ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES

EFFECT OF ATM SERVICE QUALITY ON CUSTOMER
SATISFACTION: CASE STUDY OF SELECTED BANK

BY

NIGUSAYEHU SOLOMON

A THESIS SUBMITTED TO ST. MARY UNIVERSITY, SCHOOL OF GRADUATE
STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE
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ADVISOR: ADERAW GASHAYE (PhD)

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Addis Ababa, Ethiopia

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APPROVED BY BOARD OF EXAMINERS

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CERTIFICATION SHEET

This is to certify that the thesis entitles "*Effects of ATM service quality on Customer's satisfaction in selected Bank",* submitted to St. Mary University for the award of the Degree of Master of Business Administration (MBA) and is a record of confide research work carried out by Nigusayehu Solomon, under our guidance and supervision.

Therefore, we hereby declare that no part of this thesis has been submitted to any other university or institutions for the award of any degree or diploma.

Main Adviser's Name   Date   Signature

       Aderaw Gashaye   _____   _____

DECLARATION

I hereby declare that this thesis entitled "Effects of ATM service quality on Customer's satisfaction in selected Bank", has been carried out by me under the guidance and supervision of Aderaw Gashaye (PhD)

The thesis is original and has not been submitted for the award of any degree or diploma to any university or institutions.

Researcher's Name   Date   Signature

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Abstract

The research paper focuses on studying the effect of ATM service quality on customer satisfaction in selected Bank Addis Ababa branches. The research objective was to examine the effect of service quality dimensions i.e. communication, credibility and completeness, security and reliability, responsiveness and convenience on customer's satisfaction. Sample of 398 were taken using purposive sampling techniques, from which 374 samples were considered valid. Explanatory and descriptive research designs and mixed research approach were used to analyze the data collected from customers. The researcher used primary data through questionnaire and interview and secondary data from selected Banks IT and card payment department published and unpublished materials. Those collected data were analyzed using descriptive and inferential statistics. Descriptive result shows overall customer satisfaction is lower to ATM customers. In addition, inferential result of this study shows all service quality dimensions have positive significant relationship with the dependent variable customer satisfaction. Regarding the effect of service quality on customer satisfaction all dimensions have positive effect towards it, especially convenience has high effect followed by security and reliability and completeness. The researcher recommends that further improvements has to be done on ATM service quality by providing efficient and sustainable network system, maximizing number of ATMs in convenient areas for service and considering high progress on service quality dimensions included in this study.

Keywords: ATM, Service quality and customer satisfaction.

CHAPTER ONE

INTRODUCTION

1.1. Background of the Study

E-banking is a process through which banking consumers manage their banking transaction without even visiting a bank branch. Electronic banking services have benefits for both banks and customers. For banks, electronic banking is acknowledged as a tactical tool that aids in gaining a competitive advantage, reducing resource costs, and boosting market share. (Jayawardhena and Foley, 2000) From the customers' point of view, electronic banking provides faster, easier and more reliable services to customers. In order to provide new technologies, banks are increasing their investments in e-banking, PC banking, mobile banking, ATMs, POS machines, electronic funds transfers, account-to-account transfers, online bill payment, online statements, credit cards, and other methods. One outcome of this competition is what is known as electronic commerce. (Aladwani, 2001)

Self-service delivery solutions are becoming more and more popular with bank consumers. This preference is explained by the transactions' enhanced autonomy. To stay competitive, banks are expanding their technology-based service alternatives. One way to receive banking services is through ATMs, whose traditional and main function was to dispense cash when a plastic card was inserted. The invention of the ATM allows for the mechanical receipt of deposits, issuance of withdrawals, the transfer of money between accounts, and the collection of checks. (Kadir, Rahmani and Masinaei, 2011)

Transactions were completed more quickly and clients saved time thanks to the ATM facility. (Moutinho, 1992) Customer satisfaction is greatly influenced by several criteria, including a safe and convenient location, an adequate number of ATMs, an easy-to-use system, and ATM functioning. The judgment of high and low service quality depends on how a customer perceived the actual service in context of reliability, responsiveness, completeness, access/convenience, courtesy, communication, credibility, security and understanding/knowing the customer. (Lovelock, 1994)

Every institution in the world is being impacted by the quickly expanding information and communication technologies, and Ethiopian banks are not an exception. Electronic payment systems are still in their infancy in Ethiopia, where cash is still the most common form of exchange. The first ATM machine to provide service to local users was installed by Ethiopia's largest state-owned bank, Commercial Bank of Ethiopia (CBE), in late 2001 (Gardachew, 2009).

Aiming to increase customer satisfaction, ATMs were developed to give clients access to their money whenever they need it. Cash machines are relatively new to Ethiopia, but their number is growing quickly recently, while other banks as well eager to apply so as to create ease of access for their customers. (Getachew, 2010)

Therefore, this study investigated the relationship between ATM service quality and customer satisfaction in a sample of Addis Ababa bank branches using communication, credibility, completeness, security and dependability, responsiveness, and convenience as service quality dimensions.

1.2. Statement of the Problem

The use of ATMs is a new method of gaining access to banking services that is made possible by quickly evolving technology like the Internet and is required by customers' business needs. Due to achievements brought about by increased utilization of Information and Communication Technology (ICT) in society, the banking industry has introduced ATM. ATMs offer a fresh way to dispense consumer services that is anticipated to boost productivity, sales, and customer pleasure. (Mboma, 2011)

Customer satisfaction holds the potential for increasing an organizations customer base, increase the use of more volatile, customer mix and increase the firm's reputation. Consequently, obtaining competitive advantage is secured through intelligent identification and technology acquisition must be based on actual needs and the proven ability to deliver customer friendly solutions. (Timedry, 2012)

Although ATM is providing efficient service to customers, currently customers are observed to be unsatisfied with the service they are receiving form the machine. This is raised from low service

quality related with; insufficient cash supply, less follow up at the service terminals and continuous network connection problems. (Gardachew, 2010)

Customer satisfaction on a given service of a bank will secure customer's loyalty to the bank which will result in high preference and favorableness and the dissatisfaction will also imply the reveres. So banks have to be careful on the quality of service they give for its customers not to lose the good image they have on their customers' (NBE, 2017).

Based on national Bank E-Banking report bank's ATM transaction reflects large number of suspected, rejected, pended and incomplete customer requests which seems to be increasing from year to year. Number of dispute handling reports referring to double deduction and un-dispensed cash transactions are also frequently observed (NBE, 2017).

There is many research conducted on service quality of ATM in relation to customer satisfaction regarding quality issues like insufficient cash supply, lower follow up management and network problems in many banks branches. But upon the researcher's knowledge there are no similar studies done related to ATM service quality and its effect on customer satisfaction in selected commercial banks of Addis Ababa city using Lovelock (1994) service quality measurement dimensions. On the other hand, the researcher of this study observed some banks service. Based on this observation the researcher has found issues like out of order, machine out of cash, no printing statements, cards get blocked, frequent breakdown of ATM service, unreliability of ATM service, lack of sufficient technicians, lack of alternative system which substitute ATM service, lack of convenience of ATM service, lack of debit card service, poor infrastructure, low level of relevant knowledge creation and innovation, interruption of network.

Therefore, the purpose of this study is to investigate the impact of ATM service quality aspects like Communication, Credibility, Completeness, Security and Reliability, Responsiveness, and Convenience in order to assess whether these dimensions will have the intended strengthening effect on customers' satisfaction in selected bank branches around Addis Ababa, Ethiopia.

1.3. Basic Research Questions
The study customizes to answer the following research questions formulate on the problems.

➢ Does ATM Service communication manner affect customer's satisfaction?

➢ To what extent does ATM Service credibility and completeness affect customer's satisfaction?

➢ How ATM Service security and reliability affects customer's satisfaction?

➢ Does ATM Service responsiveness affects customer's satisfaction?

➢ Does ATM Service convenience affects customer's satisfaction?

1.4. Objectives of the Study
1.4.1. General Objective
The general objective of the study was to examine the effect of ATM service quality on Customer's satisfaction in selected Bank.

1.4.2. Specific Objectives
The specific objectives were;

➢ To examine the effect of ATM Service communication manner on customer's satisfaction.

➢ To analyze the effect of ATM Service credibility and completeness on customer's satisfaction.

➢ To study the effect of ATM Service security and reliability on customer's satisfaction.

➢ To examine the effect of ATM Service responsiveness on customer's satisfaction.

➢ To examine the effect of ATM Service convenience on customer's satisfaction.

1.5. Hypothesis of the Study
In order to find out the relationship and effect of ATM service quality on customer satisfaction the following hypothesis are propose depending on the objective of the study.

H1: ATM service Communication has no positive and significant effect on customer satisfaction.

H2: ATM service Credibility and completeness has no positive and significant effect on customer satisfaction.

H3: ATM service Security and Reliability has no positive and significant effect on customer satisfaction.

H4: ATM service Responsiveness has no positive and significant effect on customer satisfaction.

H5: ATM service Convenience has no positive and significant effect on customer satisfaction.

1.6 Limitation of the study

It may be challenging to apply the study's findings to other branches of the chosen bank operating in Addis Ababa city because it only considers the selected bank in Ethiopia and the impact of ATM service quality on customer satisfaction. Convenience sampling, another study weakness, restricts the generalizability of the research findings. Additionally, the algorithm calculates a sample size of 385; however, time and resource constraints make data collecting challenging. Finally, this study did not take into account a wide range of additional variables that may have an impact on customer satisfaction with ATM service. Therefore, additional study is advised to resolve the aforementioned shortcomings.

1.7. Definition of Terms

Under this topic conceptual definition of terms used in this study are presented.

ATM (automated teller machine): is an electronic computerized telecommunications device that allows customers to directly use a secure method of communication to access their bank account, cash withdrawals, and order of cash transfer and check their account balances without the need for a human bank teller. (Kumbhar, 2011)

Service Quality: defines as the difference between customer expectation of service and perceived service. If expectations are greater than performance, then perceived quality is less than satisfaction and hence customer dissatisfaction occurs. (Jain and Saakshi, 2009)

Customer Satisfaction: Satisfaction is the consumer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under or over-fulfillment. (Oliver 2010)

1.8. Significance of the Study

The study will aim at examining the effect of ATM service quality on the customer satisfaction. It is significant due to the creation of the bank and to investigate the effectiveness of investments on quality technologies on the bank on its customer's satisfaction and in making future decision on improving the service quality and investing more on up-to-date technologies. The finding of the study will greatly importance to managements of selected Banks to investigate effect of ATM service quality on planned objectives of the banks. The study will also be important for policy makers and regulatory bodies in assessing the legal frameworks affect implementation and objectives of the services.

In addition, the study will have a great significance in providing information for external stakeholders such as foreign banks who will be planning to join the industry in the near future by transferring their state of art to Ethiopian banking industry. National Bank of Ethiopia which regulates the sector will be highly beneficial from the findings of study which will provide important information whether the implementation of the service achieves its objectives of improving the performance of the bank and quality service delivery to the public. In addition, the study is believed to have a huge contribution by laying the ground for future researches to be conducted on these recent phenomena.

1.9. Scope of the Study

The primary aim of this study was to examine how service quality of Automatic Teller machine (ATM) affects customer's satisfaction in selected bank. The investigation was only conducted at a few chosen banks' ATM sites in the Addis Ababa region. Questioners will develop for purposively selected customers of ATM on those selected ATM machine and interview for only Card Payment Assistant manager of the bank while external stake holders such as customer relationship managers and the banks employees for their experience on the area of ATM were not include. In addition, the study was only use limited service quality measurement dimensions selected based on referred literatures there are also other factors of service quality that may affect customer satisfaction.

1.10. Organization of the Research

This research paper was organized in to five chapters. The first chapter addresses background of the study, statement of the problem, objectives of the study, significance of the study and scope of the study. The second chapter deals with the review of related literature where theoretical and empirical evidences are explored from different publications in the area of customer relationship marketing. The third chapter present the research design and methodology which focused on the type of research, target population, sample size, sampling techniques, sources and instruments of data collection, procedures of data collection and finally method of data analysis. The fourth chapter discuss about the results and discussion concerning with the summarization and interpretation of the research findings. Finally, in chapter five, summary of findings, conclusions, recommendations of the study are presented

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Theoretical Review

ATM (Automatic Teller Machine) to the customers which is the need of general public and easy access to general public without any human resources like cashier, clerks and manager. In 1960 Johan shepherd Arron which was the managing director De La Rue instruments introduce the first automated teller machine. ATM performed such functions like cash withdrawal, cash transfer, cash inquiry and payment of utility bills (khan, 2010).

2.1.1. What is ATM (Automatic Teller Machine)?

ATM is typically made up of the Central Processing Unit (CPU) for controlling the user interface and transaction devices, magnetic or Chip card reader for identifying the customer, display which is used by the customer for performing the transaction, function buttons usually close to the display or a Touch screen used to select the various aspects of the transaction and a record printer which provides the customer with a record of a transaction (Cronin, 1997). Most ATMs are connected to interbank networks, enabling people to withdraw and deposit money from machines not belonging to the bank where they have their account or in the country where their accounts are held thus enabling cash withdrawals in local currency (Maxwell, 1990), and they are often identified by signs above them indicating the name of the bank owning them.

Automated Teller Machine (ATM) is the most mod computerized telecommunication electronic device that enables customers to conduct financial transactions generally outside the normal banking hours without the need of a human clerk or a bank teller. To ensure security, safety, privacy and accuracy the banking authority gives to their customers a plastic ATM card with a magnetic strip that contains a unique card number and Personal Identification Number (PIN). Security is provided by the customer entering a personal identification number (PIN), (Adepoju & Alhassan, 2010). ATMs are offering 24 hours banking services to bank customers" like cash withdrawal, funds transfer, balance inquiry, card to card transfer, and bill payment, accept deposits etc. (Kumbhar, 2011). As far as the customer satisfaction is concerned with regard to e-

banking services, ATM services play an important role as they make easy of banking transactions for customers (Premalatha & Sundaram, 2012).

ATMs are placed not only near or inside the premises of banks, but also in locations such as shopping centers/malls, airports, grocery stores, petrol/gas stations, restaurants, or any place large number of people may gather. These represent two types of ATM installations: on and off premise. On premise ATMs are typically more advanced, multi-function machines that complement an actual bank branch's capabilities and thus more expensive. Off premise machines are deployed by financial institutions and also independent sales organizations (ISOs) when there is usually a straight need of cash. (Steve, 2002)

2.1.2. Evolution of ATM
ATM is said to have evolved from early cash dispenser and is said to have first been introduced in the early 1970s. The dispensers were operated by a token inform of a punch card. This enabled a customer to withdraw as sachets of suitable values of bank notes. These sachets processed and then returned the card to the customers. Another source has it that ATM concept was started around 1967, and that it was first installed in Enfield town, on the London Borough of Enfield by Barclays Bank (Thomas, 1996).

This is said to have been accredited to John Shepherded Baron, although George Simon registered patent in New York and Don Wetzel and two other Engineers from Docatel Company also registered patent in April 1973 (Brendan, 1996). In the second generation, it was improved to the extent that made it possible to count proved money.

2.1.3. ATM in Ethiopia
In Ethiopia Commercial bank of Ethiopia introduced ATM service for local users in 2001 with its fleet of eight ATM machines located in Addis Ababa. Then Dashen bank has worked aggressively to maintain its lead on electric payment system and become the first Ethiopian Bank to acquire E-commerce and mobile merchant transaction. Then after other private banks have accepted this new mode of service delivery and apply it to their banks. Although, Dashen bank technology is one step ahead it allows transfer of funds from one's account to others, the younger United Bank was the first to introduce telephone and mobile banking including text messages (SMS). By the end of 2008 in the same year Wegagen bank has signed agreement with

Technology Associates, a Kenyan based IT firm, for the development of the solutions for the payment system and installation of a network of ATM. (Gardachew, 2010)

2.1.4. Purpose of ATM

Singh (2009) described ATM as Avoid Travelling with Money or Any Time Money but certainly it implies both. He asserts that Slim ATM cards are fast replacing compounding withdrawal form as a convenient way of getting your money from banks. A smart person no longer needs to carry a wallet-full of paper money on his person. All he needs to do is fish-out an ATM card inserts it in the slot, punch in a few details and go home with hard cash.

Today ATM machine is just like a boon for everyone. This is one of the best services provided by the banking industry to everyone having an account in a bank. ATM provides 24 hours' service, meaning that ATMs provide service around the clock. The customer can withdraw cash up to a certain limit during any time of the day or night (Akrani, 2011).

Similarly, ATM banking is a product/service that has attributes/features that meet implicit and/or explicit needs of bank customers. To achieve customer satisfaction, the attributes, have to deliver service quality to customers expected threshold. Therefore, before customer satisfaction is delivered through ATM banking, managers ought to understand the features/attributes of ATM banking that provide service quality because these are the factors that influence performance superiority to influence customer satisfaction (Poretla and Thanassoulis, 2005)

ATM is convenient, enables people to withdraw money any time, allows people to make purchases and enables them to pay bills. Steve further argues that, a major advantage of an ATM is that it allows the user to access money at any time. In addition to withdrawing money, an ATM offers other banking services. With an ATM, the user can readily move funds between accounts at the same bank or deposit checks at any time of day. ATMs also allow patrons to conduct balance inquiries. By using an ATM, the user can find out how much money is in the account without wasting time on hold or waiting in line at the bank. (Steve, 2012)

ATM is very beneficial to travelers' ATMs are of great help to travelers. They need not to carry large amount of cash with them. They can withdraw cash from any city across the country and even from outside the country with the help of ATM (Khan, 2010).

Utility bills can be paid through ATMs. ATM patrons can register their water, electric, and phone accounts with their bank. Then, users can view utility bills at an ATM and have their monthly charges deducted from their bank account. Patrons are able to get a receipt showing their utility bill has been paid from an ATM (Lovelock, 2011).

2.1.5. Customers Satisfaction
Customer satisfaction is how a given products or service satisfy the customer and fulfill their expectations. It can be defined that performance of the organizations products according to the customers want. Whenever products performance is not in accordance with customer's satisfaction it results in customer confidence decrease on product performance. But on the other hand when performance of the product or service goes in accordance with the standard of the customer, then loyalty increases.

Traditionally major flaws in banking system during operating hour's handles number of transactions and customer requests. The bank branches cannot fulfill the demand of the customer during 8 hours especially payment of cash and payment of utility bills. During holidays also problem in payment of bills and withdrawals of cash .so, it was the need to satisfy the customer with quality service (Ahmad, 2011).

Customer satisfaction can be defined as the state of mind that customers have about a company when their expectations have been met or exceeded over the lifetime of the product or service. (Cacioppo, 2000) Customer satisfaction is fulfilled response. It is a judgment that a product or service feature, or the product or service itself, provides a pleasurable level of consumption related fulfillment. (Oliver, 1997)

According to Biyaki (2010) increased customer expectations have created a competitive climate whereby the quality of the relationship between the customer and bank has taken on a greater significance in some cases than the product itself. Krishnan et al (1999) point out that, the banking industry strives to succeed by putting the topic of rapid and changing customers' needs to their agenda. This can be achieved through good customer care and offering attractive services or products that other competitors may not offer. Therefore, customer satisfaction is seen as a key performance indicator within a business.

In service provision, there are some factors, which are considered by customers as a benchmark for appreciating a service being offered. With regard to ATM, Ramora and Sundaram (2012) mentioned a list of factors considered by customers as important for their service satisfaction. Such factors include tangibility, reliability, convenience, assurance, accuracy, safety, ease of use, and responsiveness. They posited that, each of these factors is very important for customer satisfaction for the service being provided. The service should be reliable, in that the service has to be available every time the customer needs it. The service should be user friendly, meaning that a customer will be loyal to the service he/she is able to use with ease. Customers are satisfied when the service they are receiving is executed accurately, and they are always sensitive to their safety when receiving any service of their choice.

According to Nwaizugbo and Nnabuko (2010) a firm wishing to satisfy its customers must determine the level of customer service it has to provide. There are three levels of customer services that are essential for a customer to be satisfied. This is pre transaction level, transaction level and post transaction level.

Pre-transaction level further explains, contains the services the customer expects to benefit from even before the actual transaction.

Transaction level is the level of satisfaction a customer is expected to have during at the time of service receiving.

Post-transaction level is the services the customer expects to benefit from and be satisfied after the transaction.

2.1.6. Service

Before directly going to service quality we have to define what service and quality is independently.

Services are economic activities offered by one party to another. In exchange for money, time, and effort, service customers expect value from access to goods, labor, professional skills, facilities, networks, and systems; but they do not normally take ownership of the physical elements involved. (Lovelock & Wirtz, 2011).

A service occurs when an interaction is established between customers and service providers and/or the physical component of the service and/or the systems through which the service is delivered (Shahin & Janatyan, 2011).

A service is a commodity with no physical existence, usually created and consumed at the same time. Gronroos (2001) described a service as a process resulting in an outcome in a partly simultaneous production and consumption process. This definition points to the fact that service provision and consumption are simultaneous activities.

Characteristics of Services

It is generally accepted that services have four main characteristics that differentiate them from goods: intangibility, inseparability, variability, and perishability. Armstrong &Kotler (2011) mentioned the following characteristics that create unique challenges for services.

Service Intangibility refers to the fact that services cannot be seen, tasted, felt, heard, or smelled before they are bought. For this reason, customers try to evaluate the quality of a service by looking at tangible components such as the place, people, price, equipment, and communications apparent.

Service Inseparability refers to the fact that services cannot be separated from their providers, whether the providers are people or machines. This means that the employee providing the service becomes part of the service, in most cases, the customer is also present at the time of providing the service. Therefore, the provider customer interaction becomes important in determining the outcome of the service

Service Variability refers to the fact that the quality of services depends on who provides them as well as when, where, and how they are provided. This means that the quality of a service provided is not just determined by the company but by the service provider too. Therefore, understanding the role of service providers is crucial to understand perceptions of service quality.

Service Perishability refers to the fact that services cannot be stored for later sale or use, although Lovelock and Wirtz (2011) argue that "not all service performances are perishable". One problematic situation that accompanies this characteristic is when demand exceeds supply. This can be applied to the banking sector when there is traffic at the counters and no enough service providers, thus the service in that case cannot be stored for later use. In this case, banks

should think of better ways to match the service supply with the demand. For this reason, understanding perishability of services is important in the context of this study.

2.1.7. Quality
According to Juran (1974), there is no sole definition for quality. For some quality is

Performance to standards while for others it is meeting or satisfying the customer's needs. The Quality of a product or service is the fitness of that product or service for meeting or exceeding its intended use as required by the customer.

Quality can be defined as Conformance to specifications; Fitness for use, Value for price paid, Support services or Psychological criteria based on the service consistency, responsiveness to customer's request and complains courtesy, time, reliability and convenience.

2.1.8. Service Quality
Quality is defined as "fitness for use" (Juran, 1974) in user based approach and

"Conformance to requirements" (Crosby, 1979) in manufacturing based approach. Generally, quality means innate excellence it is a mark of uncompromising standards and high achievement, universally recognizable, and recognized only through experience. Quality is compared with satisfaction. The high quality means the best satisfaction of consumers' preference.

Dimensions used by consumers to measure service quality include Tangibles, Responsiveness, Empathy, Assurance and Reliability. (Oladele, 2016)

The judgment of high and low service quality depends on how a customer perceived the actual service in context of Reliability, responsiveness, Completeness, access/convenience, courtesy, Communication, Credibility and Security. (Lovelock, 1994)

2.1.8.1. Service Curtsey and Communication

Curtsey involves politeness, respect, consideration, and friendliness of contact personnel (including receptionists, telephone operators, etc.). Curtsey also includes the manner of communication from greeting to ending of the service. Service providers are expected to be polite and respectful while presenting the service.

Service delivery has to be well communicated between the service provider and receiver to whom the service is given. Communication in service needs to keep customers informed in language

they can understand and listen to them. Service provider has to be able to adjust its language for different customers. Common understanding and user friendly procedure are highly expected on self-serve machines. (Parasuraman, 1985)

2.1.8.2. Service Credibility

Credibility involves trustfulness, believability, honesty, and generally having the customer best interest at heart. Identifying elements of credibility is important because a high score on one or two elements does not guarantee high credible rating. The five credible elements in services are named as integrity, competence, sound judgment, relationally sensitiveness which includes knowing how to ask questions to listen with empathy to pull people together and likable (koizes, 2003)

2.1.8.3 Service Completeness

Completeness is all about better finalizing of service with the standard contents.

Incomplete services are never claimed as service. (Johnston R, 1995)

2.1.8.4. Service Security and Reliability

Confidentiality is the main issue of security in ATM service. Unique four-digit code (PIN) will be secretly given to every single customer that is confidentially prepared to secure customer wealth from being stolen and lost. In a secure service customers expect to have a freedom from danger, risk or doubt measurable safety and protection for the users has to be emphasized. Banking industry is highly sensitive and confidential regarding customer background and assets.

Reliability represents the capacity of a system to accomplish the specified functioning demands in environmental and demanding conditions, in a defined functioning, and in a preset period of time. Reliability can also be expressed as the probability of the system to accomplish the functions which it was designed for with a certain performance and with no flaws, in a certain period of time and in given functioning conditions. Reliability is Ability to perform the promised service dependably and accurately.

Wolfinbarger and Gilly, (2003) argue that service reliability is the strongest predictor of customer satisfaction. Reliability refers to the ability to deliver expected standard at all time,

how the organization handle customer services problem, performing right services for the first time, providing services within promised time and maintaining error free record. In regards to ATMs services, Jay and Barry (2014) noted that the reliability of machine parts or product parts is considered as consistently good in quality or performance which is able to be treated at any time. For ATM environment condition and technical reliability are equated to reliable design that is functional.

Reliability is fundamental criterion of superior electronic service quality. (Stiakakis and Georgiadis, 2009) Reliability consists of accurate order of fulfillment, accurate record, accurate quote, accurate billing, and accurate calculation of commissions which keep the service promising to the customer. (Yang and Fang, 2004)

2.1.8.5. Service Responsiveness

Responsiveness is willingness to help customers and provide prompt service. Responsiveness is defined as the ability to respond to customer requirements timely and flexibly. Responsiveness includes responding quickly, promptly, rapidly, immediately and instantly.

Responsiveness is providing speed and timeliness of service delivery supported by willingness and readiness of employees to provide service. It concerns ability to provide appropriate information to customers when a problem occurs. It includes prompt response, prompt services and quick problem solving. (Mariappan, 2006)

2.1.8.6. Service Convenience

The concept of convenience first appeared in the marketing literature in relation to categories of products. Classification of consumer products includes convenience goods: intensively distributed products that require minimal time and physical and mental effort to purchase. Time place and cost are the main issues raised in context of service convenience. (Feldman et al, 1981)

Customers perceive time and effort costs associated with service purchase or use decisions (decision convenience), initiating service delivery (access convenience), experiencing the core benefits of the offering (benefit convenience), finalizing the transaction (transaction convenience), and re-establishing subsequent contact with the firm (post-benefit convenience).

This conceptualization reflects a multistage, experiential consumption process in which evaluations of convenience vary at each stage.

2.2. Empirical Review

Numerous studies have been conducted on customer satisfaction and ATM services are reviewed and explained under this section.

Chi Anh and Phong Tuan (2015) has conducted a study on impact of service quality on customers' satisfaction of ATM machine service the case of private commercial joint stock bank in Vietnam using 5 components of service quality using SERVPERF model which are Tangible, Reliability, Responsiveness, Assurance, and Empathy.

The researchers" selected 250 samples using random and convenient manner. Data is collected from the surveys of customers coming to the Bank branches using questionnaires and direct interview. Samples were tested by using SPSS software 16.0 through descriptive analysis, factor analysis and regression analysis. The researchers finding shows that two factors that have impacts on ATM service quality of the Bank, which are assurance and tangibles, in which assurance has the strongest effect on customer satisfaction. The researchers conclude that the higher assurance and tangibility brought the more satisfaction customers get. More specifically, in terms of assurance, customers highly appreciate the thorough knowledge about expertise and professionalism of banking officers in contact with customers, which requires the affability, courtesy and politeness, thus building up the trust and credibility for customers.

Akinmayowa J.T. and Ogbeide D.O (2014) also have studied on Automated Teller Machine Service Quality and Customer Satisfaction in the Nigeria Banking Sector.

The researchers" uses Convenience, Efficient Operation, Security & Privacy, Reliability and Responsiveness as dimension to measure ATM service quality. Questionnaire was developed and used to collect information from the study sample. The structured questionnaire was administered to 350 respondents giving 87% response rate. Data collected were analyzed using SPSS 20. Correlation results indicate that convenience, efficient operation, security and privacy, reliability and responsiveness are significant dimensions of ATM service quality and that ATM service quality has a positive and statistically strong relationship with customer satisfaction. It is therefore recommended that banks need to constantly up-date and differentiate their ATM service quality dimensions to ensure continuous satisfaction and retention of customers.

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Charles Mwatsika (2016) studied Factors Influencing Customer Satisfaction with ATM Banking on all banks in Malawi deploy Automated teller machines (ATMs) making ATM banking the second most popular access channel to banking products/services. Therefore, to continue achieving competitive advantage through ATM banking, bank managers need to know the key features of ATM banking whose performance greatly influence customers' satisfaction. 353 ATM card users rated the performance of ATM banking in 25 service quality attributes and further rated their perceived satisfaction with ATM banking. The regression analyses of the performance of the 25 ATM banking attributes and customers' satisfaction first reveal that the 25 attributes adopted from empirical studies provide a perfect model for predicting customer satisfaction. Secondly, reliability and responsiveness are the key service quality dimensions of ATM banking and thirdly, the analyses revealed 12 key attributes that influence customers" satisfaction with ATM banking and these are: ATM fees charged, ATMs not out of order, cleanliness of ATMs and ATM stations, accuracy of ATM transactions, ease of access to ATMs, readable slips, convenient location, employee accessibility to solve ATM problems, privacy at ATM stations, employee speed in solving ATM issues, ease of application process for ATM cards and cash availability in ATMs.

2.3. Conceptual Frame Work

Based on previous research outcome the researcher developed the following conceptual frame work to analyze the positive relationship between dependent and independent variables. Dependent variable under this study is customer satisfaction and the independent variables are determinant factors of service quality which are presented below.

Figure 1 Logical Framework

Communication				
Credibility	→	ATM Service Quality	→	Customer Satisfaction
Completeness				
Security and Reliability				
Responsiveness				
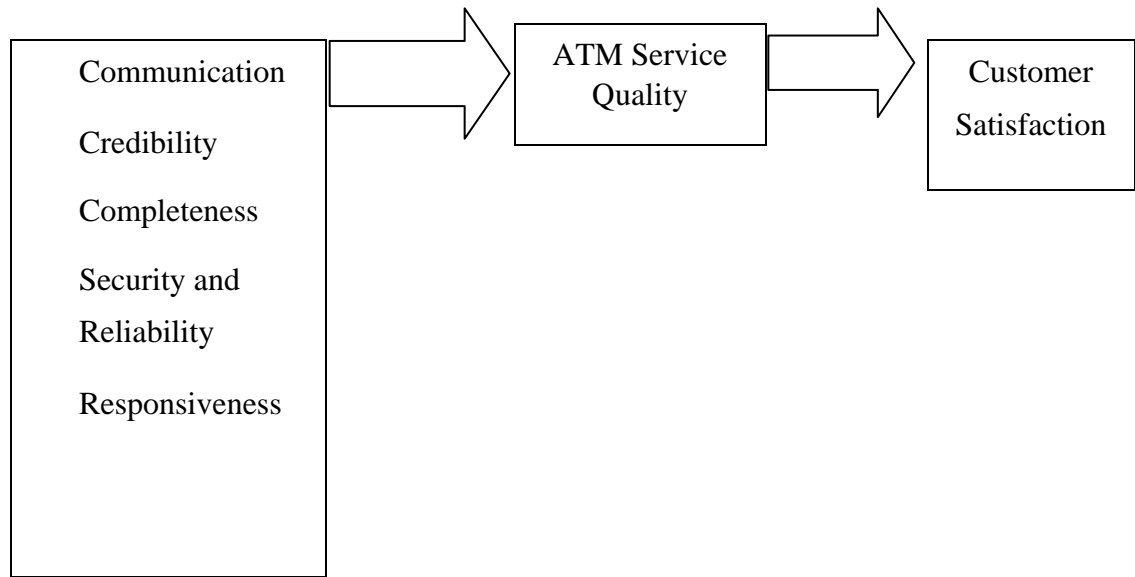
Source: Lovelock, 1994

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1. Research Approach

The study was used qualitative and quantitative approach. The qualitative approach enabled respondents to be intensively engaged in responding to the questions geared towards the objectives of the study and through interview questions presented to concerned management. According to Kumar (2005) the focus of qualitative analysis is multi-method, with an interpretive, naturalistic approach to its subject. Quantitative research approach is also used to analyze data measurements that can be quantified in the form of numbers using SPSS version 20.

3.2. Research Design

The study was followed explanatory and descriptive type of research design. According to Kothari (2004) research design is a plan or strategy used to get the expected study results. As a result, the researcher chooses the above research design to attain the primary aim of the study which was to examine the effect of ATM service quality on customer satisfaction of selected Bank. Explanatory research was used to examine the effect of ATM service quality on customer satisfaction of selected Bank. Studies that establish causal relationship is termed as explanatory study and this paper seeks to identify the causal relationship between customer satisfaction and service quality dimensions i.e. communication, credibility, security, reliability, responsiveness and convenience.

Descriptive research was applied to define the character of customers in relation to satisfaction. From data collect using distributed questionnaire and interview presented.

3.3. Population and Sampling Techniques

The target populations of the study was selected Bank ATM user customers in Addis Ababa. The researcher purposively select sample of 12 ATM Machines located in Addis Ababa based on their large number of daily ATM transactions. Then a purposive sampling method was applied again to

select respondents from selected bank customers' ATM users from other bank card users which are presented at those selected ATM area for service.

With probability samples each element has a known probability of being included in the sample but the non-probability samples population elements were selected on the basis of their availability (e.g., because they volunteered) or because of the researcher's personal judgment that they are representative. "In non-probability sampling researchers use their judgment to select the subjects to be included in the study based on their knowledge of the phenomenon" (Parahoo ,1997:223). To increase the randomization effect of the sample, Lottery method was used to select the sample branches and Convenience sampling method was used to select sample customers from each sample branches, since banks do not have a robust sample frame.

The sample size would be determined by the sample size formula which is: -

- To determine a sample size, this formula will apply if the population size is infinite (Israel, 1992).

$$n = \frac{Z^2 x p x q}{e^2}$$

- To illustrate, we have large population but that we do not know the variability in the proportion and could not got the previous related result; therefore, assume p=.5 (maximum variability). Furthermore, suppose we desire a 95% confidence level and ±5% precision. The resulting sample size is demonstrated in as follows:

$$n = \frac{Z^2 x p x q}{e^2}$$

Where,

n= required sample size
z=1.96 (95% of confidence level)

P= percentage or presence of the study characteristics (0.5, maximum variability) e=accepted

margin of error (±5% of precision)

$$n = \frac{1.96^2 x 0.5 x 0.5}{0.05^2}$$, n = 384

So from the above calculation we can determine our sample size. The sample sizes of the study were 384 respondents who are customers of selected Banks of at different branches in Addis Ababa.

3.4. Sources and Tools of Data Collection

In this study both primary and secondary data were gathered for analytical purpose. Questionnaire was used as a primary source for data collection in order to examine the effect of ATM service quality on customer satisfaction. Semi-structured interview was also present to Card Payment Assistant manager of the bank who has great exposure in the area of concern. The interview was conducted to answer basic interview questions developed with further questions for clarification based on the responds.

In addition, secondary data from published and unpublished documents of selected Banks card payment department were collected from constant ATM related reports which shows completed, rejected, suspected and pending transactions, dispute handling requests that are reported from different branches. Secondary data will refer to check the existence of service quality problem in selected Banks.

3.5. Procedures of Data Collection

In order to carry out the research, the researcher was employed questionnaire as research instrument to collect primary data from ATM users of the bank who are the primary concern for the subject matter. Structured questionnaire were distributed to sample respondents containing different parts and types of questions in which the first section intends to obtain general information, the second part intends to obtain additional information and the last part of the questionnaire containing 5 scale Likert measurement tool i.e. 1-strongly disagree 2-disagree 3-neutral 4-agree and 5-strongly agree (Likert, 1932) classified under eight service quality dimensions mentioned in specific objective of the study intends to obtain additional information regarding service quality of ATM and its effect on customer's satisfaction. The researcher prefers Likert scale to allow degree of option for respondent and to obtain quantitative data from the result.

Questionnaire were distributed to selected 12 ATM terminals to reach sample respondent and collect within three weeks with the help nearly located branches of the bank. Furthermore, semi-structured interview was also present to card payment Assistant manager with pre-resized questions in order to support the results collected from the questionnaires reflected under general findings and recommendation of the paper.

3.6. Methods of Data Analysis

The tools use in the study was descriptive, correlation and regression analysis.

Descriptive analysis was use to analyze effect of ATM service quality on customer satisfaction by using qualitative analysis. Descriptive analysis statistical results will present by table, figures, frequency distribution and percentage to give a condensed picture of the data. This was achieved through summary statistics including mean and standard deviation values. Mean value below average which is 3 are variables with low performance, value equals to average is rated as medium and mean value above average are rated as good performing. The data collect through interview and different organizational documents will also summarize, code and present in a way that communicates the finding of the study.

Inferential statistics using correlation analysis was carried out to determine the relationship between dependent variable with independent variable i.e. customer satisfaction with service quality dimensions using Spearman's correlation coefficient. And linear regression analyses were also used to examine to what extent ATM service quality affects the dependent variable customer satisfaction.

3.7. Validity and Reliability

Validity indicates the degree to which an instrument measures what it is supposed to measure. It refers to the degree to which a statistical instrument measure and emphasis on the accuracy of the measurement (Kothari, 2004). The researcher measurement variables were all selected from valid source i.e. Lovelock (1994) and the study were done under continuous supervision of my advisor.

Reliability is an instrument that measures the extent to which data yield consistent result when the characteristic being measured has not been changed. (Leedy and Ormrod, 2005)

Table 1: Reliability Statistics

Number	Study Variables	No. of items	Cronbach's Alpha Results
1	Customer satisfaction	6	0.729
2	Communication	6	0.751
3	Credibility and completeness	5	0.801
4	Security and Reliability	6	0.756
5	Responsiveness	7	0.718
6	Convenience	4	0.723

Source- Own Survey (2023)

Before proceeding to collecting data the researcher has made reliability analysis presented on table 1 using Cronbach's coefficient alpha which measures internal consistency by establishing if certain items measure the same construct. The researcher takes 30 sample respondents set of statement and found 0.738 which is higher than the threshold value of 0.7. The result is presented above in tabular form.

Beside the researcher believed that this study is reliable since the sample respondents were selected based on sampling formula and questionnaires were collected with high level of response rate.

3.9. Ethical Considerations

The research was carried out by giving respondents a privacy by privilege of not writing name and other identities to hide them from un wanted approaches to be maintained by any other groups, no respondent was forced to fill the questionnaires unwillingly and/ or without his/her consent. In this research ethical issues were given a special

consideration. The research purpose was briefly explained and discussed with respondents on the first page of the questionnaire during collecting data. In addition, the respondents were assured that their responses will only be used for the purpose of the research. The findings of the research were presented without any deviation from the outcome of the research. In addition, the researcher gave full acknowledgments to all the reference materials used in this study.

CHAPTER FOUR

RESULTS, DISCUSSION AND INTERPRETATION

In this chapter, presentations and discussions of the findings derived from the analysis of data are elucidated. Both descriptive and inferential techniques of data analysis are employees to see the characteristics of the sample and also identify and discus the relationship between dependent and independent variables.

4.1. Response Rate

The study targeted a total number of 389 questionnaires distributed 96% or 374 questionnaires were filled and returned with valid response. According to Pallant (2005) a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent; therefore, the response rate is adequate for analysis and reporting with excellent response rate. The data was analyzed using SPSS version 20.

4.2. Demographic Information

In order to generally describe the characteristics of the respondent gender, age, educational back ground (qualification), monthly income, ATM card use in years and frequency of ATM use per month were asked. The results obtained from the structured questionnaires are presented on the table below.

Table 4.1 *Demographic Characteristics of Respondents*

Demographic characteristics	Alternatives	Frequency	Percent
Gender	Male	225	60.2
	Female	149	39.8
	Total	**374**	**100.0**
Age	18-25	167	44.7
	26-35	113	30.2
	36-45	56	15.0
	46-55	30	8.0

	56-65	8	2.1
	Total	**374**	**100.0**
Educational Background	12 Complete and below	76	20.3
	Diploma	109	29.1
	Degree	96	25.7
	Masters and above	93	24.9
	Total	**374**	**100.0**
Monthly income	Less than 2,000	4	1.1
	2,000-4,999	95	25.4
	5,000-11,999	152	40.6
	12,000 and above	123	32.9
	Total	**374**	**100.0**
ATM card use in years	Less than one Year	79	21.1
	1-2 Years	145	38.8
	3-4 Years	117	31.3
	5-6 Years	33	8.8
	Total	**374**	**100.0**
Frequency of ATM use	4 or less times per month	168	44.9
	5-8 times per month	113	30.2
	9-12 times per month	75	20.1
	13 or more times per month	18	4.8
	Total	**374**	**100.0**

Source- Source- Own Survey (2023)

The result obtained from demographic characteristics of the respondents shows that 60.2% are males and the rest 39.8% are females this shows that ATM card is largely preferred by males than female. The result also shows more than 74.9% of ATM users age ranges from age 18– 35indicating that this banking channel is more preferred by younger societal groups. Respondent's educational status shows: 20.3% are 12 complete and below, 29.1% have diploma, 25.7% have Degree and 24.5% have masters and above.

Monthly income of the respondents was observed as 1.1% earning less than 2,000, 25.4% earning 2,000-4,999, 40.6% earning 5,000-11,999, and 32.9% earning 12,000 and above. From this we can conclude that ATM is not preferred by low level income societies this may be because of the charge it has while withdrawal or any other reason.

In addition, number of years in using selected bank ATM was shown as 21.1% of respondents have used selected ATM for less than a year, 38.8% have used ATM for 1-2 years, 31.3% have used ATM for 3-4 years and 8.8% have used ATM for 5-6 years. This shows that numbers of ATM users are relatively increasing since the past four years. Regarding frequency of ATM use per month 44.9% of respondents uses ATM 4 or less time per month, 30.2% uses 5-8 time per month, 20.1% 9-12 times per month and only 4.8% uses ATM 13 or more times per month.

4.3. Data Analysis

The researcher used three types of analysis techniques which are descriptive analysis to interpret result from questionnaire and interview using frequency table and figure by from result reflected in mean and standard deviation, Correlation analysis to check and understand the relationship between dependent variable Customer satisfaction and independent variable ATM service quality and finally Regression analysis is also carried out to identify the type of effect independent variable has on the dependent variable and understand the level of effect it can apply.

4.3.1. Descriptive Analysis

Descriptive analysis is used to summarize the result obtained from questionnaires collected from sample of selected Bank ATM users and interview results obtained from selected Bank Card Payment Assistance manager.

From the below descriptive statics, respondents on frequency of incomplete ATM transaction shows 4.5% have never faced incomplete ATM transaction the remaining 25.9% has faced few times, 50% faced usually and 19.5% faced incomplete ATM transaction always. This implies that from a total number of 374 respondents only 17 have never had incomplete ATM transaction. This shows the reliability of ATM is very low that there is a high chance of an incomplete transaction to happen. From this we can understand that completeness as one of

service quality dimension is not well served by selected Bank ATM machine. Those customers who almost receive incomplete transaction always are highly discouraged to use the machine unless the lost another option. This finding also supports the problem statement which is reflected by disputes with suspected, incomplete and rejected transactions.

As per the data collected through questionnaire Mostly reflected customer complain regarding ATMs are in related to dispute handling and incomplete transaction happen due to system disconnection while once request is processing; at that time the balance from the customer account is deducted but cash will not be dispensed. Even if the system will continue immediately the machine will be restarted and be ready for the next request forgetting the previous incomplete transaction. The customer's money will be returned after 4-5 days if only UB customer were using UB ATM machine (On-Us transaction) but if the ATM machine is other banks (Off-Us transaction) minimum of 15 days will be required to make reconciliation and return the customer's money. Now United Bank starts training to empower all branch managements on handling their branches dispute for on-us transactions and reveres dispute transactions within one day. But for off-us transactions, solutions are still on discussions to minimize the longer time taken by other banks

Most of the ATM problems are happening due to external factors which cannot be directly controlled by the bank managements. For instance, network problems happen as a result of telecom port transfer continuous ups and down. As a solution United Bank tries to use wireless network substitutions but still it cannot avoid disputes happen because wireless network only be used when the Telecom network is down so in between any transaction could be incomplete.

Continuous network failure is also happening on branches and ATM network modems which result in high customer dissatisfaction and unreliability on the system we have. These lead customers to return their card or not using it by preferring to go to bank in person.

The second most complains are regarding new ATM card and existing card and PIN replacement delay. These delay happen because cards are collected from PSS (Premium switch Solution Company). PSS Company which handles every card and PIN related request preparation for every member bank of PSS is handled under a single roof which results in delay of customer

request. But still the bank is requesting outsiders to install a system in which the bank can prepare its own card and PIN requests with a very short period of time.

In addition, the ATM machine speed was rated by respondents as 11% very high, 24.1% high, 35% satisfactory, 21.4% low and 8.6% as very low. The result obtained shows that speed of United Bank ATM machine to serve one's request is relatively fair and satisfactory.

The result obtained from descriptive statistics on ATM service quality dimensions and customer satisfaction is reflected in the below table using mean and standard deviation. Mean represents the sample results with a single value that represent central of the data. Standard deviation determines how spread out the data is from the mean. A higher standard deviation value indicates greater spread in the data.

Likert scale analysis for service quality dimensions' results showing mean value with low values below average value 3 are those in which customers have perceived as low quality and needs more work on that area for improvement.

According to Zaidaton & Bagheri (2009) mean value score below 3.39 is considered as low, mean value from 3.40 up to 3.79 is considered as moderate and mean score above 3.8 is considered as high.

If we observe the mean value for the response collected from respondents the data reflects courtesy (3.36), security and reliability (3.08) scoring above average medium mean value implying that this dimensions are relatively better perceived by customers but still have low value. The remaining service quality dimensions scored lower mean value below average i.e. communication (2.94), Credibility (2.66), Completeness (2.75), responsiveness (2.82) and Convenience (2.81) this is due to the service in this regards are perceived by customers in a very low value. The result implies that more quality improvement has to be done on dimensions with lower mean results. The result can also be presented in summary as presented in the below table.

Table 4.2: Descriptive Statistics of summarized service quality dimensions

	N	Mean	Std. Deviation
Customer satisfaction	374	2.6711	1.29191
Communication	374	2.9432	.63464
Credibility and completeness	374	2.6578	.90381
Security and Reliability	374	3.0797	.62324
Responsiveness	374	2.8185	.64439
Convenience	374	2.8097	.43351

Source- Own Survey (2023)

In addition, customer satisfaction on the overall selected Bank service quality is also reflected to be lower with mean value 2.67 which implies that selected Bank customers are not satisfied on the services they receive from the selected bank, which makes importance on the main reason of doing this research.

4.3.2. Correlation Analysis

The correlation between dependent and independent variables along with the causal effect was analyzed using Statistical Package for Social Science (SPSS). The researcher believed that Relationship between service quality dimensions and customer satisfaction has to be identified before directly analyzing the effect on one another. The correlation matrix presented below using Spearman's results shows correlation between dependent variable customer satisfaction and the independent variable ATM service quality measurement dimensions: courtesy, communication, credibility, completeness, security and reliability, responsiveness and convenience used in the questionnaire.

Correlation result lies between +1 and -1. The sign of the correlation coefficient indicates the direction of the relationship, while the magnitude of the correlation showing the strength of the relationship.

According to Zaidaton & Bagheri (2009) correlation result coefficient below 0.2 implies very weak relationship, coefficient from 0.2 - 0.4 shows weak relationship, coefficient from 0.4 – 0.6 implies moderate relationship, coefficient from 0.6 – 0.8 implies strongly relationship and coefficient result above 0.8 implies very strong relationship between dependent and independent variables.

Table 4.3: Spearman's correlation between service quality dimensions and   customer satisfaction

		Communication	Credibility and Completeness	Security And reliability	Responsiveness	Convenience	Customer Satisfaction
Communication	Correlation Coefficient	1	.043	.416**	.248**	.282**	.354**
	Sig. (2-tailed)		.409	.000	.000	.000	.000
	N		374	374	374	374	374
Credibility and Completeness	Correlation Coefficient	.043	1	.087**	-.259**	.111**	.245**
	Sig. (2-tailed)	.409		.092	.000	.032	.000
	N	374		374	374	374	374
Security and reliability	Correlation Coefficient	.416**	.087	1	.246**	.346**	.545**
	Sig. (2-tailed)	.000	.092		.000	.000	.000
	N	374	374		374	374	374
Responsiveness	Correlation Coefficient	.248**	-.259**	.246**	1	-.146**	.116**
	Sig. (2-tailed)	.000	.000	.000		.005	.024
	N	374	374	374		374	374
Convenience	Correlation Coefficient	.282**	.111**	.346**	-.146**	1	.383**
	Sig. (2-tailed)	.000	.032	.000	.005		.000
	N	374	374	374	374		374
Customer satisfaction	Correlation Coefficient	.354**	.245**	.545**	.116**	.383**	1
	Sig. (2-tailed)	.000	.000	.000	.024	.000	
	N	374	374	374	374	374	374

**Correlation is significant at the 0.05 level (2-tailed)

Source- Own Survey (2023*)*

From table 4.3 correlation result for all service quality measurement dimensions have positive and significant relationship with customer satisfaction. The finding supports the result of

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Akinmayowa J.T. and Ogbeide D.O (2014) Correlation results indicating that all variables (convenience, Credibility and Completeness, security and privacy, reliability and responsiveness) are significant dimensions of ATM service quality and that ATM service quality has a positive and significant relationship with customer satisfaction.

4.3.3. Regression Analysis

Regression analysis is carried out under this sub title to identify the effect of ATM service quality on customer satisfaction. The result from correlation indicates there is a positive relationship between customer satisfaction and service quality dimensions selected by the researcher. The researcher used multiple regression analysis to analyze more than one independent variable simultaneously and to explain variations in the dependent variable. Multiple regression analysis also minimizes the sum of the squared errors.

Table 4.4 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.813[a]	.661	.655	.75914

a Predictors: (Constant), Convenience, Security and Reliability, Credibility and Completeness, Responsiveness, Communication

Source- Own Survey (2023)

Adjusted R squared is coefficient of determination which tells us the variation in the dependent variable (customer satisfaction) due to changes in the independent variable service quality dimensions. From the above table 4.4 the value of adjusted R squared was 0.655 indicating that there was variation of 65.5% on customer Satisfaction (dependent variable) due to changes in ATM service quality dimensions Convenience, Security and Reliability, Credibility and Completeness, Responsiveness and Communication (independent variables) at 95% confidence interval. While the rest 34.5% customer satisfaction is affected by other external variables that are not included under this study.

Table 4.5: ANOVAᵃ

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	411.626	7	58.804	102.039	.000ᵇ
	Residual	210.922	366	.576		
	Total	622.548	373			

a. Dependent Variable: customer satisfaction

b. Predictors: (Constant), Convenience, Security and Reliability, Credibility and Completeness, Responsiveness, Communication

Source- Own Survey (2023)

From the ANOVA statics in table 6 above, the processed data which is the population parameters, had a significance level of 0% which shows that the data is ideal for making a conclusion on the population's parameter as the value of significance (p value) is less than 5%

Table 4.6: Coefficientsᵃ

Model	Standardized Coefficients Beta	t	Sig.
(Constant)		-12.939	.000
Communication	.134	3.868	.000
Credibility and Completeness	.239	6.980	.000
Security & Reliability	.157	3.988	.000
Responsiveness	.321	9.047	.000
Convenience	.313	7.329	.000

a. Dependent Variable: I am satisfied with the overall ATM service of selected Bank

Source- Own Survey (2023*)*

As reflected on Table4.6, the variable test shows all significant value for service quality dimensions and constant value has value of .000 which is p-value < 0.05 resulting positive significant relationship with the dependent variable customer satisfaction.

The values of the Standardized Beta Coefficients (β) indicate the effects of each independent variable on dependent variable. The values of the Standardized Beta Coefficients in the Beta column on the above Table indicated sign implies the direction of the relationship between the dependent and independent variables. From the multi regression result all independent variables have positive coefficient values with acceptable level of significance. This implies the increase in every independent variable (service quality dimensions) result in increase on customer satisfaction.

From the equation constant value represents the dependent variable which is customer satisfaction. When all independent factors or service quality dimensions are zero the value of the dependent variable will be **-12.939.** This means that with the absent of all quality dimensions' customers are dissatisfied with a negative value within the significant level.

The coefficients for Convenience (0.313), Responsiveness (0.321) and Credibility and Completeness (0.239) have the highest positive value implying that the increase in this variables will highly affect customer satisfaction and there has to be given a high emphasis on their performance because a decrease on their performance will at the same time decrease customer satisfaction highly. The other variables also have positive effect on customer satisfaction positively.

4.4. Hypothesis Testing

Under this sub title the research hypothesis will be tested as per the research finding

Hypothesis 1: ATM service Communication has no positive and significant effect on customer satisfaction.

Communication affects customer satisfaction positively with beta coefficient .134 with 0.000 significant value. This implies that an increase in communication will affect customer satisfaction positively. This Hypothesis is not accepted.

Hypothesis 2: ATM service Credibility and Completeness has no positive and significant effect on customer satisfaction.

Credibility and Completeness affects customer satisfaction positively with beta coefficient .239 with 0.000 significant value. This implies that an increase in Credibility and Completeness will affect customer satisfaction positively. This Hypothesis is not accepted.

Hypothesis 3: ATM service Security and Reliability has no positive and significant effect on customer satisfaction.

Security and reliability affects customer satisfaction positively with beta coefficient .157 with 0.000 significant value. This implies that an increase in both security and Reliability affects customer satisfaction positively. This Hypothesis is not accepted.

Hypothesis 4: ATM service Responsiveness has no positive and significant effect on customer satisfaction.

Responsiveness affects customer satisfaction positively with beta coefficient .321 with 0.000 significant value. This implies that an increase in Responsiveness will affect customer satisfaction positively. This Hypothesis is not accepted.

Hypothesis 5: ATM service Convenience has no positive and significant effect on customer satisfaction.

Convenience affects customer satisfaction positively with beta coefficient .313with 0.000 significant value. This implies that an increase in Convenience will affect customer satisfaction positively with relatively highest value. This Hypothesis is not accepted.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

The aim of this chapter is to summarize the overall finding of the research, conclude on the findings and finally recommend the possible solutions that could solve the main problems discussed on the above chapters.

5.1. Summary of Findings

In this section basic findings which are collected from the analysis part will be discussed. Based on the data collected through questionnaire and interview the following findings are summarized as follows.

➢ The bank's ATM user satisfaction on the overall service quality result shows mean value 2.665. The result implies ATM service is not satisfying customers need and the service is perceived by customers at a very low level.

➢ Regarding the speed of ATM machines majority customers have rates as satisfactory and high. The result comparatively shows the ATM speed is performing better.

➢ ATM incomplete transactions are rated as usually occurring problems by customers with 187 number or (50%) of sample respondents. This shows that the ATM accuracy is reflected to be lower.

➢ Survey result indicates that Security and Reliability (3.08) and is presented with comparatively better with medium mean result. The other service quality dimensions are perceived lower below average by customers.

➢ From the interview conducted disputes due to incomplete ATM transaction, delay in new as well as replacement of card/PIN and network failures are frequently reflected problems by customers. The delay in new ATM card request and existing replacement happens as a result of work overload in PSS Company which handles every card and PIN related request preparation for every member bank of PSS is handled under a single roof which results in

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delay of customer request. Though these problems are external uncontrollable factors, the bank is still finding a way to provide permanent solutions. The interviewee also mentioned that the banks is at primary stage of implementing banking technologies and number of ATMs available for service is low which needs improvement.

➢ Currently the selected bank is working hard to solve primary customer needs and provide answers for customer complains. After this next step will be evaluating the service quality under the supervision of external consultants to upgrade the system the machines are connected to and to advance the available options the ATM can implement. This will lead to moderate banking system with high level of customer satisfaction. With this the bank can achieve the planed income from the machine and change the previous trend of caring cash around for payments.

➢ Correlation analysis was carried out to understand the relationship nature between the dependent and independent variable. The result shows that there is a positive and significant relationship between customer satisfaction and service quality dimensions (convenience, Credibility and Completeness, security and privacy, reliability and responsiveness).

➢ Regression analysis has been carried out to know the effect of the independent variables on the independent variables. The result in model summary's adjusted R square is 0.655 referring that 65.5% change in customer satisfaction exists due to service quality dimensions contained under this study whereas the remaining 34.5% change is as a result of other factors not included in this study.

5.2. Conclusion

This study aims at investigating the effect of ATM service quality on customer satisfaction the case of selected bank in Addis Ababa branches. This section will conclude on the finding by considering the literature and the data collected through questionnaire and interview.

The survey result shows that convenience, Credibility and Completeness, security and privacy, reliability and responsiveness are perceived by customers with low mean value below average. The result also reflects the overall customer satisfaction by the bank service is also lower, since adjusted R square result reflects 65.5% of customer satisfaction is measured by the dimensions included under study. The result implied that more work has to be done on those lower perceived dimensions.

The study confirmed that most of the respondents from selected samples are not much satisfied with the service provided by the banks. As the result shows all of the service quality dimensions have positive relationship with customer satisfaction. And they also have positive and significant effect on the customer satisfaction which implies direct relationship to it.

Generally, the result reflected that service quality measurement dimensions of ATM are not adequately served by the banks.

5.3. Recommendations

Based on the above problems and analysis made from primary and secondary data collected, the researcher has provided the following solutions are recommended by consider it as useful.

➢ The banks have to work harder to bring the number of available ATM machines in to a highest number so that availability and accessibility to customers will enhance. This will also create convenience for card holders and will lead to increment in ATM card user satisfaction. In addition to this POS has to be distributed to business institutions like café, hotel, entertainment centers and shopping areas in order to encourage the uses with discount. And discourage

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the culture of carrying cash around or visiting bank branches for every single payment

➤ Large number of incomplete transaction is observed from the survey result. Since completeness is the main determinant for service quality. It has to be given a high emphasis. For instance, the bank has to maintain a procedure to reveres On-Us transaction disputes right on its existence so that customers will not be affected by incomplete transaction resulting with high attraction in competitive banking industry and build high trust on its customers' mind.

➤ Continuous follow up is required by the bank/ branches for issues related to network problems, cash shortage in machines, available denomination and other day to day activity requests. Since these problems can be internally controlled, researcher believed that each branch needs assigned officer for the purpose of controlling ATM related issues. From the company's structure ATM related problems are handled at head office level. In branches ATM is a responsibility for all staffs. But the researcher has suggested centralizing the controlling system of ATM service quality.

➤ The selected Banks ATM services alternatives have limited applicable options, cash withdrawal and balance enquiry are the only service provided. As the researcher observe from the machine, options like fund transfer to other account holder and walking beneficiary are listed as service to be provided but the services does not work. The researcher recommends the bank to work on modifying the available services provided by the machine and add more additional features on it to enhance customer satisfaction.

➤ Customers has to be announced well on the benefit and security management policy of the bank's ATM regarding high confidential value given to it. Also every customer has to be informed about the risk associated with putting the card and the PIN together and to literally damage the PIN and change it after the first login. Although the money withdrawal limit sated per day is mainly to prevent the risk of losing or misplacing PIN and card at the same time the limit

shall be increase by verifying further step of user authorization to increase customer convenience.

➤ Generally, the banks have to make continuous assessment using research and development to upgrade the service quality to advance level and to feel the gap between the market and customers need. Specific staffs shall be assigned for every branch named as customer relationship manager mainly involved in connecting the customer needs with the banks offer and make the necessary follow up to sustain the banks good image against continuous technological advancements

➤ Furthermore, the researcher recommends further study on the subject matter to analyze other factors that measure ATM service quality which will have effect on customer satisfaction.

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Appendix A:

St Mary's University

School of Graduate Studies

Questionnaire to be filled by bank ATM Cardholders

Dear Respondents, I would like to express my sincere appreciation for your time, honest, prompt responses and willingness.

This questionnaire is designed specifically to carry out a research on the **Effect of ATM service quality on customer satisfaction in case of selected Bank, Addis Ababa branches.** This study mainly asses on quality service delivery to enhance customer satisfaction, efficiency and attracting more customers to the bank. The information that you offer in this questionnaire will be used as a primary data for a thesis that I am conducting for partial fulfillment of the requirement of Masters of Business Administration. Hence, your involvement is regarded as a great input to the quality of the research results. Therefore, I kindly request you to attempt all the questions in the questionnaire. Your honest and thoughtful response is invaluable and will only be used for academic study purpose.

Whatever information you provide will be treated with utmost confidentiality.

Respectfully

Nigus   Tel: +251 923324284

General instructions
- ✓ There is no need of writing your name on the questionnaire
- ✓ In all cases, where answers to options are available, please tick (√) in the appropriate box

Section I: Background Information

1. Sex: Male [   ]   Female [   ]

2. Age 18-25 [   ]   26-35 [   ]   36-45 [   ]   46-55 [   ]
56-65 [   ]   66 or above [   ]

1

3. Educational qualification:

      12 Complete and below [   ]   Diploma [   ]

.   Degree [   ]   Masters and above [   ]

Section II: General questions

4. How frequently have you received incomplete transaction from the Bank ATM?

      Never [   ]   few times [   ]
      Usually [   ]   always [   ]

5. How do you rate speed of ATM machine to serve one request?

      Very high [   ]   High [   ]   Satisfactory [   ]

      Low [   ]Very Low [   ]

Thank You for your willingness!

No.	Factors	(1) Strongly disagree	(2) Disagree	(3) Neutral	(4) Agree	(5) Strongly agree
	Communication					
1	The Bank ATMs communicates with polite and respectful words.					
2	The ATM machine is welcoming and friendly					
3	The ATM language is easy to select					
4	The ATM language is easy to understand					
5	The available service provided by the machine is easy to find and use					
6	Wrong messages from the ATM machines are easily understandable					
	Credibility an Completeness					
7	Cash is always Available in ATM					
8	Notes of good Quality are available in the bank ATM					
9	The Bank ATMs always provide complete transaction					
10	ATM services has all the needed alternatives/options					
	Security and Reliability					
11	Stations to use ATM machines are secured					
12	PIN code provided from the bank is confidential					
13	Cardholder's information are secured					
14	Money received from ATM is reliable in amount					
15	I feel secure in using ATM card					
	Responsiveness					
16	The banks is responsive to ATM machine network problems quickly					
17	New cards are delivered to customers on time					
18	Card/PIN replacements are delivered to customers on time					

19	Recovery speed while there is failure in ATMs is fast.					
Convenience						
20	The Bank's ATM machines are fairly distributed in Addis Ababa					
21	ATMs are presented in convenience locations for use					
22	The bank ATMs are always connected to network and ready for service					
23	ATM cash withdrawal limit per day is appropriate and enough					
24	All needed denominations are available in the bank ATM					
25	The ATM is serving the purpose of avoiding going to banks for services.					
customer satisfaction						
26	I am satisfied with the overall service of the Bank					