method was chosen in preference to others due to the nature of the information that was being targeted. The answers needed for the study were not to require in-depth thought on the part of the respondents as the questions were straight forward and relatively easy to comprehend. It was for this same reason that interviews were not considered appropriate. Time and cost restrains and suspected low rate of response eliminated the possibility of using mail shots.

The questionnaires was administered through the help of assistants who requested members of the public found inter alia both inside and outside the halls of the various banking institutions with Automatic Teller Machine services being offered and in the various offices within their immediate surroundings, to complete them. Where banking halls were

used, it was done when considered relatively full, essentially on the Friday preceding the end of the month with the questionnaires being given to those queuing for the purposes of obtaining services which are also available at the Automatic Teller Machines.

The administrators remained at hand to clarify any issues that may have arisen and to subsequently collect the completed questionnaires. Cognisance was made of that the fact that there was only one single chance to collect data from an individual as it would not have been practically possible to subsequently return back to the same respondents to make clarifications or collect additional information (Saunders et al, 1997).

3.7 Data analysis

Statistical Package for Social Sciences (SPSS) an analytical computer software program was used to analyse the data collected. This enabled a wide range of analysis and statistical tests to be conducted quickly and accurately. Raw data was converted from the questionnaires into suitable presentation of tables and charts which were used to interpret them and form conclusions regarding the research objectives. These are in terms of frequencies to show the rates of occurrence of the responses and the percentages of each response variant for comparison purposes. Where appropriate, cross-tabulation of selected questions was done to establish if relationships between them exist. Histograms were to be drawn to show the spread of the responses.

CHAPTER FOUR
DATA ANALYSIS AND FINDINGS

4.1 Introduction

This chapter gives the analysis and findings of the questionnaire administered. Generally each question thereon has been analysed through the use of a frequency table computed to show the rate of occurrence of responses, the percentage of each response, the valid percentage which takes cognisance of any missing responses and the cumulative percentage. Cross tabulation of variables where considered apt and value adding are computed and presented in tabular format.

Out of the sample consisting of 150 questionnaires 4 were considered spoilt due to inconsistencies. 146 or 97.33% of the questionnaires intended for analysis were therefore processed. This high percentage of usable responses is attributable the simplicity of the questions and the questionnaire design and to presence of the researcher and or his assistant during the completion process.

4.2 Demographics of the Sample characteristics

It is appropriate that demographic factors of those who obliged and complete the questionnaire be analysed first so as to provide an insight into the general characteristics of the sample studied. The relevant key demographic factors identified by the researcher were namely age, educational background, employment, monthly income and gender. In addition to the above, these demographic factors were also to be used as variables in the determination of any possible relationships that may

exist between them and those directly related to the objectives of this study.

4.2.1 Age

Table 1 Age Distribution

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Between 18 and 30	73	50.0	50.7	50.7
	Between 31 and 40	45	30.8	31.3	81.9
	Between 41 and 50	23	15.8	16.0	97.9
	above 50	3	2.1	2.1	100.0
	Total	144	98.6	100.0	
Missing	System	2	1.4		
Total		146	100.0		

Over 80% of the respondents in sample were below age 40. More specifically 50.7 % were between 18 and 30 years old and 31.3% were between 31 and 40. The distribution of the remaining 20% was as follows; 16% were between 41 and 50 while 2.1% were above 50 years of age. This age distribution is consistent with that of the Kenyan population as shown in the Statistical Abstract (2003).

4.2.2 Education

The table and the graphs below show the various level of education of the people who completed the questionnaire.

Table 2 Educational Background

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High school	14	9.6	9.7	9.7
	Tertiary collage	82	56.2	56.9	66.7
	University	48	32.9	33.3	100.0
	Total	144	98.6	100.0	
Missing	System	2	1.4		
Total		146	100.0		

90.9% of the respondents who had gone beyond high school education. The majority that is 56.9% were those who had graduated from one Tertiary Collage or another then followed by those who had attained University education (33.3%). Comparatively, and consistent with the above findings, Tertiary Collages are more in number and in output than University Collages as adduced from the Statistical Abstract (2003). As a trend, most high school grandaunts are known to enrol for courses offered by Tertiary Collages to better their employment viability when they don't obtain University admissions.

4.2.3 Employment

The table below examines the employment status of all those who answered the questionnaire and indicated their employment status.

Table 3 Employment Status

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	A public institution	14	9.6	9.7	9.7
	A Parastatal	12	8.2	8.3	18.1
	A private firm	55	37.7	38.2	56.3
	Self	63	43.2	43.8	100.0
	Total	144	98.6	100.0	
Missing	System	2	1.4		
Total		146	100.0		

43.8% of the respondents were self employed. Following closely at 38.2% were employees of private institutions. Those in the public institutions and parastatals were relatively few in comparison. The researcher considered this to appropriately reflect the study's population due to the fact that the long unfavourable economic condition in the country that had prevailed for over 10 years forced youths graduating from Tertiary and University collages and the retrenched employees from both the public and private sectors to indulge in self owned businesses for lack of available employment opportunities. It is also probable that although the

public institutions have many employees, they are well spread across the country leaving only a small proportion of them working in the city of Nairobi.

4.2.4 Income

Table 4 Monthly Incomes

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Under 15,000	38	26.0	26.6	26.6
	Between 15,001 and 45,000	61	41.8	42.7	69.2
	Between 45,001 and 100,000	42	28.8	29.4	98.6
	Above 100,000	2	1.4	1.4	100.0
	Total	143	97.9	100.0	
Missing	System	3	2.1		
Total		146	100.0		

98.6% of those people who completed the questionnaire earned less that Kshs 100,000/- on a monthly basis. The majority, that is 42.7%, earned an income of between Kshs 15,001/- and Kshs 45,000/-. They were followed at a distant by 29.4% who earned between Kshs 45,001 and Kshs 100,000/- and by 26.6% who earned below Kshs 15,000/-

4.2.5 Gender

Table 5 Gender Status

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Male	99	67.8	68.8	68.8
	Female	45	30.8	31.3	100.0
	Total	144	98.6	100.0	
Missing	System	2	1.4		
Total		146	100.0		

68.8% of the respondents were male. This was consistent with the researchers expectations as more males are usually found in the

locations identified for the study and women would normally shy from interacting with strangers especially those of the opposite sex.

4.2.6 Relationships between the various demographic factors.

A cross tabulation of was undertaken to give further insight into the sample characteristics. These relationships are shown below.

Table 6 Relationship between age and employment

* Crosstabulation

Count

		A public institution	A Parastatal	A private firm	Self	Total
	Between 18 and 30	7	6	30	30	73
	Between 31 and 40	5	4	14	22	45
	Between 41 and 50	2	2	10	9	23
	above 50				1	2	3
Total		14	12	55	63	144

An equal number of respondents to the questionnaire of ages of between 18 and 30 year old were employed in a private firm or were self employed. This number grossly exceeded those within that age group who were employed in public institutions and parastatals. Most of those between the ages of 31 and 40 were self employed while most of those between the ages of 41 and 50 were employed in a private firm. Most of those over 50 years of age were self employed.

Table 7 Relationship between Age and Monthly Income

* Crosstabulation

Count

		Under 15,000	Between 15,001 and 45,000	Between 45,001 and 100,000	Above 100,000	Total
	Between 18 and 30	32	33	8		73
	Between 31 and 40	5	20	19		44
	Between 41 and 50	1	7	14	1	23
	above 50		1	1	1	3
Total		38	61	42	2	143

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32 out of the 73 respondents between 18 and 30 were earning a monthly income of less than Kshs 15,000/- and 33 of them earned between Kshs 15,000/- and Kshs 45,000/-. None earned over Kshs 100,000/-. Similarly examining the other age groups we observe that the older the people the more the income they earned. This is not necessary true of the target population but it generally portrays an acceptable pattern.

Table 8 Relationship between gender and employment

* Crosstabulation

Count

	Male	Female	Total
A public institution	10	4	14
A Parastatal	9	3	12
A private firm	33	22	55
Self	47	16	63
Total	99	45	144

Examined in the context of gender most males were self employed whist most females were employed in private institutions.

Table 9 Relationship between Gender and Monthly Income

* Crosstabulation

Count

	Male	Female	Total
Under 15,000	27	11	38
Between 15,001 and 45,000	41	20	61
Between 45,001 and 100,000	29	13	42
Above 100,000	1	1	2
Total	98	45	143

The table shows that the Monthly Income distribution pattern was the same for both the male and the females. Salary structures in Kenya do not discriminate along gender lines. The relationships analysed above does not portray any characteristic that is out of character with the researcher's expectation and was therefore considered acceptable for the objectives of this study.

4.3 Awareness, Perceptions and Attitudes

This section covers the first objective of this study. It sought to establish how the residents of the city of Nairobi were first exposed to the services of Automated Teller Machines and their perception and attitude towards the service. It therefore examined the diffusion of the innovation and the first four stages of the adaptation model as adopted in the literature review, namely awareness, comprehension, attitude and legitimating.

After the analysis was made on the awareness of the service, the perceptions and attitudes held by the residents of the city of Nairobi towards Automatic Teller Machine services was then examined. Eight opinion variables were pre-identified by the researcher as being key indicators of the perception and attitude of the service under study. The perception on each of them was sought by requiring respondents to state whether they strongly agreed, agreed, were uncertain, disagreed or strongly disagreed.

4.3.1 Awareness of Automatic Teller Machine Service

The researcher sought to find out how and by whom the awareness of the Automated Teller Machine services was spread amongst the residents of the city of Nairobi.

Table10 Analysis of the service awareness

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Friends/Relatives	33	22.6	22.9	22.9
	Workmate/Employer	38	26.0	26.4	49.3
	Adverts/Promotions	58	39.7	40.3	89.6
	Directly approached	12	8.2	8.3	97.9
	Others	3	2.1	2.1	100.0
	Total	144	98.6	100.0	
Missing	System	2	1.4		
Total		146	100.0		

From the table above we see that 40.3 % percent of the respondents were made aware of the existence of Automatic Teller machine services through advertisement and promotional campaigns by Banks when they first introduced the service in Nairobi. 26.4% and 22.9% got to know of this service through workmates or the employer and friends or relatives respectively. Collectively the word of mouth amounted to 57.6 %. Independently, direct approach by Bank representatives only managed to raise awareness to 8.3% of those who answered the questionnaire.

A cross tabulation was done to establish if the same could be said about those who owned and those who did not own the accounts with which the Automatic Teller machine service could be accessed.

Table 11 Relationship between the service awareness and ownership of the account

* **Crosstabulation**

Count

		Owner	Supplimen tary owner	Total
	Friends/Relatives	28	4	32
	Workmate/Employer	34	1	35
	Adverts/Promotions	40	7	47
	Directly approached	12		12
	Others	3		3
Total		117	12	129

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The finding was that 31.4 % of those who owned the accounts knew of the service through advertisements or promotions.23.9% was through relative and friends and 29.1% from workmates and employers. For non account owners who enjoyed that service by virtue of being supplementary Automatic Teller Machine cardholders a similar pattern of 58.3%, 14.3%, 33.3% respectively was noted.

Further cross tabulations were done with other variables namely usage of the service and the demographic factor of age. The two tables below show the findings.

Table 12 Relationship between service awareness and frequency of usage of the service

* Crosstabulation

Count

	At least once in 6 months	At least once in a month	At least once in a week	Total
Friends/Relatives	2	21	9	32
Workmate/Employer	2	25	9	36
Adverts/Promotions	1	32	16	49
Directly approached		7	5	12
Others		2	1	3
Total	5	87	40	132

Table 13 Relationship between service awareness and age of the respondents

* Crosstabulation

Count

	Between 18 and 30	Between 31 and 40	Between 41 and 50	above 50	Total
Friends/Relatives	18	12	3		33
Workmate/Employer	16	14	7	1	38
Adverts/Promotions	31	16	8	2	57
Directly approached	5	3	4		12
Others	2		1		3
Total	72	45	23	3	143

A similar pattern of the diffusion process was observed in both table 13 and 14. Word of mouth communication was the predominant method that raised the awareness of the respondents.

4.3.2 Perception and attitude on the complexity of the machines providing the service

The table below shows the response to the question seeking to establish if Automatic Teller Machines were viewed as easy to use.

Table 14 Complexity of the machines and the service

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Strongly Agree	27	18.5	19.0	19.0
	Agree	90	61.6	63.4	82.4
	Uncertain	14	9.6	9.9	92.3
	Disagree	7	4.8	4.9	97.2
	Strongly Disagree	4	2.7	2.8	100.0
	Total	142	97.3	100.0	
Missing	System	4	2.7		
Total		146	100.0		

82.4% of the respondents were of the view that Automated Teller Machines were easy to use, 19% of them being strongly convinced. 7.7% were of the Perception that the Automatic Teller Machines were not easy to use. 9.9% were uncertain.

This finding was then cross tabulated against other variables namely the usage of the service, age and gender in order to establish any possible relationships that could exist. The results are shown in the tables appended here below.

Table 15 Relationship between complexity of the machines and the frequency of its usage

* Crosstabulation

Count

		At least once in 6 months	At least once in a month	At least once in a week	Total
	Strongly Agree	1	16	8	25
	Agree	3	59	24	86
	Uncertain		9		9
	Disagree	1	3	3	7
	Strongly Disagree			3	3
Total		5	87	38	130

4 out of 5 of those who use the service at least once in six months thought that the machines were easy to use. Of the 87 who used the machines at least once in a month 75 also thought that the machines were easy to use. 32 out of the 38 who used the service at least once a week had the same view. It agrees with the expectation that because it's easy to use the service is used more frequently all other factors remaining constant.

Table 16 Relationship between complexity of the machines and the age of the users

Count

	Between 18 and 30	Between 31 and 40	Between 41 and 50	above 50	Total
Strongly Agree	18	5	3	1	27
Agree	41	34	14		89
Uncertain	8	3	3		14
Disagree	4		2	1	7
Strongly Disagree	1	3			4
Total	72	45	22	2	141

Most of the members of the younger age group (59 out of 72) agreed that the machines and the Automatic Teller Machine service were not complicated. 18 strongly agreed. The pattern repeats itself with the other age groups. Only 11 out of 141 thought they were not easy to use.

Table 17 Relationship between complexity of the machines and the gender

* Crosstabulation

Count

	Male	Female	Total
Strongly Agree	17	10	27
Agree	64	25	89
Uncertain	7	7	14
Disagree	6	1	7
Strongly Disagree	3	1	4
Total	97	44	141

81 out of 97 males and 35 out of 44 females though that the machines and the service were easy to use. Only 9 males and 2 females had the opposite view.

Whichever way it was looked at or in whichever category the respondents were placed; over 80% agreed or agreed strongly that the Automated Teller Machines were easy to use.

4.3.3 Perception and attitude on the prestige of the service

The second key factor in establishing the Perception and attitude of the residents of Nairobi on Automatic Teller Machines was whether the service was considered to be prestigious. The findings were as per the following tables.

Table 18 Prestige of the service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Stongly Agree	13	8.9	9.2	9.2
	Agree	51	34.9	36.2	45.4
	Uncertain	40	27.4	28.4	73.8
	Disagree	29	19.9	20.6	94.3
	Strongly Disagree	8	5.5	5.7	100.0
	Total	141	96.6	100.0	
Missing	System	5	3.4		
Total		146	100.0		

It was found that 45.4 % of the respondents agreed that the Automatic Teller Machine services were prestigious. In aggregate 26.3% disagreed. A negligible number of respondents held strong views on either side of the divide. It was however interesting to observe that 28.4% of the respondents were undecided in their opinion, a bigger percentage than those who disagreed. It is probable that over time the services prestigious value maybe diminishing.

Cross tabulations were done with other variables. The results are shown in the following tables.

Table 19 Relationship between prestige of service and the account ownership

Count

		Owner	Supplimentary owner	Total
	Stongly Agree	11		11
	Agree	40	6	46
	Uncertain	34	1	35
	Disagree	25	4	29
	Strongly Disagree	5	1	6
Total		115	12	127

40 out of the 115 who owned the accounts with Automatic Teller Machine service agreed that the service was prestigious. 34 remained uncertain. 25 did not consider it to be prestigious. Half of the supplementary users agreed that the service was prestigious. Similar patterns were found when the same factor was examined against the frequency of usage, age of the users and the gender status of the respondents.

Table 20 Relationship between prestige of service and the age of user

Count

		Between 18 and 30	Between 31 and 40	Between 41 and 50	above 50	Total
	Stongly Agree	8	4		1	13
	Agree	29	14	7		50
	Uncertain	17	13	9	1	40
	Disagree	14	9	6		29
	Strongly Disagree	4	4			8
Total		72	44	22	2	140

Table 21 Relationship between prestige of service and gender

Count

		Male	Female	Total
	Stongly Agree	6	7	13
	Agree	38	12	50
	Uncertain	24	16	40
	Disagree	23	6	29
	Strongly Disagree	5	3	8
Total		96	44	140

4.3.4 Perception and attitude on the convenience of the service

This key factor sought to find out the general Perception and attitude of the respondents was that the Automatic Teller Machine service is convenient. Such a perception could considerably influence the adaptation and usage of the service.

Table 22 Convenience of the service

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Strongly Agree	35	24.0	24.6	24.6
	Agree	75	51.4	52.8	77.5
	Uncertain	14	9.6	9.9	87.3
	Disagree	11	7.5	7.7	95.1
	Stronly Disagree	7	4.8	4.9	100.0
	Total	142	97.3	100.0	
Missing	System	4	2.7		
Total		146	100.0		

The finding was that 24.6% of the 142 residents of Nairobi agreed strongly that the Automated Teller Machine service was convenient. In aggregate an overwhelming 77.2 % were of the perception that the service was convenient. Only 12.6% did not think so and 9.9% were undecided.

Cross tabulation with other variables was done to gain further insight and the results were as shown in the tables below.

Table 23 Relationship between convenience and ownership of the account

Count

	Owner	Supplimen tary owner	Total
Strongly Agree	26	4	30
Agree	66	6	72
Uncertain	10	1	11
Disagree	9	1	10
Stronly Disagree	5		5
Total	116	12	128

92 out of the 116 account owners agreed or strongly agreed that the services were convenient and the same Perception and attitude was found true for 10 of the 12 who were supplementary users.

The following three tables show the relationship between convenience and other selected variables.

Table 24 Relationship between convenience of the service and the frequency of usage

* Crosstabulation

Count

	At least once in 6 months	At least once in a month	At least once in a week	Total
Strongly Agree		18	13	31
Agree	3	51	19	73
Uncertain	2	8	1	11
Disagree		7	3	10
Stronly Disagree		3	2	5
Total	5	87	38	130

69 out of 87 who used the service at least once a month agreed that the service was either convenient or very convenient. 33 of the 38 who used the service at least once a agreed or strongly agreed. It is however interesting to note that as expected by the researcher those who used the service more often thought the service was more convenient that those who used the service less frequently.

Table 25 Relationship between convenience of the service and the age groups

* Crosstabulation

Count

	Between 18 and 30	Between 31 and 40	Between 41 and 50	above 50	Total
Strongly Agree	22	7	4	1	34
Agree	34	25	15	1	75
Uncertain	5	6	3		14
Disagree	9	2			11
Stronly Disagree	2	5			7
Total	72	45	22	2	141

Irrespective of the age group the general view of the majority was that the Automatic Teller Machine service was either convenient or very convenient. It is however noted that the majority or 64.7% of those who strongly agreed that the service was convenient were aged between 18 and 30.

Table 26 Relationship between convenience of the service and gender

* Crosstabulation

Count

	Male	Female	Total
Strongly Agree	25	9	34
Agree	52	23	75
Uncertain	7	7	14
Disagree	7	4	11
Stronly Disagree	6	1	7
Total	97	44	141

.79.3% and 72.6% of males and females respectively agreed or strongly agreed that the service was convenient. More of males (25.7%) than females (20.4%) agreed strongly that the service was convenience while almost the same percentage of males (53.6) and females (52.2) only agreed. These small differences could be explained by the fact more males than females appreciate the availability of the service even late into the night.

4.3.5 Perception and attitude on the Security of the service

This next key factor was included in order to determine whether the residents of the city of Nairobi perceived Automated Teller Machines as safe to use. The findings are tabulated and shown on the graph below.

Table 27 Security of the service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	15	10.3	10.6	10.6
	Agree	28	19.2	19.7	30.3
	Uncertain	26	17.8	18.3	48.6
	Disagree	48	32.9	33.8	82.4
	Strongly Disagree	25	17.1	17.6	100.0
	Total	142	97.3	100.0	
Missing	System	4	2.7		
Total		146	100.0		

Only 30.3% viewed the Automatic Teller Machine service as safe to use. 18.3% were uncertain. More than half of the respondents or 51.4% viewed the service as unsafe. It was noted that 17.6% had strongly reservations about the security of the service. This could be explained by the cases that are touted of theft or muggings while or after using the service.

This factor was looked at in regard to its relationship with other variable.

Table 28 Relationship between the security of the service and frequency of use

* Crosstabulation

Count

		At least once in 6 months	At least once in a month	At least once in a week	Total
	Strongly Agree	1	9	4	14
	Agree		19	7	26
	Uncertain	3	14	6	23
	Disagree	1	28	14	43
	Strongly Disagree		17	7	24
Total		5	87	38	130

Out of the 5 who use the service at least once in six months only one or 20% thought it was unsafe. 3 or 60% were uncertain. The remaining 20% strongly viewed the service as secure. Perhaps, due to the infrequent use of the service it is likely that this category of users may have never experienced or only remotely heard of cases of insecurity. However having said that, of the 87 respondents who use the Automatic Teller Machine service at least once a month 45 or 51.7 % and of the 21 out of the 38 of those that use it at lease once a week 21 or 51.5% thought it was unsafe. Despite this perception and attitude their usage of the Automatic Teller Machines does not seem deterred.

Table 29 Relationship between the security of the service and gender

Crosstabulation

Count

		Male	Female	Total
	Strongly Agree	10	5	15
	Agree	20	7	27
	Uncertain	18	8	26
	Disagree	31	17	48
	Strongly Disagree	18	7	25
Total		97	44	141

Of the 97 male respondents 49 or 51.5% viewed the service as unsafe and out of 44 females, 24 or 54.5% were of a similar perception. It is worth noting that females more than males viewed the service as unsafe.

4.3.6 Perception and attitude on the Cost of using the service

This question examined whether the Automatic Teller Machine service was seen to be expensive by residents of the city of Nairobi. It was considered the next important variable in establishing of Perceptions and attitudes towards the use of the service.

Table 30 Cost of using the service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	3	2.1	2.1	2.1
	Agree	30	20.5	21.1	23.2
	Uncertain	37	25.3	26.1	49.3
	Disagree	66	45.2	46.5	95.8
	Strongly Disagree	6	4.1	4.2	100.0
	Total	142	97.3	100.0	
Missing	System	4	2.7		
Total		146	100.0		

46.5% of the respondents thought that the Automatic Teller Machine service was not expensive. Only 4.2% strongly agreed that the service was not expensive. 26.1% were uncertain on their position. 21.1% were clear that the service was expensive and 2.1% held the same view albeit more strongly.

Cross tabulation was done against the various variables as follows.

Table 31 Relationship between the Cost of using the service and the frequency of use

* Crosstabulation

Count

		At least once in 6 months	At least once in a month	At least once in a week	Total
	Strongly Agree	1	2		3
	Agree	1	13	12	26
	Uncertain	1	24	9	34
	Disagree	2	46	14	62
	Strongly Disagree		2	3	5
Total		5	87	38	130

There was an equal divide in perception as to whether the service was expensive for those who use the service at least once in six months. However, of more significance are those who use the service at least once a month and those who use it a least once a week because those are the categories that contain the bulk of the residents of Nairobi. It was noted that 51.2% and 44.7% of those categories, respectively, thought that the

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service was not expensive while 14.9% and 31.6% considered the service expensive. In both these categories the charges being now levied was deemed reasonable. It however cannot be determined whether its reasonableness of the charges or the amount earned per moth that makes the majority of users use the service once a month.

Table 32 Relationship between the Cost of using the service and the monthly income

* Crosstabulation

Count

		Under 15,000	Between 15,001 and 45,000	Between 45,001 and 100,000	Above 100,000	Total
	Strongly Agree	1	2			3
	Agree	10	14	6		30
	Uncertain	9	15	12	1	37
	Disagree	16	27	21		64
	Strongly Disagree	1	2	3		6
Total		37	60	42	1	140

Irrespective of how much the monthly income was the Automatic Teller Machines service was not considered expensive by the majority of the respondents. In other words the price being paid for using the service was generally considered worth it.

4.3.7 Perception and attitude on the Integrity of the service

The issue addressed here is the integrity of the Automated Teller Machine service both as a system and an operation. Could the service be perceived as one that could be trusted in such matters as accurately paying out the exact amount of cash as it has been instructed to dispense or accurately debit the right account with the correct amount? And can fraud be successfully perpetuated through Automatic Teller Machines?

Table 33 Integrity of the service

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Strongly Agree	22	15.1	15.5	15.5
	Agree	48	32.9	33.8	49.3
	Uncertain	35	24.0	24.6	73.9
	Disagree	33	22.6	23.2	97.2
	Strongly Disagree	4	2.7	2.8	100.0
	Total	142	97.3	100.0	
Missing	System	4	2.7		
Total		146	100.0		

49.3% of the 142 who answered this question were of the Perception that Automatic Teller Machine services could not be fully trusted. Of these, 15.5 % were strongly convinced that their integrity was questionable. On the other hand 23.2% felt they could trust the service. However it was only 2.8% who strongly agreed it could be trusted. 24.6% of the respondents were uncertain or had not given the issue a thought..

As with the others key factors, cross tabulation with the other variables was done.

Table 34 Relationship between Integrity of the service and the frequency of use

* Crosstabulation

Count

		At least once in 6 months	At least once in a month	At least once in a week	Total
	Strongly Agree		20	1	21
	Agree	3	22	19	44
	Uncertain	2	19	7	28
	Disagree		22	11	33
	Strongly Disagree		4		4
Total		5	87	38	130

Out of the 87 respondents who use the Automated Teller Machines at least once a month, 42 did not fully trust the service and 20 of the 38 who used the service at least once a week thought the same. Despite the lack of trust the use of the service was appreciated by the majority. One

possible explanation could be that the number of those who could have had a personal negative experience could be very minimal.

Table 35 Relationship between Integrity of the service and gender

* Crosstabulation

Count

		Male	Female	Total
	Strongly Agree	20	2	22
	Agree	36	12	48
	Uncertain	24	10	34
	Disagree	16	17	33
	Strongly Disagree	1	3	4
Total		97	44	141

47.4% of the males did not fully trust the service. 31.8% of the females agreed with that perception. It is however noted from this analysis that females trusted the Automatic Teller Machines service more than the males did.

4.3.8 Perception and attitude on the Friendliness of the service

Unfriendly service or encounters do not attract repeat usage. Its importance lies in the fact that this service is provided in its entirety through the use of machines rather than by fellow human beings. The question sought the Perception on whether the service was not friendly.

Table 36 Friendliness of the service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	4	2.7	2.8	2.8
	Agree	25	17.1	17.6	20.4
	Uncertain	27	18.5	19.0	39.4
	Disagree	72	49.3	50.7	90.1
	Strongly disagree	14	9.6	9.9	100.0
	Total	142	97.3	100.0	
Missing	System	4	2.7		
Total		146	100.0		

The findings were that 50.7% or just slightly over half of those who answered the questionnaire were of the view that the Automatic Teller Machine service was friendly. An additional 9.9% were much stronger in their Perception that the service was friendly. Only 20.4% thought otherwise. 19% were undecided. The absence of human factor in this service would appear to have comparably little influence on the friendliness of the service.

4.3.9 Perception and attitude on Availability of the service

This dealt basically with continuous or uninterrupted availability of the Automated Teller Machine service. Repeat unavailability of any service whenever they are required affects the Perception and attitudes of people and as a result it impacts negatively on its adaptation and usage.

Table 37 Availability of the service

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Strongly agree	3	2.1	2.1	2.1
	Agree	32	21.9	22.5	24.6
	Uncertain	68	46.6	47.9	72.5
	Disagree	31	21.2	21.8	94.4
	Strongly disagree	8	5.5	5.6	100.0
	Total	142	97.3	100.0	
Missing	System	4	2.7		
Total		146	100.0		

The outcome from the study showed that 47.9 % of those who responded were uncertain on whether Automated Teller Machines were usually unavailable. The researcher was unable to identify the reasons for this uncertainty in perception. However that notwithstanding 27.4% thought that the service is always available when needed. 24.6% disagreed with that view.

This did not unduly influence the usage as noted here below.

Table 38 Relationship between the Availability of the service and frequency of service

Count

		At least once in 6 months	At least once in a month	At least once in a week	Total
	Strongly agree		1	2	3
	Agree	2	20	7	29
	Uncertain	1	46	17	64
	Disagree	2	19	6	27
	Strongly disagree		1	6	7
Total		5	87	38	130

4.3.10 Perception and attitude of the service specific to individual respondents

In addition to the predetermined factors above other views specific to respondents could remain unidentified and unexplored. An opportunity was given to the respondents to identify any other factors that may have been left out by the researcher that could influence the Perception or attitude the residents of the city of Nairobi had on Automated Teller Machine services.

Table 39 Other views of the service

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Yes	12	8.2	8.3	8.3
	No	133	91.1	91.7	100.0
	Total	145	99.3	100.0	
Missing	System	1	.7		
Total		146	100.0		

91.7% of the 145 respondents to this question indicated that there were no other additional views that they could identify which could influence their Perception or attitude on the services of the Automated Teller

Machines. The remaining 12 or 8.3 % of the respondents identified the other factors as follows:-

Table 40 Additional views on the service

Other factors identified	Number
As this service is available all the time it increased both the expenditure patterns and amounts of individuals	4
Automatic Teller machines not currently offering a wide and adequate range of services.	3
Automatic Teller machines are few in numbers and limited in their spread across the expanse of the city of Nairobi	5

4.3.11 Perception and attitude on spreading favourable information on the service

The researcher sought to reconfirm the respondents' perception and attitude towards the Automated Teller Machine services. It was assumed that a person positively disposed towards any service would not only seek to reuse it but would also make appropriate recommendations to others whenever an opportunity arose.

Table 41 Spreading favourable information on the service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	135	92.5	95.7	95.7
	No	6	4.1	4.3	100.0
	Total	141	96.6	100.0	
Missing	System	5	3.4		
Total		146	100.0		

The outcome was a unanimous 'yes' that is 95.7% of the 141 respondents would recommend the adaptation and usage of the Automatic Teller Machines.

This outcome was cross tabulated against many other variables to as to gain a further insight into that overwhelming response. Frequency tables of the various responses are shown here below.

Table 42 Relationship between Spreading favourable information on the service and the frequency of use

* Crosstabulation

Count

	At least once in 6 months	At least once in a month	At least once in a week	Total
Yes	4	84	40	128
No	1			1
Total	5	84	40	129

Whichever the frequency of usage, the respondents were unanimous that they would recommend Automated Teller Machine services to anybody else.

Table 43 Relationship between Spreading favourable information on the service and the service delivery preference

* Crosstabulation

Count

	Over the counter	ATM	Total
Yes	15	118	133
No	6		6
Total	21	118	139

All 118 respondents who preferred to use the Automated Teller Machines to 'over the counter' service would recommend its adoption and usage. However it is worthy to note that out of the 21 respondents who preferred the 'over the counter' service to the Automated Teller Machines 15 would recommend the Automated Teller Machine services to others.

Summarily, all the results show that recommendations would be made to others to adopt and use the Automated Teller Machines. This is so despite the fact that most respondents viewed the Automated Teller Machines as unsafe or could not be fully trusted and were uncertain whether each time they visited an Automated Teller Machine, the would receive the service that they had sought.

4.4 Adoption and usage

This section covers the last stages of the adaptation process that is the trial and adoption or rejection of innovation. The usage and reasons for rejection are examined inter alia. It therefore looks at the second objective of this study.

4.4.1 Reasons for not currently using the service

This question was included so to identify the dominating reasons for not using the Automated Teller Machine services. 4 predetermined reasons were presented. However, an opportunity was also given for specification any other reasons.

Table 44 Reasons for not currently using the service

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lost card not replaced	1	.7	9.1	9.1
	My bank does not offer ATM service	9	6.2	81.8	90.9
	Not interested with ATM services	1	.7	9.1	100.0
	Total	11	7.5	100.0	
Missing	System	135	92.5		
Total		146	100.0		

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The finding was that out of the 146 people who answered the questionnaire, only 11 did not use Automated Teller Machines. Out of these, 9 or 81.8% did not use the service because the Automated Teller Machines were not installed by their Bankers. This is the dominant reason. 1 respondent had lost the Automated Teller Machine card and was yet to seek for a replacement. The remaining respondent was not interested with the service but despite being given the opportunity the respondent declined to specify the reason for the lack of interest.

A cross tabulation was done to establish relationship between this finding and the choice of services preferred by the respondents, that is, between the Automated Teller Machines and the 'over the counter' service.

Table 45 Relationship between those who don't use the service and service preference

* Crosstabulation

Count

		Over the counter	ATM	Total
	My bank does not offer ATM service	8	1	9
	Not interested with ATM services	1		1
Total		9	1	10

It was found that of the 9 people who preferred 'over the counter' service 8 banked with institutions that did not have Automated Teller Machines installed. 1 person though preferred the Automated Teller Machine service but his banker had not had any installed. Further details extracted from that respondent showed that the individual's preference came from the fact that he was a user of the Automated Teller Machine services as a supplementary user. Such an individual if say approached would gladly move his account to a bank providing Automated Teller Machine service.

Other cross tabulations was also done to determine if there were notable relationships with the other variables.

Table 46 Relationship between those who don't use the service and age

Count

	Between 18 and 30	Between 31 and 40	Total
Lost card not replaced	1		1
My bank does not offer ATM service	7	2	9
Not interested with ATM services		1	1
Total	8	3	11

The majority or the 7 of the 11 people who did not use the Automated Teller Machine service were between 18 and 30 years of age for the reason that their bank did not offer it.

Table 47 Relationship between those who don't use the service and monthly income

* **Crosstabulation**

Count

	Under 15,000	Between 15,001 and 45,000	Between 45,001 and 100,000	Total
Lost card not replaced		1		1
My bank does not offer ATM service	3	6		9
Not interested with ATM services			1	1
Total	3	7	1	11

7 out of the 11 who did not use the service earned an income of between Kshs 15,000/- and Kshs 45,000/- Of these, 6 did not use the Automatic Teller Machines because their banks did not offer the service.

The majority of the respondents who bank with institutions which does not offer Automated Teller Machine services were males of between 18

and 30 years old who had attended a tertiary collage and earned an income of between Kshs15,000/- and kshs45,000/- a month.

4.4.2 Account ownership status of the service users

This was to establish if the Automated Teller Machine service users are usually the owners of the account.

Table 48 Account ownership status

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Owner	118	80.8	90.8	90.8
	Supplimentary owner	12	8.2	9.2	100.0
	Total	130	89.0	100.0	
Missing	System	16	11.0		
Total		146	100.0		

Of the 130 who answered this question 90.8% were owners of the account. Only 12 or 9.2% did not own the accounts but were allowed to use Automatic Teller Machines by permission of the account holders by being provided with a supplementary card. Generally speaking users of the service can be assumed to be owners of the account.

Table 49 Relationship between account ownership and frequency of use

* **Crosstabulation**

Count

		At least once in 6 months	At least once in a month	At least once in a week	Total
	Owner	3	77	38	118
	Supplimentary owner	2	9	1	12
Total		5	86	39	130

77 (65%) of the 118 owners used the service at least once a month while 38 (32%) of them used it once a weak. 9 (76%) of the 12 supplementary holders used the service at least once a month and 1 (8%) used it once a

week. It can therefore be said that a greater proportion of supplementary holder use the service more often in a month that the owners.

4.4.3 Frequency of usage of the service

How often residents of the city of Nairobi used the Automatic Teller machine services?

Table 50 Frequency of usage of the service

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	At least once in 6 months	5	3.4	3.8	3.8
	At least once in a month	88	60.3	66.2	69.9
	At least once in a week	40	27.4	30.1	100.0
	Total	133	91.1	100.0	
Missing	System	13	8.9		
Total		146	100.0		

The findings were that 3.8% used the Automated Teller Machines at least once in six months, 66.2% at least once in a month and 30.1% at least once in a week. None of the respondents used the services daily.

The tables below show the relationships that exist between usage and age, usage and level of education, usage and employment status, usage and level of income and final usage and their gender status.

Table 51 Relationship between frequency of use and age

* Crosstabulation

Count

		Between 18 and 30	Between 31 and 40	Between 41 and 50	above 50	Total
	At least once in 6 months	1	2	2		5
	At least once in a month	44	30	13	1	88
	At least once in a week	20	10	8	2	40
Total		65	42	23	3	133

The major users were those in the 18 to 30 age group. 67.6% of them used the Automated Teller Machines at least once a month and 30% once a week. 71.4% of those between 31 and 40 used the service at least once a month while 23.8% used it once a week. 56.5% between 41 and 50 used the service at least once a month while 34.7% used it once a week. 33.3% of those over 50 used the service at least once a month while 66.6 used it once a week Age influence usage. It was observed that generally a larger percentage of people use the service more frequently on monthly basis when they are younger than when they are older. The opposite was also observed in that a larger percentage the older people used the service more frequently on weekly basis than younger people.

Table 52 Relationship between frequency of use and education

* Crosstabulation

Count

	High school	Tertiary collage	University	Total
At least once in 6 months	1	4		5
At least once in a month	9	51	28	88
At least once in a week	1	21	18	40
Total	11	76	46	133

The largest number users of Automated Teller Machines (57.1% of all the users) were graduates at a tertiary college. 67% of them used the service at least once a month. 34.7% of the total users had reached university with the majority of them using it once in a month. It does not follow from the above analysis that the more educated the more frequently the use of the service and vice versa.

Table 53 Relationship between frequency of use and employment

Count

	A public institution	A Parastatal	A private firm	Self	Total
At least once in 6 months			2	3	5
At least once in a month	10	10	32	36	88
At least once in a week	2	2	17	19	40
Total	12	12	51	58	133

83% of those employed in public institutions and 83% of those employed in parastatals used Automated Teller Machine services at least once in a month. 62.7% of those in private companies and 62.1% who are self employed also used the service once in month. All those working in the public institutions and parastatals use Automated Teller Machines more frequently than once in six months. About 33% of those who are self employed and of those who work in private firms use the service at least once a week. It can be said that the majority of people irrespective of their source of livelihood use the service at least once a month while at least 30% of those in private firms and self employment use the service at least once a week.

Table 54 Relationship between frequency of use and monthly income

Count

	Under 15,000	Between 15,001 and 45,000	Between 45,001 and 100,000	Above 100,000	Total
At least once in 6 months	1	4			5
At least once in a month	22	41	25		88
At least once in a week	9	12	16	2	39
Total	32	57	41	2	132

Irrespective of their income the majority of people use the Automated Teller Machines at least once in a month. However it was observed that the service was used more frequently in a week by those with an income between Kshs 15,000/- and Kshs 100,000/- . Those earning more than Kshs 100,000/- used the service at least once in a week. It would appear

that the more the individual's income the more frequency he or she would use the service.

4.4.4 Preference between Automatic Teller Machine service and over the counter service

Respondents were directly asked to indicate their service delivery preference. The outcome was that the majority of the respondents preferred the Automated Teller Machine service. Only 14.7% of the 143 respondents preferred the 'over the counter' service. This outcome was examined against other variables with the following results.

Table 55 Relationship between Preference of service delivery option and age

* Crosstabulation

Count

		Between 18 and 30	Between 31 and 40	Between 41 and 50	above 50	Total
	Over the counter	12	8	1		21
	ATM	60	37	22	3	122
Total		72	45	23	3	143

From the above table it will be noted that the Automated Teller Machine service was preferred to 'over the counter service' by all the residents of Nairobi irrespective of their age.

The relationship between Preference of service delivery option and education was as follows. 91.5% of the university graduates preferred the services of the Automated Teller Machines. 84.1% and 71.4% of the tertiary collage and high school graduates, respectively, preferred the Automated Teller Machine service. It would appear from the calculated percentages that the higher the educational advancement of the respondents the more the preference they had for the service provided by the Automated Teller Machines.

Table 56 Relationship between Preference of service delivery option and employment

Count

	A public institution	A Parastatal	A private firm	Self	Total
Over the counter	3	2	6	10	21
ATM	11	10	48	53	122
Total	14	12	54	63	143

The majority of the respondents irrespective of their employment preferred Automatic Teller Machine services. However, 22% of those who worked in public institutions preferred 'over the counter' service followed by those in self employment at 15.9%, then those in private firms at 11.1% and lastly by those in parastatals. Perhaps because of the strict rules in private firms employees prefer Automated Teller Machine services which they may be viewing as convenient and quick.

Table 57 Relationship between the service delivery option and monthly income

* Crosstabulation

Count

	Under 15,000	Between 15,001 and 45,000	Between 45,001 and 100,000	Above 100,000	Total
Over the counter	6	13	2		21
ATM	32	47	40	2	121
Total	38	60	42	2	142

All those earning above 100,000 preferred Automated Teller Machine service to over the counter service. This preference was followed by those earning between Kshs 45,001/- and Kshs 100,000/- (92.4%) then those earning under Kshs 15,000/- a month (84.2%). Least was those earning between Kshs 15,001 and Kshs 45,000/- (78.2%).

Table 58 Relationship between the service delivery option and gender

* **Crosstabulation**

Count

		Male	Female	Total
	Over the counter	15	6	21
	ATM	83	39	122
Total		98	45	143

Albeit by a small margin, it was noted that more women (86.7%) preferred the Automated Teller Machine services to 'over the counter' service than men did (84.7%).

4.5 Reasons for preferring over the counter service to Automatic Teller Machine service

The researcher sought to identify why some people preferred to use over the counter service to those offered by the Automated Teller Machines. 125 people who preferred the services of the Automated Teller Machines were not expected to participate.

5 predetermined reasons were presented to the respondents who indicated they preferred over the counter service. They were requested to give their opinion by indicating how strong they viewed those reasons. Only 20 out the possible 21 people in this category responded. Their responses are shown in the tables and graphs below. Those who preferred Automated Teller Machine services are included in the tables and graphs as 'missing' and have for the purposes of this section will be ignored in analysing the responses.

4.5.1 Automated Teller Machine services do not allow adequate cash withdrawals

The first possible reason provided to the respondents was in respect of the restrictions that Banks have put regarding the amount of cash that can be dispensed by the Automated Teller Machines, either on a given day or week or in any other form.

Table 59 Amount of cash withdrawal allowed is inadequate

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Strongly Agree	1	.7	5.0	5.0
	Agree	5	3.4	25.0	30.0
	Uncertain	7	4.8	35.0	65.0
	Disagree	4	2.7	20.0	85.0
	Strongly Disagree	3	2.1	15.0	100.0
	Total	20	13.7	100.0	
Missing	System	126	86.3		
Total		146	100.0		

35% were uncertain or unsure of their position regarding this reason. A similar percentage felt that the amount of cash withdrawal allowed was adequate, 15% of them strongly. That notwithstanding 30% felt that the amounts they could withdraw from the Automated Teller Machines could not meet their usual needs and the restriction was limiting but only 5% of them expressed a strong view.

The results were cross tabulated against the service preferences as per the table below.

Table 60 Relationship between adequacy of cash withdrawal and service delivery preference

* Crosstabulation

Count

		Over the counter	ATM	Total
	Strongly Agree	1		1
	Agree	5		5
	Uncertain	6	1	7
	Disagree	4		4
	Strongly Disagree	3		3
Total		19	1	20

31.7% of those who preferred over the counter service were positive that the amount allowed for withdrawal was not enough. 36.7% were comfortable with the restrictions.

The adequacy of the amount of cash allowed by banks for withdrawal appears not to have had an overwhelming influence in preferring over the counter services to Automated Teller Machines.

4.5.2 Automated Teller Machines are not comprehensive in their range of services

This next predetermined reason sought to establish if the range of products currently being offered by the Automated Teller Machines was sufficiently comprehensive such that it would not influence the preference of the residents of the city of Nairobi to the 'over the counter' service.

Table 61 Range of services not comprehensive

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	1	.7	5.0	5.0
	Agree	10	6.8	50.0	55.0
	Uncertain	6	4.1	30.0	85.0
	Disagree	3	2.1	15.0	100.0
	Total	20	13.7	100.0	
Missing	System	126	86.3		
Total		146	100.0		

50% of the respondents agreed that the Automated Teller Machine service did not offer a sufficiently wide enough range of services. An additional 5% felt strongly so. In total 15% disagreed or were satisfied that the services offered were sufficient.

30% were unsure while nobody was strong that they were satisfied with the range of services. It is possible that this could be due to the fact that a number of users of Automatic Teller Machine have a limited knowledge of the full range of service being offered.

Table 62 Relationship between the Range of services not being comprehensive and the service delivery option

* Crosstabulation

Count

		Over the counter	ATM	Total
	Strongly agree	1		1
	Agree	10		10
	Uncertain	5	1	6
	Disagree	3		3
Total		19	1	20

The same results were seen when the issue of comprehensiveness of service of Automated Teller Machines was looked at in regard to the variable of service delivery preference. It can be generally said that lack of comprehensive range of services offered by Automated Teller Machines had an influence on those who preferred over the counter service.

4.5.3 Automated Teller Machine service is slow

The influence on whether respondent considered that the Automated Teller Machines slower or that the service had longer queues than those for the 'over the counter' service was examined next.

Table 63 Automated Teller Machine service is slow

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly agree	1	.7	5.0	5.0
	Agree	10	6.8	50.0	55.0
	Uncertain	5	3.4	25.0	80.0
	Disagree	3	2.1	15.0	95.0
	Strongly disagree	1	.7	5.0	100.0
	Total	20	13.7	100.0	
Missing	System	126	86.3		
Total		146	100.0		

55% of those who responded agreed that Automated Teller Machine services were either slower or that the queues made to obtain the service were too long. 25% were unsure of their stand on this but 20% of the respondents did not have a problem with the speed of the machines nor were they perturbed with the length of the queues.

Table 64 Relationship between the Automated Teller Machine service being slow and the service delivery option

* Crosstabulation

Count

		Over the counter	ATM	Total
	Strongly agree	1		1
	Agree	10		10
	Uncertain	4	1	5
	Disagree	3		3
	Strongly disagree	1		1
Total		19	1	20

Over 50% of those who preferred 'over the counter' service felt that the Automated Teller Machines were slower or their queues longer than those of the 'over the counter' service. Only 2.5% thought otherwise.

4.5.4 Automated Teller Machine service is not private or secure

Queues which are usually made in open streets exposes users to insecurity and or loss of privacy.

Table 65 Automated Teller Machine service is not private or secure

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Strongly agree	2	1.4	9.5	9.5
	Agree	9	6.2	42.9	52.4
	Uncertain	6	4.1	28.6	81.0
	Disagree	2	1.4	9.5	90.5
	Strongly disagree	2	1.4	9.5	100.0
	Total	21	14.4	100.0	
Missing	System	125	85.6		
Total		146	100.0		

42.9% agreed that they felt exposed and or insecure. Despite 28.6% of the respondents being unsure of their position only 9.5% were of the perception that the Automated Teller Machine services were adequately private and secure despite having to line up in the streets.

Table 66 Relationship between the Automated Teller Machine service is not private or secure and the service delivery option

* Crosstabulation

Count

		Over the counter	ATM	Total
	Strongly agree	2		2
	Agree	9		9
	Uncertain	5	1	6
	Disagree	2		2
	Strongly disagree	2		2
Total		20	1	21

Looked at in respect of the service delivery preference, over 50% of those who preferred over the counter service agreed that the Automated Teller Machines were neither private nor secure. 20% disagreed.

4.5.5 Automated Teller Machine service queues in the street are less prestigious than queues in the Banks

Lastly, the issue of prestige of the service provided by the Automated Teller Machines was put to the respondents. Prestige is a personality issues which greatly influences the adoption or usage of any service.

Table 67 Automated Teller Machine service queues in the street are less prestigious than queues in the Banks

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Strongly agree	2	1.4	9.5	9.5
	Agree	7	4.8	33.3	42.9
	Uncertain	7	4.8	33.3	76.2
	Disagree	3	2.1	14.3	90.5
	Stongly disagree	2	1.4	9.5	100.0
	Total	21	14.4	100.0	
Missing	System	125	85.6		
Total		146	100.0		

42.9% of the respondents were in agreement that it was more prestigious to queue inside the bank to receive a financial service than it was to queue for the Automated Teller Machine service in the street. 23.8% disagreed.33.3% remained uncommitted to either side.

Table 68 Relationship between the Automated Teller Machine service queues being less prestigious and the service delivery option

* Crosstabulation

Count

		Over the counter	ATM	Total
	Strongly agree	2		2
	Agree	7		7
	Uncertain	6	1	7
	Disagree	3		3
	Stongly disagree	2		2
Total		20	1	21

As seen from the above table the results are more or less the same when

a cross tabulation is done of this predetermined reason with the service preference variable.

4.5.6 Usage of Automated Teller Machines for services other than just withdrawals

This was set to further examine the usage of the Automated Teller Machines. It sought to establish if the there were any other services that the respondents used besides withdrawing cash.

Table 69 Usage of Automated Teller Machines for other service than just withdrawals

		Frequency	Percent	Valid Percent	Cumulativ e Percent
Valid	Yes	29	19.9	20.0	20.0
	No	116	79.5	80.0	100.0
	Total	145	99.3	100.0	
Missing	System	1	.7		
Total		146	100.0		

80% of the Automated Teller Machine users did not use the service beyond the traditional cash withdrawal transactions. Of the 20% or the 29 persons intimated that they use the following other services at the Automated Teller Machines;

Table 70 Other service of Automated Teller Machines that are used

Checking account balances and/ or obtaining mini statement of their accounts.	13
Depositing cash or cheques	7
Payment of utility bills (electricity bills), purchase of mobile phone airtime (safaricom), checking their account balances, obtaining mini statements and depositing cash or cheques	5
Payment of utility bills (electricity bills)	4

4.5.7 Services desired from Automated Teller Machines

What other services if offered by the Automated Teller Machines would increase the usage of the machines and possibly discourage preference or use of 'over the counter' service.

Table 71 Desirability of other service of Automated Teller Machines

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	39	26.7	27.1	27.1
	No	105	71.9	72.9	100.0
	Total	144	98.6	100.0	
Missing	System	2	1.4		
Total		146	100.0		

72.9% of those who responded did not have any other services in mind that that if offered would make them use Automated Teller Machines more frequently that they currently do. This may reflect the fact that the full potential of these services is yet to be made known or available to the residents of the city of Nairobi.

39 respondents said that they desired additional other services from the Automatic Teller Machines in response to the question. The table below shows more specifically the respondents' desire in having the listed services included in the range of the available service offering. It would encourage more frequent usage.

Table 72 Other service desired from Automated Teller Machines

Service desired by respondents	No
Payment to companies providing utility bills:- This bracket included the introduction of the service by Banks whose Automated Teller Machines do not currently offer the service, increase of existing scope to include utilities other than just electricity bills and topping up of mobile (safaricom) airtime	18
Cash and cheque deposit facilities;- Introduction where non is currently being offered	10
Credit transfer ;- Introduction of this service to facilitate easier transfer of funds to other parties such as school fees , friends and relatives, settlement of none utility services etc	6
Numbers and Spread;- increase number of machines and improve spread across the city.	2
Foreign currency withdrawal;- Introduce where the service is not being offered	1
Withdrawal limits:- increase amounts available for daily withdrawal	1
Networking;- Introduce networking across banks so as enable utilization of services by any Automated Teller Machine irrespective of the Bank which a cardholder maintains an account.	1
Total number of respondents	39

CHAPTER FIVE
SUMMARY AND CONCLUTIONS

5.1 Introduction

This is the final chapter which presents the summary of the findings of this study, the conclusion, recommendations, limitations and suggestions for further study.

5.2 Summary of findings

This study established that the majority of participants become aware of the Automatic teller Machine services more through word of mouth from relatives, friends, workmates, and opinion leaders than through the other modes of marketing communication such as advertisement. The spread or the diffusion of this innovation can in a way, therefore, be said to have resulted from the satisfaction that must have first been experienced by the innovators, that is, those who were venturesome and eagerly tried out the new idea. However, the power of advertisement is not be down played as about 40% of the participants got to know about the service through adverts. Indeed some of the innovators may have first heard about it or seen it in advertisements. Additionally, advertisement could have acted as a reinforcement agent. According to Rogers (1983) word of mouth is amongst the most notable influences in communication.

Five of the eight opinion variables that were pre-identified and used by the researcher as key indicators of attitude towards the service were favourably perceived by the participants of the study. Two of indicators

were unfavourably perceived. The participants were uncertain on one opinion variable. This finding is drawn from the following summarised results.

Over 80% of those who responded were of the opinion that the machines and the service they offered were easy to use. About half the respondents thought that the service was prestigious, with a quarter disagreeing with that view and the remaining quarter being uncertain of their stand. An overwhelming majority thought that the service was convenient. 46.5% of the respondents thought that the Automatic Teller Machine service was not expensive, 26.1% were uncertain on their position while only 21.1% were clear that the service was expensive to them. Over half of the participants viewed the Automatic Teller Machine service as friendly. 20.4% thought otherwise while 19% were undecided. 51% of the respondents thought that the service was unsafe and 50% did not fully trust the service. 47.9 % of those who responded were uncertain of whether Automated Teller Machine service was always available whenever they required using them. However that notwithstanding 27.4% thought that the service is always available. 24.6% were of the view that the service was not always available.

The majority (91.7%) of the participants responded that they did not have any additional different views to offer on the Automated Teller Machine service. Those who did were predominantly concern that the service encouraged thrift. 95.7% of all participants were sure that they would recommend the use the service to others.

A few other interesting observations were also made. Firstly, as more and more people joined in using the Automated Teller Machine service its value as a prestigious service declined. The absence of a human face in this service appeared to have only had a little influence if any on the

friendliness of the service. Females trusted the integrity of the machines more than their male counterparts did. Those who used the service more often were more concerned about its security and lastly more females than males viewed service as unsafe.

This study also established that 81.8% of those who did not use the Automated Teller Machines did so because their bankers did not have the machines installed. Other reasons such as service integrity, security, loss of the Automated Teller Machine cards and lack of interest in the service were insignificant. 90.8% of those who used the service did so on the accord that the owned the accounts in which the service was offered.

66.2% of the participants used the Automated Teller Machines at least once in a month and 30.1% at least once in a week. Only 3.8% used it at least once in six months and none of the participants would normally use the service daily. It was generally observed that a larger percentage of those who use the service on once a month basis were the younger people. The older people used the service more frequently that is on weekly basis. The educational status did not exert any pressure on the frequency of use of the service. It can be said that the majority of people irrespective of their source of livelihood use the service at least once a month and that at least 30% of those in private firms and self employment respectively used the service at least once in a week. It would also appear that the more the individual's income was the more frequently he or she would use the service.

Only 14.7% of the 143 respondents preferred over-the-counter service to that offered by the Automated Teller Machines. This was so irrespective of their employment status. However, be that as it may, 22% of those who worked in public institutions preferred over-the-counter service followed by those in self employment at 15.9%, then those in private

firms at 11.1%. Perhaps this is so because of the strict rules that exist in private firms regarding absence from work stations that has forced their employees to prefer the use Automated Teller Machines which they may be considering as convenient and quick. Albeit by a small margin, it was noted that more women than men preferred using the Automated Teller Machine services to the over-the-counter service.

The adequacy of the amount of cash allowed by banks for withdrawal appears not to have had an overwhelming influence in making a choice between over-the-counter service and that of the Automated Teller Machines. This could be a direct result of the amount of monthly income earned. However, it can be generally said that lack of a comprehensive range of services offered by Automated Teller Machines has an influence on those who prefer over-the-counter service.

More than half of those who preferred over-the-counter service felt that the Automated Teller Machines were slower or their queues were longer than those inside the banking halls. 42.9% felt too exposed and or insecure in the Automated Teller Machine queues and were also of the view that it was more prestigious to queue inside the bank to receive a financial service than it was to queue for the Automated Teller Machine service in the street.

Most of the Automated Teller Machine users do not use the service beyond the basic or traditional cash withdrawal service. They did not however have any other services in mind that that if offered would make them use Automated Teller Machines any more frequently that they currently do. This may reflect the fact that the full potential of these services is yet to be made known or made available to the residents of the city of Nairobi.

5.3 Conclusions from the study

This study set out to establish the perception and attitude that the people of Nairobi have on Automated Teller Machines services installed by the Banks in Nairobi. It also set out to identify the factors that influence its adoption and usage. Although it was to maintain or increase market share in an industry that was and is still faced with rigorous competition and unfavourable economic climate the introduction of Automatic teller Machines as a strategic innovation was expected to bring in a major behavioural change in an area that is of significant importance to both customers and potential customers. In essence the service introduced self service in banking, where consumers would independently use equipment provided by the service provider to produce for themselves the service they required.

Knowledge to the resident of the city of Nairobi of the existence of Automated Teller Machines services was disseminated through various ways. It can be said that the word of mouth is the most effective way of reaching the target market when dealing with service innovations. Simultaneously, however, it was noted from the responses in the questionnaire that all those who participated were not ignorant of the existence of the service. Thereby extrapolating this result to the study population it can be said that the innovation was well diffused in the city of Nairobi.

From the finding of this study, it is conclusive that the Automatic Teller Machines are well perceived and that the residents of Nairobi have a general favourable attitude towards it. This is so despite the fact that residents still carry with them the fear of insecurity during and after use of the service. Robbery and muggings are known to have happened many

a times. Perhaps, consumers who expect to deal with such situations will be more likely to start forming attitudes in anticipation of the event. In addition, they do not fully trust that the service is without errors and that the potential of untoward transactions is always a possibility. This lack of complete trust is consistent with the fiduciary characteristic that is unique to financial services, which makes it difficult to understand and evaluate the financial service offer. Lastly residents are not too sure that the service will be available whenever or wherever they desired it

This good attitude towards Automated Teller Machines is confirmed by the fact that its service is used at least once a month by most residents in spite of the demographic circumstances they maybe in and almost exclusively by all the account owners. Its use would be recommended to non users by virtually all users and even the non users of the service. Lastly the confirmation comes in terms of customers desire to have the service expanded. If the attitude towards the service was considered to be bad then it would matters little that the service may be good.

Thus firstly, the major influence on the adoption and usage of Automated Teller Machine service dependent on perception and attitude of the resident of the city of Nairobi towards it. Influence on attitude would normally include its relative advantage in terms of such attributes as economics, prestige or convenience to the user, compatibility with existing values and needs. It would also include its complexity or the degree in which it is considered easy to understand or use, the extent to which it could be sampled or experimented with and lastly the extent to which the results of the innovation can be seen thus stimulating peer discussions through evaluation and encouraging trial. A service that provides benefits consistent with those desired by members of a culture group at any point in time has a better chance of gaining acceptance.

Basically all those participants in the study save for those whose financial service providers did not have the machines installed had been motivated to use Automatic Teller Machines. Consumers' behaviour outcome is in essence the adoption and usage or rejection of any service that is intended to have satisfied a need. The issue here in understanding the behaviour of consumers when encountering an innovation is in the decision making process through which the individual undergoes. The amount of effort that goes into this process depends on the nature of the need or the problem that is being addressed by the consumer. Where it is perceived to carry a high level of risk or it is viewed to be very important or valuable, the search for information is usually robust and requires time. Satisfaction remains the key element because of its impact on repeat usage and in the conveying of positive messages to other would be customers. A customer who is dissatisfied will not only reverts to any available alternatives but may also resort to negatively influencing others.

80% or thereabout of the residents preferred the service of Automated Teller Machines to those offered over-the-counter in banking hall. It was however observed that this preferred service offering is limited to cash withdrawals, account balance enquiry and to the occasional payment of utility bills and depositing of cheques. This situation is so because the banks do not offer the full range of services that the machines are capable of providing and also due to the lack of customer knowledge of these services or their need if provided. This should provide a challenge to financial services providers. Having enjoyed the limited benefits gained from adoption and usage of the service, in time customers demands will upgrade not only in terms of the quantity but also the quality of the service

Finally, can the Banks be said to have achieved their initial goal by introducing Automatic Teller Machine services as a strategy? This question is double edged. The innovators did. However the same can not be said of them today as almost all banks have either installed Automated Teller Machines individually or collectively. The competitive advantage has now shifted from the simple case of innovation to that of quantity and quality.

5.4 Recommendations

Recommendations adduced from the questionnaire are here below made in terms of the marketing mix if growth in adoption and usage is to be pursued as a strategy.

1. Product

Emphasis should be in increasing their range of service offerings. Thus these machines should be allowed to offer their full potential as standard. This will include acceptance of cash deposits, more than one currency withdrawals, credit transfers and so on. Issues such as mistrust and security ought to be addressed quickly. This will generate service both quantity and quality thereby enhancing customer perception and satisfaction of needs and hence the desire to use Automatic Teller Machines even more. The Banks should now start asking its customer what else they require from these machines other than thinking it for them.

2. Promotion

It is clear that most participants did not know of the other existing services offered by banks through the Automatic Teller Machines other the cash withdrawals and obtaining their account status. While efforts by banks should still be put into further enhancing their customers' attitude, the institutions image and in promoting their usage, emphasis ought also to be aimed at informing and educating the present and potential customers so that their unmet needs are addressed.

3. Price

Currently pricing is not a big issue as it was generally accepted that it was not to expensive to use the service. However there is a significant number of those respondents who felt that the service was expensive and those who remained on the fence. The underlying issue behind this dissident opinion is that these customers are not convinced that they get full value for the amount that they pay for the service. This ought to be addressed least over time this number increases to become a big issue.

4. Place

While efforts have been made to spread this service, the general cry made by customers is that the Automatic Teller Machines be increased both in numbers and in spread. Perhaps the institutions should move away from dictating to the users where the machines should be placed but instead seek their input in making that decision. In this way a suitable planning delivery mix will be achieved to customers' satisfaction and the wasteful practice where some machines remain virtually ignored and others overcrowded is avoided.

The recommendation here would be centred on the availability of service. It would be remembered that a significant number of respondents were uncertain that they would find the machines available where and when they needed the service. If the number of those who were definite that they would not receive service for the same reason is added then it would be overwhelming and definitely a big issue. Unavailability could be partly due to lack of coordinated efforts between the various teams that come together to make the service available. If this be it, then appropriate effort ought to be put to remedy the situation. Team working is essential.

6. Process

The service has been seen and said to be easy to use. There is however the possibility of errors and the perpetuation of fraud. The process ought to be regularly reviewed in light of experiences gained so that in time, with decreased misgivings, customer may feel more comfortable using the service.

7. Physical Evidence

Automatic Teller Machine provides a service. Unlike goods, services cannot be touched nor can the service provider cannot be separated from delivery of service. To reduce the impact of these two characteristics of service there is the need to improve the physical environment in which the Automatic Teller Machines are placed. This will include amongst many, the ambiance and the safety factors within and around the machines.

5.5 Limitations

Of all the limitations encountered, great significance is placed by the researcher on constraints of time and funding. The impact resulting there from includes the conscious restriction in the number of questionnaires administered in a research that would probably require a bigger sample and also the number and spread of locations identified within the city of Nairobi in which to conduct the study. For the same reasons the researcher found it only befitting to exclude in the questionnaire designs further variables that would have shed more light on perception, attitude, adoption and usage. Such variables would have considered aspects of quantity and quality of service, satisfaction, branding, details of the financial transactions undertaken, use locations, time service is used and so on. The research design would also have amalgamated the use of observation to aid capture the facts required from those chosen but were reluctant to participate. Use of interviews would have been put into place to give respondents a wider opportunity to air their view outside the requirement of the questionnaire, for this would enhance knowledge. Lack of time and resources would have allowed the researcher to take into account the changing trends.

5.6 Suggestions for further research

Avenues which were beyond the scope of this study or hindered by limitation of time and funds but could be considered for further investigations include:

- o How can Automatic Teller Machines services be moved to the next level or how can the machines be used to better further the living conditions of the residents of the city of Nairobi.

o What marketing effort is needed to improve on the usage of Automatic Teller Machines services?

o How can the services of Automatic Teller Machines services be improved to remove the unfavourable perception of insecurity, the likely unavailability of the service and the element of distrust on Automatic Teller Machine transactions.

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APPENDIX 1

Letter of introduction to participating Banks

<div align="right">

C/o University of Nairobi
Department of Business Administration
Faculty of Commerce
P O Box 30197
NAIROBI

</div>

Retail Services Director

Dear Sir

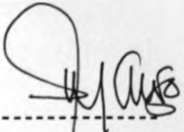<u>REQUEST TO INTERVIEW YOUR CUSTOMERS WITHIN YOUR BANKING HALLS</u>

I am a post graduate student in the Faculty of Commerce, University of Nairobi. In partial fulfilment for the award of the Degree in Masters of Business Administration, I am conducting a study on the Adoption and usage of Automatic Teller Machines services installed by Banks in Nairobi.

For the purposes of conducting this study I wish to collect data from some of your customers in your branches located on Moi Avenue. The data collection process has been designed such that it will not interfere with the delivery of your services to your customers. A sample copy of the questionnaire to be used is attached.

Upon its completion, a copy of the final report will be made available to you if requested and may be used for your strategic planning and implementation.

Kindly grant that I may proceed.

Yours Sincerely

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Stephen E Onyango   Dr. R Musyoka
Student   Lecturer & Project Supervisor

APPENDIX 2

Letter of introduction to respondents

C/o University of Nairobi
Department of Business Administration
Faculty of Commerce
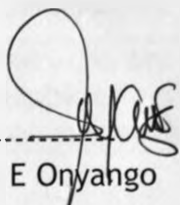P O Box 30197
NAIROBI

Dear Sir / Madam

REQUEST FOR RESEARCH DATA

I am a post graduate student in the Faculty of Commerce, University of Nairobi.
In partial fulfilment for the award of the Degree in Masters of Business
Administration, I am conducting a study on the Adoption and usage of
Automatic Teller Machines services installed by Banks in Nairobi.

You have been selected to form part of this study. Your opinion is important.
Your name is not required but should you indicate it on the questionnaire, all
your answers will be kept confidential.

Your assistance and cooperation will be highly appreciated.

Yours Sincerely

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Stephen E Onyango   Dr. R Musyoka
Student   Lecturer & Project Supervisor

APPENDIX 3

Questionnaire

Kindly tick the most appropriate answer to each question.

1. How did you get to know about ATM services?

   1. Friends / Relatives   (   )
   2. Workmate / Employer   (   )
   3. Advertisement / Promotional publications   (   )
   4. Directly approached by Financial Institutions   (   )
   5. Others, please specify

   _____

   _____

2. Please rank the following statements on how you perceive ATM services.

	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
ATM services are easy to use					
ATM services are prestigious					
ATM services are convenient					
ATM services are secure					
ATM services are expensive					
ATM services cannot be fully trusted					
ATM services are not friendly					
ATM services are usually unavailable when their services are required					

3. Do you have any other views about ATMs that are not specified above? If yes, please specify.

   _____

   _____

4. Would you recommend the use of ATM services to a friend?
   1. Yes   (   )
   2. No   (   )

If your answer is no please give your reason

_____

_____

_____

5. If you do not use ATM services at all currently, please tick the reason for not doing so
    1. A previous transaction has had errors or has been fraudulent   ( )
    2. I have been subjected to theft or injuries after using an ATM   ( )
    3. I have lost my card which has not been replaced   ( )
    4 My bank does not offer ATM services.   ( )
    5. I am not interested in using the service (please specify)   ( )

_____

_____

_____

6. If you use ATM services,
    1. Are you the owner or one of the owners of the account   ( )
    2. Or have you been allowed the use the account   ( )

7. How often do you use ATM services?
    1. At least once in six months   ( )
    2. At least once a month   ( )
    3. At least once a week   ( )
    4. At least once a day   ( )

8. Which of the two services do you prefer or use mostly?
    1. Over the counter   ( )
    2. ATM   ( )

9. If the answer to the above is 'over the counter' please rank the following statements.

	Strongly agree	Agree	Uncertain	Disagree	Strongly disagree
The amount allowed for withdrawal at ATMs is not sufficient for my usual needs					
ATMs in Kenya do not offer a comprehensive range of services					
ATMs are slower or the queues are much longer					
ATM services are too exposed and therefore are not private or secure					
It is more prestigious to queue inside the bank than in the streets					

10. Other than withdrawing cash, for which other services do you use ATMs?

_____

_____

_____

11. Are there any specific services you would like to see offered if you were to use ATMs more that you currently do?

_____

_____

_____

12. Are you
   1. Between 18 and 30 ( )
   2. Between 31 and 40 ( )
   3. Between 41 and 50 ( )
   4. Above 50 ( )

13. Which is your highest level of education?
   1. Primary ( )
   2. High school ( )
   3. Tertiary collage ( )
   4. University ( )

14. Are you employed by
   1. A public institution e.g., the public service commission, ( )
   2. A parastatal e.g., Kenya Pipeline, ( )
   3. A private firm e.g. Caltex Oil, Kenya Bus Services ( )
   4. Self e.g., shop owner, etc ( )

15. What is your approximate monthly income? ( )
   1. Under 15,000 ( )
   2. Between 15,001 and 45,000 ( )
   3. Between 45,001 and 100,000 ( )
   4. Above 100,000

Thank you for your cooperation.