



**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES**

FACULTY OF BUSINESS ADMINISTRATION

**THE IMPACT OF ATM SERVICES QUALITY ON CUSTOMER
SATISFACTION; ON PERSPECTIVE OF AT COMMERCIAL
BANK OF ETHIOPIA SOUTH ADDIS ABABA DISTRICT**

BY

TIGIST TESFAYE

ID SGS0485/2007A

**AUGUST, 2016
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LIST OF ACRONYMS

ATM - Automated Teller Machine

CBE – Commercial Bank of Ethiopia

CO - Convenience

CS - Customer Satisfaction

EO - Efficient Operation

E-S-QUAL - Electronic Service Quality

ICT - Information and Communication Technology

IT - Information Technology

POS - Point Of Sales

PIN- Personal Identification Number

RE - Reliability

RS - Responsiveness

SERVQUAL - Service Quality

SERVPERF - Service Performance

SP - Security and Privacy

USA - United States of America

ABSTRACT

The aim of this research focuses on investigating the impact of ATM (automated teller machine) service quality on customer satisfaction on Convenience, Efficient operation, Security and Privacy, Reliability and Responsiveness in Commercial Bank of Ethiopia south Addis Ababa district. The study is based on quantitative research approach using explanatory research design. The study included a non probability (judgmental sampling), convenience-sampling technique for the reason that the inability to access current users of Visa card databases. The study uses primary data collected through questionnaires which were distributed to the ATM card users. The population of this research was employees of commercial bank of Ethiopia south Addis Ababa district in 67 branches. Out of this population 15 branches were selected that have high number of card users. Convenience sampling technique was used to collect primary data from 250 customers of the bank. Because of the inability to access current users of Visa card databases to perform a probability sampling, a convenience sampling technique were used. The modified E-S-QUAL and SERVQUAL model considers the impact of ATM service quality dimensions (convenience, efficient operation, security and privacy, reliability and responsiveness) on customer satisfaction. These five independent variables are regressed with the dependent variable, i.e. customer satisfaction. The results indicate that these dimensions are positively and significantly affect the satisfactions of ATM card users of the bank. While ranking the five dimensions respondents rated Convenience as the most important service quality indicator at the bank. Multiple regression analysis was employed to test the impact of service quality on customer satisfaction. This indicated that overall model was statistically significant relationship between service quality and customer satisfaction. The results of this study indicated that service quality is an important antecedent of customer satisfaction. The study also indicates that the banks need to become more responsive and assuring to their customers as well as increase their accessibility. It is apparent from the present study that managers and decision makers in commercial bank of Ethiopia to seek and improve the elements of service quality that make the most significant contributions on customer satisfaction.

KEY WORDS:

Convenience, Efficient operation, Security and Privacy, Reliability and Responsiveness

CHAPTER ONE

INTRODUCTION

This chapter provides a background to the study. It highlights the relevance of ATM service quality on customer satisfaction. This chapter also brings out the background of the study, problem statement, research questions, objectives, significance, delimitation, limitation, definitions of terms and lastly the organization of the study.

1.1 BACKGROUND OF THE STUDY

The financial service industry is undergoing significant transformations. Mergers, consolidation, expansion, shifting customer preferences, emerging non-traditional competition and a continuously evolving complex regulatory environment are just some of the issues on the minds of bankers worldwide. With these changes coming rapidly, banks must quickly embrace the new world pace and accelerate growth to stay a step ahead of the competition. This requires shedding away the complexity which has grown significantly across business functions and operations. (Kotler, P. 2001)

The banking sector is essential for the Ethiopian economy and plays an important financial role therefore, its growth is very critical to the health of the general economy at large. In the last twenty years there has been a rapid increase in the activity of private banks in Ethiopia, and this has fostered repaid competitiveness among banks in Ethiopia. In the increasing world of business, the task of each bank operating to make more profits is becoming a challenge with each passing day. In order for an organization like commercial banks to operate optimally, it has to be able to measure its profitability with regards to its inputs and outputs. (Abinet, Y. 2010)

The recent "Information Technology (IT) revolution" has exerted far-reaching impact on economy, in general, and the financial service industry, in particular. Within the financial service industry, the banking sector was one of the first to embrace rapid globalization and benefit significantly from IT development (Berger, 2003).

Banks operating in Ethiopia is consequently put into lot of pressures due to increase in competition. Various strategies are formulated to retain the customer and the key of it is to increase the service quality level. Service quality is particularly essential in the banking services context because it provides high level of customer satisfaction, and hence it becomes a key to competitive advantage (Almossawi, 2001).

The technological revolution in banking started in the 1950s, with the installation of the first automated bookkeeping machines at bank. The first Automated Teller Machine (ATM) along with payment card system has been introduced in the USA in 1968 with only a cash dispenser (Consoli, 2005).

Automation in banking have become widespread over the past few decades as banks quickly realized that much of their labor intensive information-handling processes could be automated with the use of computers (Farhana, 2012). In our country the modern payment systems are almost nonexistent. The country's economy is significantly cash based. Checks are also being used as an alternative payment mechanism but to a very limited extent. CBE also, the first bank to introduce Automated Teller Machine (ATM) to Ethiopia by using ATM card (debit card) in 2011. By using, "Temenos" software delivers all the functionality and efficiencies need to match a world class commercial bank. Using this software CBE is going to provide to their customers better services like E-banking, Mobile banking etc. (www.combanketh.com)³ Against this background the paper examines the application of payment card system on customer satisfaction in Commercial bank of Ethiopia with a special emphasize on south Addis Ababa district.

Commercial bank of Ethiopia established as the name of State Bank of Ethiopia by Emperor Haile Selassie's after the Ethiopian victory over Fascist Italy in August 1942. In 1963, the State Bank of Ethiopia split into the National Bank of Ethiopia and the Commercial Bank of Ethiopia S.C. with the purpose of segregating the functions of central banking from those of commercial banking. Thus, until the end of 1974, there were state owned, foreign owned and Ethiopian owned banks in Ethiopia. The banks were established for different purposes: central banking, commercial banking, development banking and investment banking. Following the 1974 Revolution, on January 1, 1975 all private banks and 13 insurance companies were nationalized and along with state owned banks, placed under the coordination, supervision and control of the

National Bank of Ethiopia. Eventually in 1980 this bank was itself merged with the Commercial Bank of Ethiopia to form the “Commercial Bank of Ethiopia,” thereby creating a monopoly of commercial banking services in Ethiopia. (E-Payment Business Solutions Team of CBE 2015)¹

Commercial Bank of Ethiopia’s operational improvement plans will modernize its services to its growing client base in Ethiopia as part of its vision to become a World Class bank. It has strong correspondent relationship more than 40 renowned foreign banks and a SWIFT bilateral arrangement with 712 others. Pioneer to introduce Western Union Money Transfer Services in Ethiopia. The bank has reliable and long-standing relationships with many internationally acclaimed Banks throughout the world. (www.combanketh.com)³

It was against this background that the founders decided to set the Bank as unique in its service giving capacity to the clients. This uniqueness was expressed ranging from the modality of banking operations since inception to its present giant strides. The system helps the user by reducing time, increasing reliability and confidentiality. In general Electronic payment system is performed by three basic components i.e. network, card reader device and electronic card.

Electronic payment is mostly referred to automated payment or banking channels that allows delivery of banking services in an effective, efficient and convenient way via electronic channels such as Automatic Tellers Machine (ATM), Point of Sale (POS) Terminals, Mobile phones, Internet, and Personal Computers. Electronic payment is the prospect for the advent of a cashless society (www.combanketh.com)³

The payment card system in Ethiopia is not an area which has been used to its fullest potential and now in an environment where electronic payment is only at its earliest development stages. Reliable is a visa branded debit card issued by CBE to facilitate the exchange of funds without paper or hard copy. Reliable visa debit card is either domestic or international. The domestic card is valid only in Ethiopia while the international card is used to make international transactions. The total number of ATM and POS terminals deployed at various locations reached 740 and 4,458 respectively. Currently CBE has more than 11 million account holders and the number of Mobile and Internet Banking users also reached more than 460,000 as of September 30, 2015. Active ATM card holders reached close to a million.

The services rendered by each of these banks are hence to be at full commercial banking activities where in all types of services will be provided to the customer. Such an arrangement saves the customers' time and presupposes of all rounded bankers.

Now a day, Commercial Bank of Ethiopia is the largest commercial bank in Ethiopia As of September 2015 over 1000 branches positioned in the main cities and regional towns. The latter include above 190 branches in the national capital Addis Ababa. CBE's banking network has reached online above 802 branches (www.combanketh.com)³. The banks vision and mission are “To become a world-class commercial bank by the year 2025” and “We are committed to best realize stakeholders' needs through enhanced financial intermediation globally and supporting national development priorities, by deploying highly motivated, skilled and disciplined employees as well as state-of-the-art technology. We strongly believe that winning the public confidence is the basis of our success” respectively.

In general, it can be concluded that even though there have been studies on ATM service quality and customer satisfaction in some developed and developing nations, as per the knowledge of the researcher, there appear to be no studies that examine the impact of ATM service quality on customer satisfaction on the Commercial bank of Ethiopia. It is, therefore, not known whether the customers of Commercial bank of Ethiopia card users are satisfied by the services delivered by the bank or not. In this context, the purpose of this study is to investigate the impact of ATM service quality on customer satisfaction and to measure the quality of the service and the satisfaction of the users.

1.2 STATEMENT OF THE PROBLEM

The economic liberalization of the financial sector started in 1991 laid a foundation for the formation and expansion of private banks in Ethiopia (Hansson, 1995). This coupled with rapid technological advancement and improved communication systems, have contributed to the increasing integration and resemblance amongst banks in the financial sector. As a result, banks are now faced with very high and intense competition (Harvey, 2010). Satisfying customers is the first major mission and purpose of any business organization. Customer satisfaction also leads organizations to gain loyalty and achieve the desired objectives. Therefore, it is essential

for organizations to satisfy their customers promptly so that they can achieve what they plan. Today, Ethiopian banks are facing challenges with stiff competition. Hence, delivering quality service and creating customer satisfaction is expected of them to win this competition. So, it becomes very important for banks to meet or exceed the target customers' satisfaction with quality of services expected by them.

Different studies have been conducted on relationship between customer satisfaction and ATM service quality in different countries. kumbhar (2011) identified that to provide a preliminary comparative investigation of the customer satisfaction in ATM service of public and private sector banks in India. For this investigation primary data was collected from 150 respondents of public and private sector banks through a structured questionnaire. Collected data was analyzed according to the objectives of the present research and result of the statistical analysis indicates that private sector banks are providing more satisfactory ATM service as compared to public sector banks. Empirical evidences indicates that customers perception about Efficiency, Security and Responsiveness, Cost Effectiveness, Problem Handling and Compensation and Contact service related to ATM service is low in both public and privates sector banks.

Lakshmi & Kavitha (2013) conducted that to examine the customer satisfaction in ATM service provided by banks in India. For this investigation primary data was collected from 100 respondents through a structured questionnaire. Collected data was analyzed according to the objectives of the present research and result of the statistical analysis indicates that there is no relationship between the demographic factors and customer satisfaction. Empirical evidence indicates that customer's satisfaction in location and process of withdrawing the money under ATM scheme is high, whereas the satisfaction is comparatively low in the aspects of transaction charge and prompt delivery of ATM card. Hence it is suggested that banks should proactively monitor customers' preferences with regard to the transaction fee; delivering of ATM card promptly and issue of new cards due to loss of original cards in order to retain their customers.

Adeniran & Junaidu (2014) was to measure the satisfaction of customers as regards to ATM services. The research was carried through across-sectional survey design which questioned respondents on ATM services. The population of study mainly constituted of customers of United Bank for Africa within Sokoto metropolis. The sample in this study consisted of 100

respondents who are users of the ATM services. The data collected was analyzed by use of multiple logistic regression analysis. The findings revealed that, the impact of ATM services in terms of their perceived ease of use, transaction cost and service security is positive and significant. However, the result also indicates that the impact of ATM services in terms of availability of money is positive but insignificant.

Idowu & Oluwaseun (2015) the paper was to measure customer satisfaction as regards to ATM services. The research was carried through survey design which questioned respondents on ATM services. The population of study mainly constituted of customers of United Bank for Africa within Lagos. The sample in this study consisted of 200 respondents who are users of the ATM services. The data collected was analyzed by use of multiple logistic regression analysis and Pearson correlation. The findings revealed that, necessary input to the bank management to increase customers' satisfaction through improving ATM service quality. The focus should not be on ATM service quality dimensions only. This aspect should be augmented and integrated with other aspects of the service quality of banks for satisfaction of customers. This research concentrated on determinants of ATM service quality and its impact on consumer loyalty. Notwithstanding, the exploration did not examine the relationship between consumer loyalty and customer retention.

Hailmariam (2013) this study focuses on investigating the impact of ATM (automated teller machine) service quality on customer satisfaction in Dashen Bank S.C. The study uses primary data collected through questionnaires which were distributed to the Area Bank's ATM card users. Convenience sampling technique was used to collect primary data from 200 customers of the Area bank. The modified E-S-QUAL and SERVQUAL model considers the impact of ATM service quality dimensions (convenience, efficient operation, security and privacy, reliability and responsiveness) on customer satisfaction. These five independent variables are regressed with the dependent variable, i.e. customer satisfaction. The results indicate that these dimensions are positively and significantly affect the satisfactions of ATM card users of the bank. While ranking the five dimensions respondents rated Reliability as the most important service quality indicator at the Area bank. The study also indicates that the banks need to become more responsive and assuring to their customers as well as increase their accessibility.

Katono (2011) identified the most important e-service quality evaluation dimensions in Uganda, focusing specifically on (ATMs). The study employed a triangulation approach, using both qualitative and quantitative methods based on a convenience sample composed mainly of students at Uganda Christian University. This was followed by hierarchical linear regression to identify the most important dimensions of e-service quality. The study established that tangibles, card issues, reliability and location are the most important student service quality evaluation dimensions of ATMs in Uganda.

CBE is the pioneer to introduce the modern payment card system and ATM facility; it has the objectives of offering a high service quality to the ATM card users. Nevertheless, banks found in our country (Ethiopia) have little care about their customers. This leads them to use more obsolete and traditional technologies that cause dissatisfaction and switching among customers. As the impact of ATM service quality on customer satisfaction is not standard in Ethiopia context, the present study tries to fill this knowledge gap considering ATM service quality of Commercial bank of Ethiopia users. In order to address this knowledge gap and as the use of ATM service is increased day by day, it is important to make a study to gain insight about the ATM service quality dimensions and level of customer satisfaction towards ATM service quality provided by the bank.

1.3 BASIC RESEARCH QUESTION

The primary research questions are to be addressed in this study which is as follows.

1. What are the major of ATM service quality by using five dimensions of service quality?
2. What is the satisfaction level of ATM card users based on the services delivered by the Bank?
3. What is the correlation between ATM service quality dimensions and the satisfaction of ATM card users?
4. Which ATM service quality dimension significantly affects the satisfaction of ATM card users of the Bank?

1.4. OBJECTIVES OF THE STUDY

General Objective:

- The general objective of this study is to examine the impact of ATM service quality on the satisfaction of ATM card users of CBE.

Specific objectives

1. To assess the level of ATM service quality by using five dimensions of service quality.
2. To examine the satisfaction level of ATM card users based on the services delivered by the Bank.
3. To investigate the correlation between ATM service quality dimensions and the satisfaction of ATM card users.
4. To observe which ATM service quality dimension significantly affect the satisfaction of ATM card users of the Bank.

1.5 SIGNIFICANCE OF THE STUDY

- ✓ This provides a general insight as to the contribution payment card system on customer satisfaction.
- ✓ It can be a good indicator for managers to identify the gap between management's perception of service quality and that of their customers and taking actions to close the gaps.
- ✓ The paper can also be used as a feedback for operation managers of the banks that considered in the study regarding the perceptions of their customers toward their service quality.
- ✓ It comes up with alternative solutions that enable the responsible body to increase customer satisfaction.
- ✓ It serves as a stepping stone for those who want to engage a study on the same issues.

1.6 DELIMITATION OF THE STUDY

The study is highly concentrated on measuring ATM service quality on customer satisfaction in Commercial bank of Ethiopia by taking south Addis Ababa district customers that have high number of card users. The researcher believes that it will be appropriate to conduct the study in large scale. However, the limited time and other resources do not allow doing so. Hence, the scope of this study is to focus on current users of CBE visa card in south Addis Ababa district 2015/2016. With respect to the study value this research is focus on customer satisfaction as a dependent variable and ATM service quality with its dimensions like convenience, efficient operation, privacy & security, reliability and responsiveness as independent variables.

1.7 LIMITATION OF THE STUDY

The findings of the study should be viewed with certain limitation in mind. The paper was conducted at one district of in Addis Ababa being constructed by not having sufficient time and budget to gather enough data from the four districts. Generalisability of the present findings should therefore be examined in future research in other district branches with wide sample size.

1.8 OPERATIONAL DEFINATIONS

- **Customer satisfaction:** the measurement of ATM services provided by a CBE to meet its customer's expectation.
- **Convenience:** dimension refers to ease of use and accessibility of the service at all times.
- **Efficient operation:** relates to efficient and speedy operation of ATM. Efficiency in operations optimizes the resources for the customers. Customer accord priority to user-friendliness of ATM.
- **Security and Privacy:** refers to perceived low-risk with use of ATM. The security environment and the frequent vulnerabilities of ATM users have enhanced the risk associated with the use of this delivery channel.
- **Reliability:** describes accurate and promised service at all times. ATM users want to receive the right quantity and right quality of service at all times, as promised by the banks.

- **Responsiveness:** aspect of ATM service quality relates to the ability of the bank staff to provide the agreed services timely, accurately, dependably, and promptly.

1.9 ORGANIZATION OF THE STUDY

The study attempted to analyze the ATM service quality on customer satisfaction. Accordingly, it was organized in 5 chapters. The first chapter introduces the background for the study, statement of the problem, basic research question, objective, significance, delimitation, limitation, operational terms and organization of chapters. The second chapter addressed the detail review of theoretical and empirical literature on the topics. The third chapter deals with methodology used in the study. The fourth chapter was dedicated to the detail analysis and discussion of the data collected for the study. The summary of the findings, conclusion, recommendations and implication for future research were included in the fifth chapter.

CHAPTER TWO

LITERATURE REVIEW

This chapter reviews the theoretically & empirically literature. The theoretical part of the review is focus on the theory and concept of the ATM service quality & customer satisfaction. And the empirical part of the review assessed the research that was previously conducted by different researchers.

2.1 THEORETICAL FRAME WORK

Visa debit card is one of electronic banking technology; it is the cornerstone for success of a banking system. Banking business like the financial transactions and payment can now be processed quickly and easily. The banks with the latest technology and techniques are more successful in the competitive financial market. They have been able to generate more and more business resulting in their greater profitability. (Goel 2012)

Generally, To-day without information technology and communication anyone cannot think banking business. There are some theoretical studies that have been undertaken at national and the international level to analyze the problems and challenges on the Visa Debit Card payment system.

Visa is the commonly used for debit card in many countries although some of the banks have their own proprietary debit cards. Most of the commercial banks issue debit cards mostly visa. Debit cards are used to withdraw cash from automated teller machine (ATMs) and to make payment of purchases by using point of sale (POS) outlets. It is important to note that very few departmental stores and restaurants have established POS machines to perform transaction through debit cards. (DelaliKumaga 2010)¹⁴

A debit cards allows a customer to pay for goods and services at various retail outlets by directly debiting their bank accounts. On the other hand, credit cards enable the holders to obtain credit and withdraw cash up to a pre-arranged ceiling (Pallister and Isaacs (2002). Several studies indicates that the use of debit/credit cards have been on the increase over the recent past world over. This rise can be attributed to the improvement in the information technology (Chorofas 1987; Livy, 1981).

Debit cards are machine-readable and encoded plastic cards which resemble credit cards in appearance. Debit cards first appeared in the U.S. in the 1980s when the transaction volume was too low to be noticeable. Since the mid-1990s, debit cards have become the fastest growing type of payment in the U.S. (Carow and Staten, 1999). Debit cards represent one of the innovations in electronic banking technology. Based on the belief that people in a social system differ in their readiness to adopt an innovation, Rogers (1995) developed the Diffusion of Innovations model to describe different adopter categories.

There are two types of debit cards, on-line and off-line. In an on-line debit card transaction, the cardholder authorizes the transaction by entering a personal identification number (PIN) at the point of sale. In an offline debit card transaction, the cardholder authorizes the transaction by signature, similar to a credit card transaction. Although debit cards are similar to credit cards in appearance, their functions are different. Debit card transactions draw on funds that are deposited in the cardholder's bank account beforehand rather than a pre-established line of credit as is done in credit card transactions (Kahn & Roberds, 2002).

Debit cards have become increasingly popular in the United States. However, studies of debit card use have focused primarily on the supply side. This study investigated debit card use from the perspective of the demand side, the consumers. The impact of consumers' demographic, socio-economic, and credit-related characteristics on debit card use was examined by using data from the 2001 Survey of Consumer Finances (SCF). Logistic regression analysis showed that household heads that were younger, with more education, and more income were more likely to use debit cards. In addition, household heads who were Hispanic, renters, and credit card revolvers were more likely to use debit cards than household heads who were white, home owners, and convenience users of credit cards.

Pat Meredith, Chair: Debit cards are preferred by merchants because of their much lower merchant costs compared to credit cards. Merchants are concerned that the entry of Visa and MasterCard into the Canadian point of sale debit card market currently monopolized by Interact Debit would inevitably lead to higher merchant fees. The operator of Interact Debit, the Interact Association, is required to operate on a cost recovery basis and does not have an interchange fee. Consumers, as opposed to merchants, are directly paying for most of the cost of the debit card

payment system through their banking fees. The lower relative cost of credit cards for Canadian cardholders (including credit card rewards programs) is one influencing factor in consumers recently increasing their use of credit cards as compared to debit cards.

David L Stearns (2007) wrote about what is Visa? In general, Visa is not what you might think it is. Visa is not a part of the US Federal Reserve System or any other central bank. It is not an agency of any government, nor is it a public utility. Visa itself is not even a bank. It does not issue cards, nor does it recruit new merchants to accept those cards. It does not grant credit to consumers; maintain their accounts, nor control the interest rates charged on unpaid balances. It does not even manufacture, distribute, or install that electronic point of sale terminals.

Visa is a cooperative membership association that is jointly owned by more than 20,000 financial organizations around the world. Those member organizations, which are mostly banks, are both the owners and the customers of Visa. The members compete with one another to issue cards and recruit merchants, but Visa provides them a framework in which they can cooperate to provide a ubiquitous payment service that none could have realistically supplied alone. The central Visa organization, which consists of only 6,000 employees, serves three core functions. First, they maintain, interpret, and enforce the rules by which transactions are processed and disputes are resolved. Second, they build and operate the worldwide computer systems and telecommunication networks that authorize, clear and settle those transactions in electronic form. Third, they promote the Visa name and service marks through general advertising and commercial sponsorships.

2.1.1 Overview of Payment card system

The usage of information technology (IT), broadly referring to computers and peripheral equipment, has seen tremendous growth in service industries in the recent past. The most obvious example is perhaps the banking industry, where through the introduction of IT related products in internet banking, electronic payments, security investments, information exchanges (Berger, 2003), banks now can provide more diverse services to customers with less manpower. The recent "Information Technology (IT) revolution" has exerted far-reaching impact on economics, in general, and the financial service industry, in particular. Within the financial

service industry, the banking sector was one of the first to embrace rapid globalization and benefit significantly from IT development. The technological revolution in banking started in the 1950s, with the installation of the first automated bookkeeping machines at banks. The first Automated Teller Machine (ATM) is reported to have been introduced in the USA in 1968 with only a cash dispenser. Automation in banking have become widespread over the past few decades as banks quickly realized that much of their labor intensive information-handling processes could be automated with the use of computers. (Goel 2012)

Let us consider the case of automated teller machines (ATMs) by banks. If ATMs are largely available over geographically dispersed areas, the benefit from using an ATM will increase since customers will be able to access their bank accounts from any geographic location they want. This would imply that the value of an ATM network increases with the number of available ATM locations, and the value of a bank's network to a customer will be determined in part by the final network size of the bank. (Goel 2012)

ATMs allow customers to deposit money, cash withdrawals, bill payments, forex, fund transfer, mobile top up, Balance inquiry, etc at any time. ATM services not only provide convenience for customers, but also decrease operating costs for the bank (Rose and Hudgins, 2008). However, ATMs lack personalized services and do not have the ability to sell peripheral services, such as a mortgage plan (Rose and Hudgins, 2008).

2.1.1.1 Debit card

Debit cards are linked directly to the bank account of its holder. The holder of debit card can use it to buy goods or withdraw cash and the amount is taken from the bank account right away.

In pay-now payment systems, the payer's account is debited at the time of payment. ATM card based systems fall into this category. According to (Vassiliou, 2004), debit instruments allow the payer to have purchases directly charged (debited) to funds on his/her account at a deposit-taking institution such as a bank.

Debit cards are machine-readable and encoded plastic cards which resemble credit cards in appearance Debit cards first appeared in the U.S. in the 1980s when the transaction volume was

too low to be noticeable. Since the mid-1990s, debit cards have become the fastest growing type of payment in the U.S. (Carow and Staten, 1999).

Debit cards represent one of the innovations in electronic banking technology. Based on the belief that people in a social system differ in their readiness to adopt an innovation, Rogers (1995) developed the Diffusion of Innovations model to describe different adopter categories.

There are two types of debit cards, on-line and off-line. In an on-line debit card transaction, the cardholder authorizes the transaction by entering a personal identification number (PIN) at the point of sale. In an offline debit card transaction, the cardholder authorizes the transaction by signature, similar to a credit card transaction. Although debit cards are similar to credit cards in appearance, their functions are different. Debit card transactions draw on funds that are deposited in the cardholder's bank account beforehand rather than a pre-established line of credit as is done in credit card transactions (Kahn & Roberds, 2002).

2.1.1.2 Credit card

Credit card is a plastic card used as a system of payment on credit. It allows its holder to buy goods and services from his/her premises. It provides the ease and power of purchase. It can also be used in case of emergencies. But it does involve a high interest rate and online frauds.

In pay-later (credit) payment systems, the payee's bank account is credited the amount of sale before the payer's account is debited (Asokan, et. al., 2000). Credit cards allow customers to make purchases up to a prearranged ceiling. The credit that is granted is either settled in full by the end of a specified period, generally a month, or can be settled in part, with the remaining balance extended as credit (Asokan, et. al., 2000). Credit cards are internationally known to customers and accepted by merchants. They are also easy to use on the internet, as only the credit card details need to be sent to the beneficiary in order to effect a payment (Vassiliou, 2004).

2.1.1.3. ATM (Automated Teller Machine)

ATM means computerized machine that permits bank customers to gain access to their accounts and permit them to conduct some limited scale banking transactions with a magnetically encoded

plastic card and a code number. An ATM transaction typically involves withdrawing cash from an ATM machine. The consumer presents an ATM card, which is issued by the bank holding his or her checking account, at an ATM terminal, which may or may not be owned by the same bank. The consumer enters a personal identification number (PIN) to verify identity, the checking account is checked for adequate funds, and if everything is satisfactory, cash is issued. All of this is routed across one or more ATM networks. (E- Payment Procedure of CBE 2015)²

The late 1960s marked the beginning of modern ATM and POS systems. It might be argued that the first ATMs were cash-dispensing machines. England's Barclays Bank, for example, installed the first cash dispenser in 1967. But it did not use magnetic-stripe cards; customers were issued paper vouchers that were fed into the machine, which retained the voucher and dispensed a single £10 note. Don Wetzel has been credited with developing the first modern ATM. The idea came to him in 1968 while waiting in line at a Dallas bank, after which he proposed a project to develop an ATM to his employer, Docutel. A major part of the development process involved adding a magnetic stripe to a plastic card and developing standards to encode and encrypt information on the stripe. (E- Payment Procedure of CBE 2015)²

ATMs were first accessed primarily with credit cards, but in 1972, City National Bank of Cleveland Successfully introduced a card with an ATM but not a credit function. ATMs were developed that could take deposits, transfer money from checking to savings or savings to checking, provide cash advances from a credit card, and take payments. (Mcandrews, 2003)

ATMs also were connected to computers, allowing real-time access to information about cardholder account balances and activity. By connecting a string of ATMs to a centralized computer, banks established ATM networks. It is a device that allows customer who has an ATM card to perform routine banking transactions without interacting with a human teller. In addition to cash withdrawal, ATMs can be used for payment of utility bills, funds transfer between accounts, deposit of cash into accounts, balance enquiry etc. ATM means computerized machine that permits bank customers to gain access to their accounts and permit them to conduct

some limited scale banking transactions with a magnetically encoded plastic card and a code number.

2.1.1.4. POS (Point of Sales)

Point of Sale (POS) service is an innovative electronic money transferring system that allows the customers of banks to pay for their purchases through their ATM and credit card at any POS enabled retailer. (E- Payment Procedure of CBE 2015)²

Point of Sale (POS) as an electronic payment channel predominantly facilitates purchase of goods and services using payment card. It is a noncash alternative that allows customers to purchase goods and services through instant transfers of funds from their accounts to merchants. The use of Point of Sale can be extended to paying bills, recharging prepaid mobile, and fund transfers. However, POS can also be used for cash advance services which allows manual cash disbursement by bank tellers while automatically posting transactions. In such cases, POS are used as a substitute to ATMs. (E- Payment Procedure of CBE 2015)²

Point of Sale Terminal is a computer terminal that is linked online to the computerized customer information files in a bank and magnetically encoded plastic transaction card that identifies the customer to the computer. During a transaction, the customer's account is debited and the retailer's account is credited by the computer for the amount of purchase.

2.1.1.5. Merchant

A shop, restaurant and the like are cards can be use. Merchants may have a registration facility both on the physical premises and for remote trading via the Internet.

2.1.1.6. Benefits of payment card to the Bank

Additional Product – For the bank it is an additional product to its business, which will serve as an additional steam of income.

Increased Customer Base – It is believed that more customers can be acquired by introducing such an innovative product. Besides the direct income from the card business the magnitude of

income from other products will also escalate as people will tend to transfer their deposit, loan and other accounts in need of benefiting most from their card. (Mcandrews, 2003)

2.1.1.7. Benefits of payment Card to the customer

An ATM card can be used to keep accurate records of banking transactions. Monthly statements, usually available online or printed and mailed, itemize each transaction made with the card. This benefit leads to fewer accidental overdrafts, and provides a visual record of spending habits, unlike using cash. Transactions are processed quickly with an ATM card. Sliding the card is faster than writing a check, more accurate than paying with cash (since change can be miscounted), and makes some transactions quicker (CBE e-payment procedure 2015).

Safety – By having a card in his/her pocket the cardholder may develop peace of mind as it minimizes the volume of cash one needs to carry and the associated risk of theft.

Convenience – Putting a single card in pocket one can buy whatever is needed at whichever convenient time and place; of course depending on the development of the payment infrastructure in one's country. (Mcandrews, 2003)

2.1.1.8 Benefits of payment Card to the Merchant

Cost of cash management – Companies are spending a lot of money to manage their cash. By doing business with cards the merchant will significantly reduce such costs as collections are made electronically, which is relatively easy to control.

Risk Minimization – By accepting cards for payment the merchant will reduce the amount of cash on hand. This is a significant benefit as it minimizes the level of burglary risk.

Increased Sales – In order to use their card cardholders prefer merchants who can accept their card for payment. Hence, this will increase the number of customers and thereby sales volume for the merchant. (Mcandrews, 2003)

2.1.1.9 Benefits of payment Card to the Economy

Tourist Attraction – Travelers are the major users of payment cards due to its convenience to carry and the safety involved in it. Most holiday tourists therefore prefer to go and enjoy in

countries where their cards can be accepted. Moreover, as the seat of the African Union and other international organizations it will have a positive impact to raise the frequency of business meetings held in the country. Hence, introduction of payment card system will raise the flow of tourists in the country.

Flow of Foreign Currency – Cards may encourage tourists to spend more. This together with the expected increase in the flow of tourists indicated above will contribute to the foreign currency flow to the country.

Less printing of paper money – When the country reaches to a level where cards are predominantly accepted by the community, it will reduce the frequency and magnitude of printing paper money. This has a significant cost reduction effect to the economy (CBE e-payment procedure 2015).

2.1.2. The Card Payment Cycle

In a typical complete card payment process five parties will be required to involve. These parties and their corresponding roles are discussed below.

1. **The Issuer** – Is a financial institution that issues the cards required for payment.
2. **The Cardholder** – Is the customer of that financial institution who is provided with the card. The cardholder is expected to use the card for payment at a Point of Sale (POS) terminal or for withdrawal of cash at an ATM that can accept the card.
3. **The Merchant** – Is a trader who can accept cards as a payment tool in exchange for the products/services he/she sales to the cardholder.
4. **The Acquirer** – Is the merchant’s representative which will make a payment to the merchant when a transaction is effected using a card and latter claim the amount from the issuer.

5. **The Card Association** – Is someone like Visa or MasterCard who will facilitate the interchange for the whole payment process. They basically serve as central settlement and clearance body for the transactions made in between the Issuer and the Acquirer (CBE e-payment procedure 2015).

2.1.3 Concept of customer satisfaction

Customer satisfaction is actually a term most widely used in the business and commerce industry. It is a business term explaining about a measurement of the kind of products and services provided by a company to meet its customer's expectation. Satisfaction became a popular topic in marketing during the 1980s and is a debated topic during both business expansions and recessions. Most discussions on customer satisfaction involve customer expectation of the service delivery, actual delivery of the customer experience, and expectations that are either exceeded or unmet. If expectations are exceeded, positive disconfirmation results, while a negative disconfirmation results when customer experience is poorer than expected. In today's world of intense competition, the key to sustainable competitive advantage lies in delivering high quality service that will in turn result in satisfied customers (Shemwell et al., 1998). Kotler and Armstrong (1999) defended the customer satisfaction as the customer's perception that compares their pre-purchase expectations with post purchase perception. Oliver (1997, p. 13) defines satisfaction as "the consumer's fulfillment response", a post consumption judgment by the consumer that a service provides a pleasing level of consumption-related fulfillment, including under or over-fulfillment. Oliver (1981) point of view Customer satisfaction is the evaluation a customer makes to a certain exchange, which reflects the relation of the customer's expectation and their real perception to products and services they receive.

To some, this may be seen as the company's key performance indicator. In a competitive marketplace where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy. There is a substantial body of empirical literature that establishes the benefits of customer satisfaction for firms. It is well established that satisfied customers are key to long-term business success (Zeithami et al., 1996).

It also defined as a global issue that affects all organizations, regardless of its size, whether profit or non-profit, local or multi-national. Companies that have a more satisfied customer base also experience higher economic returns (Aaker and Jacobsson, 1994). Consequently, higher customer satisfaction leads to greater customer loyalty. For that matter, many market leaders are found to be highly superior-customer-service orientated. They have been rewarded with high revenue and customer retention as well. For that matter, organizations in the same market sector are compelled to assess the quality of the services that they provide in order to attract and retain their customers.

There are two general conceptualizations of satisfaction here, namely, the transaction-specific satisfaction and the cumulative satisfaction (Boulding et al., 1993). Transaction-specific satisfaction is the customer's very own evaluation of his or her experience and reaction towards a particular service encounter (Cronii and Taylor, 1992). This reaction is expressed by the customer who experiences a product or service for the first time. Meanwhile, cumulative satisfaction refers to the customer's overall evaluation of the consumption experience to date (Johnson, Anderson and Fornell, 1995); an own accumulation of contacts with services provided them from day-to-day. It is from this accumulation that customers establish a personal standard which is used to gauge service quality. However, in general, it is agreed that customer satisfaction measurement is a post-consumption assessment by the user, about the products or services gained (Churchill and Surprenant, 1982).

2.1.4. SERVQUAL and E-S-QUAL

The term of service quality has become a controversial issue in terms of definition as well as measurement since there is not a precise definition for this phrase. Mohamed & Shirley (2009) emphasized that banks have to care about the quality of their services since this quality is considered the essence or core of strategic competition. Walfried, et.al (2000) defined service as a set of characteristics that meet the clients' needs, strengthen the links between the organization and them, and enhance the clients' value as well.

During the past few years, SERVQUAL has become the most commonly used technique for evaluating service quality. Perceived service quality is associated with consumer judgment about

a service provider's overall excellence (Parasuraman et al., 1988). This judgment is the result of the distinction between what a customer believes a service provider should offer in terms of expectations and his/her perception of the actual performance of the service (Parasuraman et al., 1988). Numerous techniques exist for measuring service quality, including the famous SERVQUAL tool (Parasuraman et al., 1988) based on the assumption that perceived service quality derives from the consumer's comparison of expected service and actual service performance (Parasuraman et al., 1988).

One of the famous tools to assess customer satisfaction is SERVQUAL model by (Zeithaml et al., 2000) but this model cannot be used in internet banking because it has a different service delivery process. E-SERVQUAL model is developed by (Zeithaml, Parasuraman and Malhotra's, 2000) to cover all customers' communication on websites. Dimensions are Quick response to enquiries, comfortable navigation and trustworthiness (Zeithaml et al. (2000, 2002) and (Parasuraman et al. 2000) conducted a research on e-service quality based on earlier research on traditional service quality and developed an E-S-QUAL scale based on 7 dimensions. They later extended their research and created another model with 11 dimensions that are: Trustworthiness, quick response, accessibility, flexibility, comfortable navigation, efficiency, assurance, security, site design, price information and customization. This model resembles a lot to SERVQUAL instrument, but it has new dimensions that related to online services.

Parasurama Zeithaml, I & Berry that there exist ten criteria and dimensions through which service quality can be assessed:

- **Reliability:** the ability of an organization to accurately achieve its services in the proper time and according to the promises it has made to its clients.
- **Responsiveness:** the tendency and willingness of service providers to help clients and satisfy their needs, immediately reply to their inquiries, and solve their problems as quickly as possible.
- **Competence:** having adequate skills and knowledge that enable the employees to perform their jobs properly.
- **Accessibility:** providing easy access to a service in terms of location and through services provided via the telephone, the internet, or any other means of communication.

- **Courtesy:** treating clients respectfully in a polite friendly manner, understanding their feelings, and answering their phone calls gently.
- **Communication:** this occurs through gentlemanly listening to the client conveying information to them clearly and facilitating external communication with workers.
- **Credibility:** this can be achieved through full trust and confidence in the service provider as well as his honesty and straight forwardness.
- **Security:** this depends on whether the service is free from risks and hazards, defects or doubts so that it provides bodily safety, financial security as well as privacy.
- **Understanding/ knowing the customer:** this can be made achievable through the ability to pinpoint the customers' needs as well as understanding their individual problems.
- **Tangibility:** this includes physical aspects connected with service such as instruments and equipment, persons, physical facilities like buildings and nice decoration and other observable service facilities.

2.1.5 SERVICE QUALITY MODEL

The service quality model of Parasuraman et al. (1988) suggested a five dimensional structure of perceived service quality tangibles, reliability, responsiveness, empathy and security as the instruments for measuring the service quality (Parasuraman et al., 1988; Zeithaml et al., 1990).

Tangibles as a SERVQUAL dimension

The tangibles involve the firms' representatives, physical facilities, materials, and equipment as well as communication materials. Furthermore, Physical environmental conditions appeared as a clear evidence of the care and attention paid for the details offered by the service provider (Fitzsimmons & Fitzsimmons, 2001). Davis et al. (2003) summarize tangibles like the physical confirmation of the service. More specifically, Parasuraman et al. (1985) define the tangibility appearance of physical facilities, equipment, personnel, and written materials.

Reliability as a SERVQUAL dimension

Reliability depends on handling customer service issues, performs the services right the first time; offers services on time, and maintain a record of error-free. Moreover, they define reliability as the most significant factor in conventional service (Parasuraman et al., 1988). Reliability also consists of the right order fulfillment; accurate records; accurate quote; right in the bill; Results are more accurate than commissions; keep the promise of service. He also mentions that reliability is the most significant factor in banking services (Yang et al., 2004).

More specifically, in a study by Parasuraman et al. (1985), SERVQUAL was applied to gather data in four different companies, including banks, credit card companies, the company's maintenance services, and Long Distance Phone Company. He found high reliability in all four of these companies, with the possible exception of some of the values associated with significant dimensions (Parasuraman et al., 1985, p. 24). Finally, reliability is defined as the "ability to perform the promised service dependably and accurately" (Parasuraman et al., 1988, p.23).

Responsiveness as a SERVQUAL dimension

Responsiveness is defined as "the willingness to help customers and provide prompt service"(Parasuraman et al., 1988). Furthermore, Johnston (1997) defines responsiveness such as speed and timeliness of service delivery. This consists of processing speed and service capabilities to respond promptly to customer service requests, and wait a short and queuing time. More specifically, responsiveness is defined as the willingness or readiness of employees to provide services. It contains the timeliness of service (Parasuraman et al., 1985). It also contains understanding the needs and requirements of the customer, easy operation time, individual attention provided by the staff, attention to the problem and customers' safety in their dealings

Empathy as a SERVQUAL dimension

Parasuraman et al. (1985) defined empathy as a caring and individual attention that the firm provides to its clients. It contains giving individual attention to employees who understand the needs of their customers and customer facilities during business hours. Furthermore, Ananth et al. (2011) demonstrates empathy in their research of private sector banks, provide individual attention and easy operation time; give personal attention, and understand the specific needs of customers. Fitzsimmons and Fitzsimmons (2001) suggest that empathy contains approachability, sensitivity, and efforts to understand customer needs. Also, Johnston (1997) defined empathy as

the ability to make customers feel welcome, especially by staff contacts. Additionally, the SERVQUAL model indicates that satisfaction is related to the size and direction of disconfirmation of a person's experience when he/she faces his/her initial expectations (Churchill & Surprenant, 1982; Parasuraman, Zeithaml & Berry, 1985; Smith & Houston, 1982).

Security as a SERVQUAL dimension

Security refers to the safety and security of customer transactions with the bank including a privacy policy. Security is ensued when the service becomes safe, and the customer information gets protection (Parasuraman et al., 2005; Zeithaml et al., 2002).

2.2 EMPIRICAL REVIEW

There are various studies that examine the effects of ATM service quality on customer satisfaction by using different instruments. Reviews of these are presented as follows.

2.2.1. ATM Service Quality and its Dimensions

Davies et al., (1996) examined the factors that influence customers' satisfaction about ATM service quality. These factors include costs involved in the use of ATM, and efficient functioning of ATM. Joseph and Stone (2003) examined the United States customers' perception of ATM quality and found that user-friendly, convenient locations, secure positions, and the numbers of ATM provided by the banks are essential dimensions of ATM service quality.

Shanka (2012) studied the relationship between service quality, customer satisfaction and loyalty using five dimensions of SERVPERF model which are reliability, assurance, tangibility, empathy and responsiveness in private banks in Ethiopia. The study used correlation and multiple regressions to analyze data from a convenient sample of 260 respondents. The study shows that all service quality dimensions are positively correlated with customer satisfaction indicating quality banking service as a prerequisite for establishing and having satisfied customers. Mboma (2006) studied the effects of ATMs on customers' satisfaction in Tanzanian banking sector by interviewing customers of three banks as a case study. The study established that ATM services enhance operations and customer satisfaction in terms of flexibility of time. Also they add value in terms of speedy handling of voluminous transactions which traditional

services were unable to handle efficiently and expediently. However the level of satisfaction is reduced by technological and processing failures, the perception that the service delivery mode is expensive and insecure regarding stand-alone ATMs, which creates customer dissatisfaction.

Leblanc (1990), in a study of ATM users in Canada, established that major reasons for using ATM were accessibility, freedom to do banking at all times, and to avoid waiting lines. The study also found the users' apprehension about the risk associated with its use and complexity of the machine in executing the transaction. Researchers contend that service quality has a direct link with customer satisfaction (Parasuraman et al., 1988). Strong evidence exists in literature about customers' satisfaction from ATM services. Some studies have also identified customers' dissatisfaction with ATM service quality dimensions. Large numbers of customers are resistant to this new mode of service delivery and prefer more personalized service (Murdock & Franz, 1983). The researchers noted that customers do not like ATMs because of impersonality, vision problem, fear of technology and reluctance to change and adopt new mode of delivery of service (Stemper, 1990).

Awanet *al.* (2011) investigated the service quality and its relationship to customer satisfaction among the customers of conventional banks and Islamic banks. They carried a survey using a modified SERVQUAL scale to 200 walk-in customers conveniently drawn. The study used regression analysis and identified five service quality dimensions namely; empathy, service architecture, convenience service encounter, employee service criteria, customer focus and five customer satisfaction dimensions: responsiveness, competency, safe transaction, competitive services and knowledge for the overall banking. Haq and Muhammad (2012) compared public and private sector banks of Pakistan by evaluating their customer satisfaction. The study used questionnaires which were distributed to 351 respondents. The study showed that customers' satisfaction varies according to the nature of services and in this case, highest customers' satisfaction is shown in such areas like price charged by banks which is nominal, convenient location of bank branches and staff attitude toward problem solving of customers. Moreover, when the private sectors banks are compared with public sector banks, private bank customers were more satisfied with their bank because of their multiple branches at convenient locations and technology.

Rajiv Sindwani & Manisha Goel (2012) have reviewed 8 studies on ATM banking service quality conducted in different countries across the world over a period of more than 10 years. They have also concluded that there is no consensus among researchers with regard to dimensions of ATM banking service quality. For the purpose of measurement of service quality of services involving face-to-face interactions between the service provider and the customer, SERVQUAL and SERVPERF scales are most commonly used. But there are no generally accepted dimensions and no such standard scale for measuring service quality in case of ATM banking.

It has been found that different studies have considered different service quality dimensions of ATM banking. The various dimensions proposed by various researchers have been mentioned below. Lovelock (2000) mentioned that effective service delivery in ATM system guarantees quality excellence and superior performance and provide autonomy to the customers. He identified secure and convenient location, adequate number of ATMs, user-friendly system, and functionality of ATM as dimensions of ATM banking service quality.

Mukhtar *et al.* (2014) documented on customer satisfaction towards financial services of banks in Bahawalpur, Pakistan. The study used correlation analysis to check the intensity of relation of customer satisfaction with dimensions of service quality. These dimensions included reliability, assurance, responsiveness, empathy and tangibility. The study found that service quality is positively correlated with customers' satisfaction. The most important variable that affects customer satisfaction is tangibility, which is followed by assurance. Regression equation derived from regression analysis shows that only assurance and tangibility has significant correlation with customer satisfaction, but reliability, empathy and responsiveness has no importance relationship with customer satisfaction. Banks utilize their assets in right direction, providing better tangibility and assurance to customers about their services. Banks focus their attention towards their tangible services, such as; Auto Teller Machines (ATM), building and interior designs.

Joseph and Stone (2003) investigated some of the various roles technology plays in the US banking sector and how technology in general impacts the delivery of banking service. The

authors developed a grid for bank managers when making decisions concerning the priority of implementation of service-oriented technology. Authors conducted an empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector. They examined the United States customers' perception of ATM quality and found that user-friendly, convenient locations, secure positions, and the numbers of ATM provided by the banks are essential dimensions of ATM service quality.

Al-Hawari et al. (2005) developed a comprehensive model of banking automated service quality taking into consideration the unique attributes of various delivery channels including ATM, Internet Banking, Telephone Banking and other dimensions that have a potential influence on quality issues. They compiled a list of major dimensions of ATM service quality based on previous studies. The dimensions include secure locations, user-friendliness of the ATM system, convenient location and functions of ATM. These dimensions were also tested by conducting an empirical study.

Dilijonas et al. (2009) presented the self-service systems quality management and evaluation framework. The framework described three groups of imperatives aimed to ensure sustainable service provision for self-service banking clients by increasing quality of the operational, resource and marketing services. Authors examined the essential aspects of ATM service quality in Baltic States. They identified essential resources (adequate number of ATMs, convenient and secure location and user-friendly system); important dimensions of operation of ATM (maximum speed, minimum errors, high uptime, cash backup); and value-based aspects (quality service at reasonable cost, and maximum offering to cover maximum needs of customers) as vital facets.

Khan (2010) investigated significant dimensions of ATM service quality and its effect on customer satisfaction in Pakistan. He used questionnaires to collect the data from a convenience sample of 500 customers of multinational and national Banks. Regression results indicated that convenience, efficient operation, security and privacy, reliability and responsiveness are significant dimensions of ATM service quality and that ATM service quality positively and significantly contributes toward customer satisfaction.

Narteh and Owusu-Frimpong (2011) conducted study in Ghana to determine the dimensions of ATM service quality and their relation with customer satisfaction. The survey employed a convenience and systematic sampling methods and a self completion questionnaire were administered to 650 ATM users of 15 banks in Ghana. The results generated by exploratory factor analysis method indicate that reliability, ease of use, accuracy, convenience and responsiveness are all significant dimensions of ATM service quality. Further analysis indicated that ATM service quality is positively related to customer service satisfaction. However, individually, only reliability, convenience and accuracy dimensions have a significant impact on customer satisfaction. The study therefore suggested that managers who intend to improve ATM service experience of customers should focus on the reliability, convenience and accuracy dimensions of the ATMs.

Kumbhar(2011) conducted empirical study to identify key factors that have influence on customers satisfaction in ATM service provided by public and private sector banks. He identified various dimensions of ATM service quality as System Availability, Fulfillment and Efficiency, Security & Responsiveness, Easiness, Convenience, Cost Effectiveness and Problem Handling and Contact. For the purpose of finding factors affecting customer satisfaction primary data was collected using schedule. Results of factor analysis, correlation and regression analysis showed that a cost effectiveness, easy to use and security and responsiveness in ATM service were most important factors affecting customer satisfaction.

Katono (2011) identified the most important e-service quality evaluation dimensions in Uganda, focusing specifically on automatic teller machines (ATMs). The study employed a triangulation approach, using both qualitative and quantitative methods based on a convenience sample composed mainly of students at Uganda Christian University. Instrument development was based on the results of a qualitative study. The psychometric properties of this instrument were assessed using exploratory factor analysis followed by cross-validation using confirmatory factor analysis. This was followed by hierarchical linear regression to identify the most important dimensions of e-service quality. The study established that tangibles, card issues, reliability and location are the most important student service quality evaluation dimensions of ATMs in Uganda.

ATM BANKING SERVICE QUALITY DIMENSIONS

ATM Dimensions	Lovelock (2000)	Joseph and Stone (2003)	Al-Hawari et al. (2005)	Dilijona s et al. (2009)	Khan (2010)	Narteh and Owusu Frimpong (2011)	Kambhar (2011)	Katono (2011)
Secure Location	✓	✓	✓	✓	✓		✓	
Convenient Location	✓	✓	✓	✓				✓
Adequate Number	✓	✓		✓				
User-Friendly System/Ease of Use	✓	✓	✓	✓		✓	✓	
Functionality	✓		✓					
Maximum speed			✓					
Minimum Errors/Accuracy			✓		✓			
High uptime			✓					
Cash Backup			✓					
Quality service at Reasonable Cost/Cost Effectiveness			✓			✓		
Maximum Offering			✓					
Convenience				✓	✓	✓		
Efficient Operation				✓	✓	✓		
Privacy				✓				
Reliability				✓	✓		✓	
Responsiveness				✓	✓	✓		
System Availability						✓		
Fulfillment						✓		

Table 1- ATM Banking Service Quality Dimensions

2.2.2. ATM Service and customer satisfaction

Choodambigai (2011) assessed the customer satisfaction on credit cards and ATM services of SBI (State Bank of India) Coimbatore based on the primary data. Random sampling technique was adopted to select 100 samples from SBI of R.S Puram Branch of Coimbatore. The study was conducted on qualitative aspect and discriminate analysis technique was used to classify the samples into one or more mutually exclusive and exhaustive groups on the basis of a set of independent variables. The study shows that it is revealed withdraw in cash through ATM was very convenient and majority of the respondents had used ATM services regularly. With regard

to purpose more weight age was given to 'withdrawal' facility of ATM. It was delightful to note that the samples had enough and adequate guidance to use ATM cards and they were satisfied with the security facility made at the ATM stations. Non-functioning or the failure of the ATM machine was the negative remark made by the ATM users. The positive association between the age of respondents and purpose of using ATM cards was well accepted by the study. From this study one can understand that convenience is one important ATM service quality dimension on the satisfaction of card users.

Samir and Pallab, (2007) examined the satisfaction level of ATM card holders of a leading bank HBSC (Hongkong and Shanghai Banking Corporation) in Bangladesh. The study adopted a descriptive statistics and it was a type of exploratory research using convenience sampling technique where samples have been selected on the basis of convenience. The study found significant relationship of ATM service quality with customers' satisfaction. The study identified that location, personnel response, quality of currency notes, promptness of card delivery and performance of ATM were positively and significantly related to customer' satisfaction. The security, frequent breakdown of machine, and insufficient number of ATM were major contributors of customers' dissatisfaction.

Kumbhar, (2011) examined an empirical investigation on the factors that affecting customers' satisfaction on ATM services. The study shows that there is a positive relationship between service quality and customer satisfaction in ATM service. That is, the perceived service quality of ATM service provided by public and private sector banks is related to the perceived satisfaction customers in the Indian banking industry. Overall results shows that cost effectiveness of ATM service were core service quality dimension and it were significantly affecting on overall customer satisfaction in ATM service provided by commercial banks. The above two studies found that customer satisfaction and ATM service quality has a positive and significant relationship.

Nana and Andrew (2012), measured Standards and Service Quality of Automated Teller Machines in the Banking Industry of Ghana. Their results show that the rapid proliferation and diffusion of ICT in the Banking Industry of Ghana provides a platform to use modern

technologies to develop operational efficiency and quality of service to attain and retain customers. They also found that, for effective customer responses, satisfaction and retention, Banks in Ghana should proactively monitor customers' preferences with regard to use of ATMs and try to implement these preferences in the features of ATMs. Banks in Ghana should focus on important aspects of user friendliness, ATM functionality, and availability of transaction receipts, security and privacy as well as frequent monitoring and maintenance of ATMs.

It has been proven from the above researches on ATM service quality and customer satisfaction that they are related from their relationships with other aspects in business. To crown the fact that customer satisfaction and ATM service quality are important variables in business research on customers.

In general, the literature review in this area has been covered so far as below;

- It has been reviewed that there is a relationship between customer satisfaction and ATM service quality (Khan, 2010), (Islam, Samir and Pallab, 2007), (Narteh and Owusu-Frimpong, 2011) and (Kumbhar, Vijay 2011).
- It has been reviewed that service quality could be evaluated with the use of modified SERVQUAL and E-S-QUAL model (Parasuraman 1985), (Parasuraman, Zeithaml, & Malhotra, 2005), (Dilijonas et al., 2009) and (Mobarek 2007).
- It has been reviewed that there are no generally accepted ATM service quality dimensions and no such standard scale for measuring service quality in case of ATM banking (Rajiv & Manisha, 2012).

Different studies have considered different service quality dimensions of ATM banking. Out of these different variables of ATM service quality, only Secure Location, Convenient Location and User-Friendly System have been included in majority of the studies. All have been used customer satisfaction as a dependent variable and various ATM service quality dimensions as independent variables as follow.

- Lovelock (2000) has been used secure and convenient location, adequate number of ATMs, user-friendly system, and functionality of ATM as independent variables.

- Joseph and Stone (2003) have been used user-friendly, convenient locations, secure positions, and the numbers of ATM provided by the banks as independent variables.
- Al-Hawari et al. (2005) developed a model by using secure locations, user-friendliness of the ATM system, convenient location and functions of ATM.
- Khan (2010) has been used convenience, efficient operation, security and privacy, reliability and responsiveness as the dimensions of ATM service quality.
- Narteh and Owusu-Frimpong (2011) conducted study by using reliability, ease of use, accuracy, convenience and responsiveness as the dimensions of ATM service quality.
- Kumbhar (2011) conducted an empirical study on various dimensions of ATM service quality as System Availability, Fulfillment and Efficiency, Security & Responsiveness, Easiness, Convenience, Cost Effectiveness and Problem Handling and Contact.

Regarding the present study, the researcher adopted Khan's ATM service quality variables i.e. customer satisfaction as a dependent variable and convenience, efficient operation, security and privacy, reliability and responsiveness as independent variables. It is selected as it is good for our country context and by its inclusive nature of ATM service quality concept which is resultant from the fact that services are intangible it is the key dimension of ATM service quality and customer satisfaction. Because of the Khan model used to investigate the significant dimensions on ATM service quality and customer satisfaction.

2.3 RESEARCH GAP

After observing such relevant studies, it can be concluded that many researchers examined and studied different aspects of ATM service quality on customer satisfaction. However, there are some considerable contradiction among the previous work and theories of science. Many researchers have studied their work in their own contextual scenarios. This study emphasizes on the customer satisfaction of ATM service quality. Most of the previous works agree it has been proven from the above researches on ATM service quality and customer satisfaction that they are related from their relationships with other aspects in business. To crown the fact that customer satisfaction and ATM service quality are important variables in business research on customers.

Now based on the above literature review there was observed the research gap. Different variables of ATM service quality, only Secure Location, Convenient Location and User-Friendly

System have been included in majority of the studies. All have been used customer satisfaction as a dependent variable and various ATM service quality dimensions as independent variables. Unlike these studies, the current study used the previous studies as a bench mark. Since the studies were not free of flaws, the researcher of this study attempted to include facts and theories which eliminate the above mentioned flaws.

2.4 HYPOTHESIS

In order to achieve the objective of the study, the following hypotheses is formulated and tested regarding the effect of ATM service quality on customer satisfaction in Commercial bank of Ethiopia south Addis Ababa district.

These hypotheses can be formulated as follows:

H1o: The level of ATM service quality delivered by the bank is low.

H1a: The level of ATM service quality delivered by the bank is high.

H2o: The level of the satisfaction of ATM card users is low.

H2a: The level of the satisfaction of ATM card users is high.

H3o: Service quality dimensions have no relationship with customer satisfaction.

H3a: Service quality dimensions have relationship with customer satisfaction.

CHAPTER THREE

RESEARCH METHODOLOGY

The literature related to ATM service quality on customer satisfaction has been reviewed in the previous chapter. This chapter addresses the research methodology used in this study to test hypotheses and the rationale behind it. The population, samples and sampling approaches is described. Furthermore, the instrument that was used in the research is described. Finally, a brief description of the relevant statistical techniques used in the study is also provided.

3.1 RESEARCH DESIGN

According to John W.crewell(2009) research design are plans and the procedure for research that san from broad assumptions to detailed methods of data collection and analysis. Research design usually refers to the blue print of the research. The study is based on quantitative research approach using explanatory research design with a primary purpose of examining the impact of ATM service quality delivered by the bank on customer's satisfaction by using the modified SERVQUAL and E-S-QUAL model of Parasuraman (1985) and Parasuraman, Zeithaml, & Malhotra, (2005) respectively.

For the purpose of measurement of service quality of services involving face-to-face interactions between the service provider and the customer, SERVQUAL and SERVPERF scales are most commonly used. But there are no generally accepted dimensions and no such standard scale for measuring service quality in case of ATM banking (Rajiv & Manisha 2012). They also concluded that there is no consensus among researchers with regard to dimensions of ATM banking service quality. After reviewing the literature intensively, the study adopted Khan's ATM service quality dimensions among various literatures which are shown in Table 1.

The main reasons for selecting the above dimensions are it is a comprehensive type that includes all other dimensions and it is also relatively the recent dimensions. In addition, these dimensions seem to be the most appropriate fit for the current scenario. The nature of the study adapts quantitative approach which is conducted by collecting and analyzing data from primary sources.

3.2 RESEARCH VARIABLES

As the research was an explanatory research, there were two variables dependent and independent variables. Customer satisfaction was considered as dependent variables. The independent variables had five sub variables namely, convenience, efficient operation, security and privacy, Reliability and Responsiveness.

3.3 POPULATION AND SAMPLING DESIGN

John W. Creswell (2009) point out that, "population is the group of interest to the researcher the group to whom the researcher would like to generalize the results of the study". The population of this research is commercial bank of Ethiopia south Addis Ababa district 67 branches. Out of this population 15 branches were selected that have high number of card users. On the basis of convenience sampling 250 Commercial bank of Ethiopia Visa card holders were selected. Questionnaires were distributed to the respondent while they are using the fifteen (15) branches and ATM machines in Addis Ababa town. Equal numbers of customers were asked to fill the questionnaire for each chosen branch. Subjects were asked to assess their perceptions of various items representing service quality and customer satisfaction.

The target samples for the study is Commercial bank of Ethiopia Visa card holders of south Addis district. The study included a non probability, convenience-sampling technique. Because of the inability to access current users of Visa card databases to perform a probability sampling, a convenience sampling technique were used.

Regarding the sample size (Hair, 2010), the researcher generally would not factor analyze a sample of fewer than 50 observations and preferably the sample size should be 100 or larger. As a general rule, the minimum is to have at least five times as many observations as the number of variables to be analyzed. In other words, the ratio should never fall below 5:1, meaning that five observations are made for each independent variable in the variant. In addition to its role in determining statistical power, sample size also affect the generalizability of the results by the ratio of observations to independent variables.

3.4 PROCEDURE OF DATA COLLECTION

First the researcher was collected an introductory letter from SMU, school of Graduate to the examined organization. This assisted to increase the willingness and participation of the staffs for data collection. The researcher hired and oriented part time field workers to deliver and collect the questionnaires. The orientation was carried out in two sessions; first the researcher tested the questionnaires with a small sample of 30 respondents as a pilot test. Secondly after the pilot test the questionnaires were corrected and refined for the final data collection stage.

To accomplish this effectively the researcher was critically supervised the pilot testing, delivery and collection process, this ensured the quality of data obtained. Being a cross sectional survey, the data were collected as just a point in time.

3.5. DATA SOURCES, COLLECTION METHODS & INSTUMENTS

The data utilized in the study were gathered from primary data sources by using ATM service quality instruments which was distributed to customers who hold Debit cards from Commercial bank of Ethiopia Visa card holders of south Addis Ababa district with respect to the research objective. This study offers modified scale for assessment of service quality and customer satisfaction in e-banking. It is modified version of E-S-Qual offered by Parasuraman et al (2005) to assess e-service quality in general. To determine the impact of ATM Service Quality on Customer Satisfaction, the instruments of ATM Service Quality and customer satisfaction dimensions have been adopted from (Khan, 2010).

The questionnaires measure five dimensions of ATM service quality and its effect on customer satisfaction. The convenience dimension have contained (11 items); efficient operation (14 items); security and privacy (5 items); reliability (6 items); responsiveness (4 items); and customer satisfaction (6 items). All instruments have 46 items which was constructed by using a Five-point Likert scale (1= Strongly Disagree, 2=disagree, 3=Neutral, 4=Agree and 5=strongly Agree which is identify through a comprehensive review of the e-service quality literature. The first part of the questionnaire contains the demographic characteristics of respondents. The second section designed to measure the customers' perception of ATM service quality about the bank service delivery system. Statements in this section represented each groups of items measuring a particular dimension, and the third part of the questionnaires are concerned on the overall satisfaction.

3.6 DATA ANALYSIS

The analysis was carried out after collecting the necessary data from the primary sources. The researcher use quantitative data analysis method. Accordingly, the study identified a total of six (6) variables including one dependent, five independent variables based on the previous study on similar topic in Pakistan. The dependent variable is Customer Satisfaction (CS) and the independent variables are Convenience (CO), Efficient Operation (EO), Security and Privacy (SP), Reliability (RE) and Responsiveness (RS). After clearly identifying the dependent and the independent variables, the researcher use correlation analysis to show the relationship between the dependent and independent variables. Then the output of the Statistical Package for Social Science (SPSS) is interpreted through tabular and graphics. As per the requirements of the study reliability test is to conduct and only those dimensions are used for further analysis which having Cronbach's alpha above .700. Multiple regression and correlation analysis is performed to identify predictors of customer satisfaction. A descriptive method is to do present and interpret the data collected on various dimensions of the appraisal system.

3.7 MODEL SPECIFICATION

As stated earlier, it has been find that different studies have considered different service quality dimensions of ATM banking. Rajiv & Manisha, 2012 concluded that there is no consensus among researchers with regard to dimensions of ATM banking service quality. For the purpose of measurement of service quality of services involving face-to-face interactions between the service provider and the customer, SERVQUAL and SERVPERF scales are most commonly used. But there are no generally accepted dimensions and no such standard scale for measuring service quality in case of ATM banking.

Among these studies, Al-Hawari (2005) developed a comprehensive model of banking automated service quality. The dimensions include secure locations, user-friendliness of the ATM system, convenient location and functions of ATM. Similarly Kumbhar (2011) conducted empirical study to identify key factors that have influence on customer's satisfaction in ATM service provided. He identified various dimensions of ATM service quality as System Availability, Fulfillment and Efficiency, Security & Responsiveness, Easiness, Convenience, Cost Effectiveness and Problem Handling and Contact. Khan (2010) also conducted an empirical

study on the significant dimensions of ATM service quality and its effect on customer satisfaction in Pakistan. He investigated that convenience, efficient operation, security and privacy, reliability and responsiveness are significant dimensions of ATM service quality and that ATM service quality positively and significantly contributes toward customer satisfaction. The researcher adopted Khan's ATM service quality dimensions; it is selected as it is good for our country ATM service quality context and by its inclusive nature of ATM service quality concept which is resultant from the fact that services are intangible.

Therefore the Model used in the presented study is the following:

$$CS(Y) = \beta_0 + \beta_1 (CO) + \beta_2 (EO) + \beta_3 (SP) + \beta_4 (RE) + \beta_5 (RS) + + \acute{\epsilon}$$

Where: CS- Customer Satisfaction

CO-Convenience

EO-Efficient Operation

SP-Security and Privacy

RE-Reliability

RS-Responsiveness

$\acute{\epsilon}$ - Error Term

Source: Khan (2010)

CHAPTER FOUR

RESULTS AND DISCUSSION

In order to address the research objective and hypotheses, it is crucial to examine the results of the different methods concurrently. This chapter presented the statistical and regression results which are computed using different methods adopted to investigate the impacts ATM service quality on customer satisfaction. Accordingly, the chapter started by presenting the results of demographic and descriptive statistics followed by test result for the hypothesis. Lastly the chapter presented the result of Pearson's correlation coefficient and multiple regressions.

4.1. DEMOGRAPHIC & DESCRIPTIVE STATISTICS

The target population for this study is the ATM card holders of the bank and a sample size of 250 ATM card users were conveniently selected. All 250 questionnaires were distributed to the customers of the bank. The data collection resulted in 250 answers from customers. A total of 250 of these questionnaires were completed and used in the data analysis representing a response rate of 100 percent. This relatively high response rate was attributed to the self-administered approach undertaken in distributing questionnaires.

Variables	N	Measurements	Frequency	Percentage (%)
GENDER	250	MALE	144	57.6
		FEMALE	106	42.4
AGE OF RESPONDENT	250	18-25	78	31.2
		26-35	92	36.8
		36-45	56	22.4
		ABOVE 45	24	9.6
EDUCATIONAL LEVEL	250	12 COMPLETE	49	19.6
		DIPLOMA	64	25.6
		BACHLOR DEGREE	98	39.2
		MASTOR & ABOVE	39	15.6
OCCUPATION OF RESPONDENT	250	STUDENT	63	25.2
		EMPLOYED	133	53.2
		SELF EMPLOYED	42	16.8
		UNEMPLOYED	12	4.8
ATM CARD USAGE (Years)	250	LESS THAN ONE YEAR	27	10.8
		ONE UP TO THREE YEARS	149	59.6
		MORE THAN THREE YEARS	74	29.6

Table 2- Demographic profile of Respondents

One of the sections of the questionnaire was related to the demographic information of the respondents. It includes age, gender, educational level, Occupation and Period of ATM service usage. The general demographics of the respondents illustrated in the following table shows that out of the 250 complete responses received, 144 or 57.6% were male and 106 or 42.4% were female.

From table 2 below, 78 or 31.2% of the respondents falls within the age group of 18- 25, followed by the age group of 26-35, which represents 92 people or 36.8% of the total

respondents. 56 or 22.4% of the respondents are among the age group of 36-45 and the remaining 24 or 9.6% were above 45 years.

Education level was another section of the questionnaires. 49 or 19.6% of the respondents are 12 complete whereas 64 or 25.6% of them are diploma holders followed by 98 or 39.2% and 39 or 15.6% of the respondents are Bachelor Degree and Master & above respectively.

Occupational background of the respondents is another sections of demographic part and 63 or 25.2% of the respondents are employed whereas 133 or 53.2% of respondents are students. 42 or 16.8% of respondents are self employed followed by 12 or 4.8% of the respondents are unemployed.

Period of ATM services usage was the last section of demographic part. 27 or 10.8% of the respondents use ATM service facilities less than a year whereas 149 or 59.6% of them use the services between 1 to 3 years followed by 74 or 29.6% of the respondents who use services more than three years.

To summarize the implication of demographic variables, the highest percentage of participants in this study was males who form 57.6% of respondents. In the case of classification of respondents by age the highest percentage of participants are young (18-25 years old) who form 36.8% of total respondents followed by the age group of 26-35 which is 39.2%. Regarding the educational level of the study participants, the highest percentage of them has bachelor degree that form 53.2% of total participants followed by master & above which is 20.2%. This implies that most of ATM card users are highly qualified to perceive all the questionnaires. The largest percentage of participants was employed by governmental or non-governmental organizations that form 53.2% of the total respondents. On the other hand, the highest percentage of participants has used the ATM card one up to three years and more than three years and their percentage is 59.6 & 29.6 respectively. This also indicates that most respondents have an experience to perceive the ATM service quality delivered by the bank.

Thus, the ATM users of Commercial Bank of Ethiopia in South Addis Ababa district are mainly male, young, employed and have been using for one up to three years.

4.2. RESULTS OF RELIABILITY & VALIDITY OF DATA

Data on the various multi-item constructs representing the different components of Service Quality and customer satisfaction were first tested for reliability and validity by computing Cronbach's α values. Reliability and validity tests are important to standardize the measurement scales, and to demonstrate whether they truly measure what they are supposed to measure. There are different methods of reliability test, for this study Cronbach's α is considered to be suitable. Cronbach's α is the most common measure of reliability. As stated by Hair et al., (2007) reliability indicates the extents to which a variables or set of variables is consistent in what it is intended to measure. Reliability analysis used to measure the consistency of a questionnaire. According to Hendrickson et al (1993) and McGraw and Wong (1996) the α of a scale should be greater than .700 for items to be used together as a scale. Variables which have item-total correlation less than 0.3 will be removed. Measurements are with Cronbach Alpha being greater than or equal to 0.6 can be deployed (Nunnally 1978; Peterson 1994; Slater 1995). Normally, measurements with Cronbach α from 0.7 to 0.8 will be used. Many researchers assume that those which have the reliability from 0.8 to nearly 1.0 are acceptable measurements. Therefore minimum 0.700 coefficient α values accepted to finalize the item reliability. The results found from pilot test have assured the content validity of the measurement instrument. In order to check the reliability of the scale, Cronbach's α measure technique has been used. Cronbach's α analysis was performed on all the accepted variables to ensure the reliability of the questionnaire and to test for substantial flaws. The result shows a satisfactory loading for all the six variables analyzed. The reliability values were all above 0.7. Thus it can be concluded that the measures used in this study are valid and reliable. A multiple regression analysis was used to determine the relative importance of service quality characteristics in predicting the customer satisfaction. See table 3 below:

Variables	Factor Loading
Convenience	.790
Efficient Operation	.802
Security and Privacy	.782
Reliability	.806
Responsiveness	.793
Customer Satisfaction	.892

Table: 3 Cronbach's Analysis for Reliability

4.3. DESCRIPTIVE STATISTICS

4.3.1. Descriptive analysis of variables

A descriptive statistics has conducted for the dependent variable (Customer satisfaction) and independent variables (Convenience, Efficient Operation, Security and Privacy, Reliability and Responsiveness). Table 4 shows the mean, standard deviation and the number of observations for each variable. The table presents the descriptive statistics for the variables, related to ATM service quality included in the models to measure the satisfaction of ATM card users. According to Best, (1977)¹, the score from 1-1.80 is lowest, from 1.81-2.61 is lower, from 2.62-3.41 is average/moderate, from 3.42-4.21 is good/high, and 4.22-5 is considered very good. A standard deviation of more than 1 could be considered as high. Since all these were above average, it indicates that the variable items were good enough (Best, 1977).

Descriptive Statistics

	Mean	Std. Deviation	N
CONVENIENCE	3.8742	.61394	250
EFFICIENT OPERATION	3.6952	.62761	250
SECURITY & PRIVACY	3.9473	.58264	250
RELIABILITY	3.9037	.54751	250
RESPONSIVNESS	3.9147	.60548	250
CUSTOMER SATISFACTION	4.1428	1.0124	250
SERVQUAL DIMENSIONS	3.9489	.55126	250

Table 4 Descriptive statistics of study variables

On the basis of weighted average sum, ranking is done against various aspects of instruments of ATM service quality dimensions in order to know which instrument contributes the highest

average mean of ATM service quality and which one gives the least. On table 4, the least average mean of ATM service quality is 2.13 which resulted from the bank ATM has disconnected the power availability of power backup like /generator/inverter under efficient operation dimension. On the other hand, the highest average mean score of ATM service quality is 4.57 that came from the ATM card has good appearance & suitable size under convenience ATM service quality dimension.

Instruments	Average Mean	No. of Respondents
ATM card has good appearance & suitable size.	4.57	250
The bank ATM has disconnected the power availability of power backup like /generator/inverter.	2.13	250

Table: 5 Descriptive statistics of Instruments

4.3.2. Results of Correlation Analysis

A correlation matrix was constructed using the variables in the questionnaire to show the strength of relationship among the variables considered in the questionnaire. According to Kline (1998), correlation matrix is defined as "a set of correlation coefficients between a number of variables". A Pearson correlation analysis was done in SPSS to determine the relationship between dependent and independent variables. Correlations are the measure of the linear relationship between two variables. A correlation coefficient has a value ranging from -1 to 1. Values that are closer to the absolute value of 1 indicate that there is a strong relationship between the variables being correlated whereas values closer to 0 indicates that there is little or no linear relationship (Fikre et al, 2009). As described by Andy (2006) the correlation coefficient is a commonly used measure of the size of an effect: Values of ± 0.1 represent a small effect, ± 0.3 is a medium effect and ± 0.5 is a large effect. As explained on that (Fikre et al, 2009) "the sign of a correlation describes the type of relationship between the variables being correlated. A positive correlation coefficient indicates that there is a positive linear relationship between the variables. A negative value indicates a negative linear relationship between variables. As shown in table 5 among those correlations between explanatory variables, the correlation between Reliability and Customer Satisfaction shows 0.669. This is due to the fact that the reliable ATM service qualities highly affect the satisfaction of ATM card users.

The correlation matrix indicates that service quality was positively and moderately correlated with customer satisfaction. The positive correlation coefficient between Reliability and Customer Satisfaction reveals that as the reliability of ATM service quality of the Bank increase the level of Customer Satisfaction also increased. The other high correlation exists between Efficient Operation and Customer Satisfaction with a correlation coefficient of 0.613. The correlation coefficient between Security & Privacy and Customer Satisfaction is 0.288 which is the smallest positive coefficient as compared to other variables, this mean that Security & Privacy of ATM service quality has small association with Customer Satisfaction.

Generally, all ATM service quality dimensions provided by the south Addis Ababa district have significant and positive relationship with overall customer’s satisfaction. This study is supported by the previous studies. (Khan, 2010) indicates that convenience, efficient operation, security and privacy, reliability and responsiveness have positive relationship with ATM service quality and also the results are also show that ATM service quality has positive relationship with customer satisfaction. Mcandrews, (2003); Komal & Singh, (2009); Mobarek (2007) and Dilijonas et al., (2009) mentioned that service quality have significant relationship with overall customers satisfaction in ATM service Sited by Kumbhar 2011). The findings displayed that the respondents who perceived a greater awareness of service quality exhibiting the more positive reactions in favor of customer satisfaction.

	CONVENIENCE	EFFICIENT OPERATION	SECURITY & PRIVACY	RELIABILITY	RESPONSIVENESS	CUSTOMER SATISFACTION
CONVENIENCE	1					
EFFICIENT OPERATION	.498**	1				
SECURITY & PRIVACY	.346**	.286*	1			
RELIABILITY	.431**	.623**	.298**	1		
RESPONSIVENESS	.345**	.685**	0.178*	.618**	1	
CUSTOMER SATISFACTION	.681**	.613**	.288**	.669**	.614**	1

** . Correlation is significant at the 0.01 level (2- tailed)

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

Table 6 Correlation analysis between study variables

4.4. TEST OF MULTICOLLENIARITY

Variables	Collinearity Statistics	
	Tolerance	VIF
CO	.888	1.419
EO	.705	1.846
SP	.772	1.296
RL	.633	1.579
RS	.853	1.173

Table 7 Collinearity Statistics

Multicollinearity refers to the situation in which the independent variables are highly correlated. When independent variables are multicollinear, there is overlap or sharing of predictive power. This may lead to the paradoxical effect, whereby the regression model fits the data well, but none of the explanatory variables (individually) has a significant impact in predicting the dependent variable Gujarati (2004). Among several ways of multicollinearity tests Pearson correlation and Variance Inflation Factor (VIF) are used for this purpose. The Pearson product-moment correlation matrix is another important technique of testing multicollinearity of explanatory variables. The pair wise correlations between variables are lays between ± 1 . Therefore, in terms of partial pair wise correlation between variables majority of correlation are on between 0.178 and 0.681 as presented on table 5. To have a strong assurance the following more efficient technique, VIF technique is run on table 7. Therefore, the VIF verify the absence of multicollinearity since there are no exaggerated pair wise correlation values more than 10 score. In general, all tests illustrated above are testimonials as to the employed model are not sensitive to the problems of violation of the CLRM (Classical Linear Regression Model) assumption of autocorrelation among the independent variables and it would be stated that the data has multicollinearity problem.

4.5. REGRESSION ANALYSIS RESULTS & DISCUSSIONS

Multiple regression analysis was employed to test the impact of service quality on customer satisfaction. It is a useful technique that can be used to analyze the relationship between a single dependent and several independent variables (Hair et al., 1998). The Regression Analysis presented in table 7, indicate a significant relationship between the dimensions of ATM service quality and customer satisfaction ($F=41.721$, $p<0.001$). This means convenience, efficient operation, security and privacy, reliability, and responsiveness jointly determine customer satisfaction. An adjusted R-Square of 0.545 shows that the above ATM service quality dimensions jointly determines 54.5% of the variation in customer satisfaction in other words the dependent variable customer satisfaction adjusted R^2 is 54.5 percent explained by its independent variables, which is very large. The result of linear regression indicated that the regression model predicts the outcome variable significant and its shows the overall model applied was significantly good enough in predicting the outcome variable. The proposed model was adequate as the F-statistics (p -value = 0.000) was significant at the 1 percent level ($p \leq 0.01$). This indicated that overall model was statistically significant relationship between service quality and customer satisfaction. From Table (7), it can be observed that the coefficient of determination (R^2) was 0.545, representing that 54.5 percent of customer satisfaction can be explained by the five independent variables of service quality. Thus, there is effect of the service quality on customer satisfaction.

To conclude, the regression model used for the study is highly explained the overall model signifying the study was note lost very important variables that affect the study output.

As per the regression result regression equation can be write as:

$$CS(Y) = 0.634 + 0.484*CO + 0.322*EO + 0.045* SP + 0.396*RE + 0.217 *RS + + \hat{\epsilon}$$

Where: CS- Customer Satisfaction

CO-Convenience

EO-Efficient Operation

SP-Security and Privacy

RE-Reliability

RS-Responsiveness

$\hat{\epsilon}$ - Error Term

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.789 ^a	.563	.545	.46883

Table: 8 Model Summary of Multiple Regressions Analysis

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations			Collinearity Statistics	
	B	Std. Error	Beta			Zero-order	Partial	Part	Tolerance	VIF
1 (Constant)	.634	.316		2.428	.089					
CO	.484	.096	.296	3.896	.000	.528	.322	.231	.888	1.419
EO	.322	.102	.427	2.152	.000	.554	.047	.032	.705	1.846
SP	.045	.094	.002	.225	.000	.217	.050	.034	.772	1.296
RL	.396	.089	.307	4.728	.000	.656	.412	.307	.633	1.579
RS	.217	.085	.180	2.299	.000	.516	.157	.108	.853	1.173

a. Dependent Variable: CS

Table: 9 Multiple Regressions Coefficient

4.6. HYPOTHESIS TESTING & INTERPRETATION OF THE RESULTS

In order to test the research hypotheses Regression analysis was used because it is appropriate method to measure the significances of independent variables on the dependent. “Regression has become one of the most widely used techniques in the analysis of data in the social sciences. It should become apparent that regression is a powerful tool for summarizing the nature of the

relationship between variables and for making predictions of likely values of the dependent variable” (Bryman and Cramer, 2001). Regression analysis is also used to predict the value of a dependent variable from one or more independent variables (Saunders et al., 2009).

Hypotheses # 1

H1o: The level of ATM service quality delivered by the bank is low.

H1a: The level of ATM service quality delivered by the bank is high.

On the basis of weighted average sum, ranking is done against various aspects of instruments of ATM service quality dimensions in order to know which instrument contributes the highest average mean of ATM service quality and which one gives the least. On table 4, the least average mean of ATM service quality is 2.13 which resulted from the bank ATM has disconnected the power availability of power backup like /generator/inverter under efficient operation dimension. On the other hand, the highest average mean score of ATM service quality is 4.57 that came from the ATM card has good appearance & suitable size under convenience ATM service quality dimension.

The descriptive statistics on table 4 shows that the overall mean of ATM service quality is 4.14 which means the respondents agreed that the ATM service quality delivered by the bank is high. Based on this the null hypothesis is rejected and the alternative hypothesis is accepted.

Hypotheses # 2

H2o: The level of the satisfaction of ATM card users is low.

H2a: The level of the satisfaction of ATM card users is high.

The correlation matrix indicates that service quality was positively and moderately correlated with customer satisfaction. The positive correlation coefficient between Reliability and Customer Satisfaction reveals that as the reliability of ATM service quality of the Bank increase the level of Customer Satisfaction also increased. The other high correlation exists between convenience and Customer Satisfaction with a correlation coefficient of 0.681. The correlation coefficient between Security & Privacy and Customer Satisfaction is 0.288 which is the smallest positive coefficient as compared to other variables, this mean that Security & Privacy of ATM service quality has small association with Customer Satisfaction The respondents are agreed in high

perceived satisfaction related to ATM service quality provided by the south Addis Ababa district. Therefore, H0a is rejected and H1a is accepted.

Hypotheses # 3

H3o: Service quality dimensions have no relationship with customer satisfaction.

H3a: Service quality dimensions have relationship with customer satisfaction.

1- Convenience -the convenience dimension refers to ease of use and accessibility of the service to meet the users financial needs at all times. As the ATM offers an alternative way of conducting banking transaction outside the banking halls, location convenience of the ATM site is also an important quality determinant. Most ATMs are located in bank branches, or off sites such as in hospitals, shopping malls and college campuses. If the ATMs are conveniently located, the inconvenience in moving long distances in order to carry out transactions will be minimized. Convenience also involves “an all-day all-night” availability of the service to the customers. Banking services for 24 hours a day is of great benefit to customers making them able to their banking at their own convenience and pace. It has enabled them to have access to products. ATMs enable a customer to perform a full range of banking transactions at ATM point 24 hours a day, 7 days a week. The regression results have indicated that convenience dimension has positively and significantly influence customer satisfaction. Convenience ($\beta = .484$, $p < .001$) has been found to be significant at 1 percent level of significance. From the customers’ point of view, convenience is the most important dimensions in the context of using ATM service facilities. Furthermore, as shown in table 5, based on the standardized Beta estimates, convenience has emerged as the most important dimension which has highest impact on the customer satisfaction. This suggested that the convenience of ATM usage to the lifestyle of the respondents was important. Numerous studies indicated that the location of service of delivery mode is a strong driver of customers’ perception of ATM service quality (Aldlaigan & Buttle, 2002; Almossawi, 2001; Levesque & McDougall, 1996) cited by (Khan 2010). The result indicated that the p-value is .000, which is less than the significant level. This indicted that there is large positive relationship between convenience and customer satisfaction in the Commercial bank of Ethiopia south Addis Ababa district. As a result the null hypothesis is rejected.

2-Efficient operation The second dimension of ATM service quality, efficient operation, relates to efficient and speedy operation of ATM. Efficiency in operations optimizes the resources for the customers. Customer accord priority to user-friendliness of ATM. Dilijonas et al., (2009) argued that minimum breakdown of machines constitutes essential aspect of ATM service quality. Al-Hawari (2006) argued that efficient ATM functions positively affect customers' perception of service quality. Efficient operation ($\beta = 0.322$, $p > 0.01$) was found to have significant positive relationship on the customer satisfaction. Therefore, it may be interpreted from the above analysis that bank provide the facilities to its customers more comfort through efficient operation services delivery via ATM service usage. As a result, null hypothesis is rejected and the conclusion would be that, there is a positive significant relationship between efficient operation and customer satisfaction on the bank's ATM service.

3- Security and privacy refers to perceived low-risk with use of ATM. The security environment and the frequent vulnerabilities of ATM users have enhanced the risk associated with the use of this delivery channel. Results of regression analysis indicates that security and privacy ($\beta = 0.045$, $p > 0.05$) dimension has a positively insignificant impact on customer satisfaction. It is inconsistent with other studies like Yoo and Donthu (2001), and Szymanski and Hise (2000) which was empirically found that customers' perception of security and privacy played an essential role in their satisfaction. Lio and Cheung (2002) also argued that expectation of security is essential in shaping customers' perception of service quality. The concern of customers about security and privacy, while using this service, is a major cause of their dissatisfaction (Madu & Madu, 2002, Khan, 2010).

From this one can understand that there is lowest insignificant relationship between security and privacy and customer satisfaction. Therefore, the null hypostasis is not rejected.

4- Reliability involves the ability of the organization to perform the promised service dependably and accurately. The consistency and dependability of the ATM service quality performance. In this research reliability attributes refers the ability of banks to promise to do something in a certain time and performing as promised, the banks capacity of showing sincere interest in solving their customers' problems related to ATM service, the banks' ability to perform the service right the first time. It also refers the banks capacity to carry out their services

at the time they promised to do so and their ability of insist on error-free records. In the present study, it has been observed that reliability dimension has a positive significant influence on customer satisfaction at 1 percent level of significance. Reliability ($\beta = .396$, $p = .000$) has emerged as the most important ATM service quality dimension which has highest impact on the customer satisfaction, The literature (Khan, 2010) provides strong support that reliability is an essential determinant of customers' perceived service quality and positively relates to customers' use of ATM services. Wan et al., (2005) also discovered that the accuracy of transactions' information was a major predictor shaping customers' perception of ATM service quality. From this we conclude that when there is an increase in the reliability of ATM service quality there is an increment in customers' satisfaction. Therefore, the null hypothesis is rejected and the alternative hypothesis is accepted.

5- Responsiveness refers the willingness or readiness of employee or professionals to provide ATM service. The responsiveness aspect of ATM service quality relates to the ability of the bank staff to provide the agreed services timely, accurately, dependably, and promptly. Responsiveness measures the extent to which the banks put in place measures to recover services when ATM services are negatively confirmed, and to response quickly to issues and suggestions clients provide prompt solutions to customers. In general in this research responsiveness includes the willingness and ability of employees of the Area Bank in informing the exact time when the service will be delivered to the customers, to give prompt service, to help customers and to answer customers' questions related to ATM service quality. As stated on Table 9 responsiveness ($\beta = 0.217$, $p < 0.05$) was positively significant to customer satisfaction and hence supported in this study. Prior studies indicate that responsiveness is crucial to sustain service quality and facilitates building long term relationship between service provider and the customers (Bauer et al., 2006; Khan, 2010). This implies that there is a positive relationship between responsiveness and customer satisfaction in the Bank's ATM service. This means if the bank increase the responsiveness dimension of the service quality it can also increases their customers' satisfaction. Thus the null hypothesis is rejected.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, RECOMMENDATIONS & IMPLICATIONS FOR FUTURE RESEARCH

The present paper entitled “Impact of ATM service quality on customer satisfaction” focus that the relationship between dimensions of ATM service quality (i.e. Convenience, Efficient Operation, Security & Privacy, Reliability and Responsiveness) with customer satisfaction. The paper also examines the level of ATM service quality delivered by the commercial bank of Ethiopia south Addis Ababa district and customer satisfaction.

5.1 SUMMARY OF THE FINDINGS

From the analysis and discussion, the researcher presented the following major findings.

- ✓ The implication of demographic variables are ATM users of Commercial Bank of Ethiopia in South Addis Ababa district are mainly male, young, employed and have been using for one up to three years.
- ✓ Cronbach’s alpha analysis was performed on all the accepted variables to ensure the reliability of the questionnaire and to test for substantial flaws. The result shows a satisfactory loading for all the six variables analyzed. The reliability values were all above 0.7. Thus it can be concluded that the measures used in this study are valid and reliable.
- ✓ A descriptive statistics has conducted for the dependent variable (Customer satisfaction) and independent variables (Convenience, Efficient Operation, Security and Privacy, Reliability and Responsiveness). Table 4 shows the mean, standard deviation and the number of observations for each variable. The table presents the descriptive statistics for the variables, related to ATM service quality included in the models to measure the satisfaction of ATM card users.
- ✓ On the basis of weighted average sum, ranking is done against various aspects of instruments of ATM service quality dimensions in order to know which instrument

contributes the highest average mean of ATM service quality and which one gives the least. On table 4, the least average mean of ATM service quality is 2.13 which resulted from the bank ATM has disconnected the power availability of power backup like /generator/inverter under efficient operation dimension. On the other hand, the highest average mean score of ATM service quality is 4.57 that came from the ATM card has good appearance & suitable size under convenience ATM service quality dimension.

- ✓ The correlation matrix indicates that service quality was positively and moderately correlated with customer satisfaction. The positive correlation coefficient between Reliability and Customer Satisfaction reveals that as the reliability of ATM service quality of the Bank increase the level of Customer Satisfaction also increased. The other high correlation exists between Efficient Operation and Customer Satisfaction with a correlation coefficient of 0.613. The correlation coefficient between Security & Privacy and Customer Satisfaction is 0.288 which is the smallest positive coefficient as compared to other variables, this mean that Security & Privacy of ATM service quality has small association with Customer Satisfaction.
- ✓ The regression model used for the study is highly explained the overall model signifying the study was note lost very important variables that affect the study output.
- ✓ In order to test the research hypotheses Regression analysis was used because it is appropriate method to measure the significances of independent variables on the dependent.

5.2 CONCLUSIONS

A result of data analysis and hypothesis tests indicates that the ATM card users of the commercial bank of Ethiopia south Addis Ababa district are agreed to the quality of ATM service and consequently they are satisfied with ATM service provided by the Bank.

The results of the study shows that the ATM service Convenience is core service quality dimension and it was significantly affecting the overall customer satisfaction in ATM service delivered by the bank followed by Reliability, Efficient operation and Responsiveness. It has been further found that Security and Privacy are which have insignificant impact on the customer satisfaction.

The study also indicates that the bank's ATM service quality level is high. As a result, the satisfaction level of ATM card users of the bank is also high. Similarly the study also shows that among various instruments of variables used, ATM has disconnected the availability of power backup like /generator/inverter has the least average mean score and the ATM card has good appearance & suitable size under the dimensions of convenience has the highest average mean score.

A positive relationship between responsiveness and customer satisfaction in the Bank's ATM service can indicate if the bank increase the responsiveness dimension of the service quality it can also increases their customers' satisfaction.

The results of this study indicated that service quality is an important antecedent of customer satisfaction this result consistent with results drawn (Andaleeb and Conway, 2006; Gotlieb et al., 1994; Buttle, 1996; Zeithaml and Bitner, 1996; Lee et al., 2000; Zeithaml and Bitner, 2003). Five dimensions of service quality have significant influence on customer satisfaction. These dimensions include convenience, reliability, responsiveness, efficient operation, and Security and Privacy. Moreover, our findings show that service quality is an important antecedent of customer satisfaction. This finding reinforces the need for banks managers to place an emphasis on the five dimensions of service quality.

Today, more and more services are being delivered through technology, particularly with the advent of internet applications. As far as ATM service concerned, customers always seek about error free transactions, easy access, and responsiveness of facilities, the security/privacy in transactions and efficiency of the service providers in providing them.

5.3 RECOMMENDATIONS

- The Bank being the pioneer to introduce automated Banking service in Ethiopia, it must maintain in providing quality ATM service to make its customer more satisfied. Problems of technical nature resulting from Dis-functionality of the ATM should be rectified urgently.
- Care must be taken to ensure that such problems do not occur at all.

- Service quality of visa debit card payment system must be update within new technology and distribute their branches through world.
- The banks can employ customized software that records relevant information on ATM cards so that banks can establish whether unauthorized transaction has taken place or not.

Moreover, our findings show that service quality is an important antecedent of customer satisfaction. This finding reinforces the need for banks managers to place an emphasis on the five dimensions of service quality.

5.4 IMPLICATIONS FOR FUTURE RESEARCH

This research focused on the impact of ATM service quality on customer satisfaction by using convenience, efficient operation, security and privacy, reliability and responsiveness as the dimensions of ATM service quality. However, it is evident that these dimensions are not the only characteristics that influence customers' satisfaction. It would be interesting to replicate the study by using other additional factors that contribute to customer satisfaction include cost effectiveness, Tangible, assurance, empathy, Fulfillment and others.

This study was conducted in 15 branches and ATMs of Commercial Bank with a sample size of 250 ATM card users; therefore, it would be appropriate to study by including other branches and banks.

Further studies can be undertaken related to the gap between customer expectation and perception and the effect of demographic factor on the ATM service quality and customers' satisfaction.

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ቅድስት-ሚያምዩኒቨርሲቲ

ቢዝ ስ አስተዳደር የጎምርት-ክፍል

(የ ሀለትኛ ዲግሪ ፕሮግራም)

በደንበኞች የሚሻ መጠይቅ

የዚህ መጠይቅ ዓላማ በቢዝ ስ አስተዳደር የ ሀለትኛ ዲግሪ የ መረጃ ጽሁፍ ጥናት ለመክሄድ ሲሆን ጥናቱም በኢትዮጵያ ንግድ ባንክ ደቡብ አዲስ አበባ ዳስትሪክት" የ ኤቴክም አገልግሎት ጥራት በደንበኞች እርካታ ላይ የሚኖረውን ተፅዕኖ ለመለካት የተዘጋጀ ነው :

በዚህም መረጃ መጠይቅ ለማጠናቀቅ የእርሶን ክፍተት የሆነ እገዛና ትብብር በአክብሮት እንጠይቃለሁ : መልስ ምንም መስጠት የማይጠበቅ ለዚህ ጥናት ብቻ የሚጠቀም ይሆናል :

ለዚህ ጥናት ተሳትፎ ምክንያት ጸንቶ አቀርባለሁ : አስተዋፅኦ ምንም ክፍት ጥቅም አለው :

ትዕግስት ተስፋህ

የቢዝ ስ አስተዳደር ሀለትኛ ዲግሪ ተማሪ

ማህበራዊ ካስፊል ግምት 0935584887 ይደውሉ :

ክፍል 1. የግል መረጃ ሁኔታ - በሳጥኑ ውስጥ ምልክት ያስቀምጡ

- 1. ያታ ወንድ ሴት
- 2. እድሜ 1)18-25 2)26-35 3)36-45 4) ከ45 በላይ
- 3. የጎምርት ደረጃ: 1)12 ያጠናቀቀ/ች 2)ዲፕሎማ 3)የፈጠራ ዲግሪ 4)ሀለትኛ ዲግሪ እና
- በላይ
- 4. የስራ ሁኔታ: 1) ተማሪ 2) ተቀጣሪ 3) የግል ስራ 4) ስራ ፈለገ
- 5. የባንክ ደንበኝነት የቆይታ ጊዜ: 1) ከአንድ ዓመት በታች 2) 1-3 ዓመት
- 3) ከ3 ዓመት በላይ

ክፍል 2. ይህ ክፍል እርስዎ በዚህ ባንክ የኤቴኤም አገልግሎት ጥራት ላይ ያለዎትን ተግባር ለመከታተል ከአገልግሎቱ

አቅጣጫዎ አንፃር የያዘ ነው :

የእያንዳንዱ መጠይቅ ባለአገልግሎት ደረጃ መዝገብ መግለጫ -

- 1= በጣም አልሰማኝም 2= አልሰማኝም 3= ገለልተኛ
 4= እስማኝሁ 5= በጣም እስማኝሁ

መሪያ: የሚጠየቅ ነ ጥበብ ሰጥኑ ወስኑ ✓ በሚረግ ያመልክቱ

ተቁ	መግለጫ	መዝገብ ደረጃ				
		1	2	3	4	5
	የኤቴኤም ጥራት					
1	ኤቴኤም በሰዓት 7 ቀን በቀን 24 ሰዓት አገልግሎት ይሰጣል :					
2	ኤቴኤም ለመጠቀም ቀላል ሆኖ አግኝቶታለሁ :					
3	ኤቴኤም ወይንም ሆኖ ሃይማኖት የሚቀንስ ነው :					
4	ባንኩ በከተማ ወይንም በቀበሌ ቁጥር ያላቸው ኤቴኤም አለብኝ :					
5	የባንኩ ኤቴኤም በግምገማታችን ተተክለዋል :					
6	በኤቴኤም ማይት ማይት ግልፅ ናቸው :					
7	ከባንኩ ቅርንጫፍ አገልግሎት ማግኘት ይቻላል ከኤቴኤም መጠቀም ይቀርባል :					
8	ከኤቴኤም ላይ የማይገኙ ፀሀፎች በሚገባ የተሰደሩና በግልፅ የሚበቡ ናቸው :					

9	ኤቴኔሎም ለበት-አካባቢ ለግደን የሚከተሉ ንፁህ ነው :					
10	ኤቴኔሎም ካርዱ ጥሩ ገፅ ታና ተስማሚ መሆኑ አለው :					
11	ኤቴኔሎም ማሽን ላይ ያሉት ቁልፎች በተገቢው መገንዘብ ይሰራሉ :					
	የስራ ሁኔታ ብቃት					
12	የባንኩ ኤቴኔሎም ሀልቢዜ ስራ ላይ ነው :					
13	ከባንኩ ኤቴኔሎም ስገለገል ለሚጠራው ችግር ጊዜ ሳይወስድ ይፈታል :					
14	ባንኩ የኤቴኔሎም ካርድ ለመስጠት ቀላል መሆኑና ደንብ ይጠቀማል :					
15	ባንኩ የኤቴኔሎም ካርድ ሲጠፍ ወይም ሲሰላሽ በፍጥነት ይተካል :					
16	የኤቴኔሎም አገልግሎት መጠቀም ከባህላዊ የባንክ አገልግሎት የላቀ ወጠት ይሰጣል :					
17	የባንኩ ኤቴኔሎም አገልግሎት ሲሰጥ በፍጥነት ነው :					
18	የባንኩ ኤቴኔሎም ግልፅና ቀላላ መሆኑ ይጠቀማል :					
19	የኤቴኔሎም አገልግሎት የባንኩን አገልግሎት አሰጣጥ ሂደት ወጠታ ማደርገቱ ይቻላል :					
20	የኤቴኔሎም አገልግሎት መጠቀም የባንኩን አገልግሎት ብቃት ይጨምራል :					
21	ከባንኩ ኤቴኔሎም ገንዘብ ሳወጣ በቂ የሆነ የገንዘብ መጠን ይኖረዋል :					
22	ከባንኩ ኤቴኔሎም ገንዘብ ሳወጣ ጥራት ያላቸው የብር ኖቶች ይኖረዋል :					
23	ኤትኤሎም በሞላ ጠቃሚ በሆኑ ቦታዎች ይገኛል፡፡ ለምሳሌ አዳሪሾች፣ ሆስፒታሎች፣ ጣይም ወዘተ					
24	ኤቴኔሎም ሀልቢዜ የተስተካከለውን ቀሪ ሂሳብ ያሳያል :					

25	የባንኩ ኤቴኦም የሀይል መቀረት በያጋጥመው ተተኪ ሀይል አለው ፡ ለምሳሌ ጀኔራል					
	ጥበቃ ደህንነት					
26	ደንበኞች በባንኩ ኤቴኦም ሲገለገሉ ብቻቸውን እንዳይሆኑ ይደረጋል ፡					
27	ኤቴኦሞቹ የተቀመጡት በታላቅ ደንበኞች ደህንነትና ጥበቃ ምቹ ነው ፡					
28	የኤቴኦም ካርድ ተጠቃሚ መሆኔ ምቹና ከራት ይሰጣል ፡					
29	ባንኩ ኤቴኦሞቹ ባለበት አካባቢ ተገቢውን ጥበቃ ያደረጋል ፡					
30	ባንኩ የእኔን የግል መጃ ለለላ ዓላማ አይጠቀምም ፡					
	ታማኝነት					
31	የባንኩ ኤቴኦም ትክክለኛውን አገልግሎት በጀመያው ጊዜ ይፈፀማል ፡					
32	የባንኩ ሁሉንም ደንበኞች በሚገልገልበት አገልግሎት ይፈፀማል ፡					
33	የባንኩ ሁሉንም ደንበኞች የአገልግሎት ችግር ሲያጋጥማቸው በፍጥነት ይፈታሉ ፡					
34	የባንኩ ሁሉንም ደንበኞች የሚገልገልበት አገልግሎት ተከታታይ ይሆናል ፡					
35	ከኤቴኦም የማይጠጡ ከፍተኛ የገንዘብ መጠን በቂ በመሆኑ እረካሉ ፡					
36	የባንኩ የኔትወርክ አወቃቀም አልመቀረጠም ፡					
	ለደንበኞች አሳቢነት					
37	የባንኩ ሁሉንም ደንበኞችን ሲያስተናግዱ ተገቢውን እንክብካቤ ያደርጋሉ ፡					
38	የባንኩ ሁሉንም ደንበኞች በሙሉ ፈቃደኝነት የደንበኞችን ጥያቄ ያሟላሉ ፡					
39	የባንኩ ሁሉንም ደንበኞች ተገቢውን ትክክለኛ በመሆኑ ምላሽ ይሰጣሉ ፡					
40	የባንኩ ሁሉንም ደንበኞች የሚገልገሉትን መጃ በቀላሉ ያቀርባሉ ፡					

	የደንበኞች እርካታ					
41	በባንኩ የኤቴኤም አገልግሎት አሰጣጥ በሚደሰ አሰኛለሁ፡					
42	በባንኩ ኤቴኤምን ንዘብ ወጭሳደርግና ተጨማሪ አገልግሎቶችን ስጠቀም በሚደሰ አሰኛለሁ፡					
43	በባንኩ ኤቴኤም ስጠቀም የአገልግሎት ዋጋው ተመጣጣኝነት በሚደሰ አሰኛለሁ፡					
44	የባንኩ ሀይተኞች በሚጠሩ ሙያዎች እና ባለቸው ችሎታ እረካለሁ፡					
45	በባንኩ የኤቴኤም አገልግሎት ለመቀጠም በመሰላኔ በሚደሰ አሰኛለሁ፡					
46	ከባንኩ የኤቴኤም አገልግሎት እንዲያገኙ ለሌሎች እመክራለሁ፡					

ST. MARY'S UNIVERSITY
MBA IN GENERAL MANAGEMENT
 (Post graduate studies)

Dear respondents,

The purpose of this questionnaire is to gather primary data for conducting a study on the topic “**The Impact of Payment Card & ATM Service Quality on Customer Satisfaction- the Case of Commercial Bank of Ethiopia South Addis Ababa district**” as a partial fulfillment of the requirement for the degree of Masters of Business Administration program at St Mary’s University. The research will be conducted to measure the impact of ATM quality service on customer satisfaction I believe your participation as a responded will allow the objectives of this research into a reality. It is therefore, assure you that all the information you provide will be confidential and will exclusively be used for research purpose, as well; your co-operation will be highly appreciated.

If you have any question, do not hesitate to contact me with the following address.

Email – tigesttesfaye07@gmail.com or Tell 0935584887

Thank you!

Tigist Tesfaye

Please indicate by marking (✓) your response on the appropriate box.

I. Personal Data

1) **Gender:** Male Female

2) **Age:** 1) 18-25 2) 26-35 3) 36-45 4) Above 45

3) **Educational Background**

1) 12 complete 3) Bachelor Degree

2) Diploma 4) Master & above

4) **Occupation –**

1) Student 2) Employed

3) Self employed 4) unemployed

5) **How long time has had use the ATM card?**

1) Less than one year.

2) 1 Up to 3 years

3) More than three years

II. Questionnaires to measure ATM service quality.

Please show the extent to which these statements reflect your perception of ATM service in Commercial bank of Ethiopia.

Definitions of scale: 1= strongly disagree

3= Neutral

2= Disagree

4= Agree

5= strongly agree

No.	Instruments	1	2	3	4	5
	<i>Convenience</i>					
1	The ATM is convenient in terms of 7 days & 24 hours services.					
2	I found the ATM easy to use.					
3	The ATM transaction is accurately executed.					
4	The bank has sufficient number of ATMs in the town.					
5	The ATM is conveniently located.					
6	The information displayed is clear.					
7	Using ATM is more accessible to me than visiting a bank.					
8	The ATM screen is well organized and easy to read.					
9	The physical surroundings of ATMs are visually appearing and neat.					
10	ATM card has good appearance & suitable size.					
11	Key pad of ATM machine is working properly.					
	<i>Efficient Operation</i>					
12	The ATM machine functions all the time.					
13	It does not take a lot of time to fix payment error when carrying out my transaction over ATM.					

14	The bank has simple procedure for obtains ATM cards.					
15	The bank is fast to replace ATM cards if lost /stolen/ damaged.					
16	Using ATM provides me with a better result than when I use a traditional system like personal contact.					
17	The ATM transaction has short waiting time.					
18	The ATM has a clear and easy guidance screen. (User friendly)					
19	Using ATM increase the efficiency of the service delivery system.					
20	The ATM increases the effectiveness of the service.					
21	The ATM has enough money during transactions.					
22	The ATM has good quality currency.					
23	ATMs are found all useful places like malls, hospitals, stations etc.					
24	ATM slip always shows updated balance.					
25	The bank ATM has disconnected the power availability of power backup like /generator/inverter.					
	<i>Security and Privacy</i>					
26	The bank provides customer's privacy during transaction.					
27	The ATM positions are securely located.					
28	I feel safe and confident to use ATM for banking operation.					
29	The bank provides adequate physical security at ATM.					
30	The bank does not misuse my personal information.					
	<i>Reliability</i>					
31	Are you satisfied by the service that ATM performs right at					

	the first time (the time at which it is performed)?					
32	Are you satisfied with the service provided by the bank as promised related to ATM service (Error free transaction)?					
33	Are you satisfied the service of handling a problem related to ATM service (speed of solving the problem)?					
34	Are you satisfied with the way bank delivers up to date record related to ATM service?					
35	Are you satisfied maximum limit of cash withdrawal in the ATM?					
36	Are you satisfied the network capacity of the bank?					
	<i>Responsiveness</i>					
37	Are you satisfied with the employees' promptness of the delivery of ATM card?					
38	Are you satisfied with the willingness of employees to help customers?					
39	Are you satisfied with the banks employees to respond to your request?					
40	Are you satisfied by the employees in the bank to tell you exactly when the services will be performed?					
	<i>Customer Satisfaction</i>					
41	Are you satisfied with the ATM service quality provided by					

	the bank?					
42	Are you satisfied with the ATM based transactions?					
43	Are you satisfied with the transaction fees charged by bank for using ATM card?					
44	Are you satisfied with the bank staff knowledge and way of giving services?					
45	Are you satisfied with your decision to use Commercial bank of Ethiopia ATM services?					
46	I will recommend Commercial bank of Ethiopia ATM service to others.					

DECLARATION

I, the undersigned, declare that this thesis is my original work, prepared under the guidance of Dr Abebaw Kassie (Assistant Professor). All sources of materials used for the thesis have been duly

acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Tigist Tesfaye Worku

Name

Signature & Date

ENDORSEMENT

This thesis has been submitted to St.Mary's University, School of Business for examination with my approval as a university advisor.

Dr Abebaw Kassie (Asst. Profesor)

Advisor

signature and Date