IMPACT OF AUTOMATIC TELLER MACHINE (ATM) SERVICE ON CUSTOMER SATISFACTION: IN THE CASE OF COMMERCIAL BANK OF ETHIOPIA ADDIS ABABA.

BY:

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February, 2018
Addis Ababa, Ethiopia
IMPACT OF AUTOMATIC TELLER MACHINE (ATM) SERVICE ON CUSTOMER SATISFACTION: IN THE CASE OF COMMERCIAL BANK OF ETHIOPIA ADDIS ABABA.

A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY, SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION

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DECLARATION

Here with I, declare that, this thesis is prepared for the partial fulfillment of the requirements for MBA Degree in General Management entitled “Impact of Automatic Teller Machine (ATM) Service On Customer Satisfaction an Empirical Study in Commercial Bank of Ethiopia” is prepared with my own effort and this work is original in nature. I have made it independently with the close advice and guidance of my advisor and all source of material used for the thesis have been duly acknowledged.

Declared By: Hiwot gessese

Signature ________________________

Date _____________________________
ENDORSEMENT

This thesis has been submitted to St. Mary's university, school of Graduate Studies for examination with my approval as a university advisor.

Tilahun Mehari(PhD)  ____________________
Advisor  Signature

St. Mary's university, Addis Ababa  February, 2018
STATEMENT OF CERTIFICATION

This is to certify that Hiwot Gessese has carried out this research paper on the topic entitled “Impact of Automatic Teller Machine (ATM) Service On Customer satisfaction in the case of Commercial Bank of Ethiopia.” under my supervision in partial fulfillment of the requirements for Master of Arts in General Management at St. Mary’s University. This work is original in nature and is suitable for submission for the award of Master’s degree in General Management.

_____________________

(PHD): Tilahun Mehari

(Advisor)
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<td>ANOVA</td>
<td>Analysis of Variance</td>
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<td>ATM</td>
<td>Automated Teller Machine</td>
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<td>CBE</td>
<td>Commercial Bank of Ethiopia</td>
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<td>E-business</td>
<td>Electronic business</td>
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<td>E-Recs-QUAL</td>
<td>Electronic recovery service quality</td>
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<td>Premiere Switch Solutions</td>
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<td>SERVQUAL</td>
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<td>TA</td>
<td>Technology Associates</td>
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<td>SPSS</td>
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ABSTRACT

The main purpose of this study was to assess the most important factors (dimensions) affecting customers’ satisfaction in Automated Teller Machines (ATMs) service of Commercial Bank of Ethiopia. The study employed a quantitative methods based on a convenience sample consists mainly of respondents in different professions at the age of above 18 years. A Self-administered questionnaire which consists demographic characteristics and survey questions was distributed to 399 CBE’s ATM users. 8 Branch were conveniently selected in order to reach ATM users in different parts of Addis Ababa. Instrument development was based on reviewing related literatures and discussing with concerned academicians and practitioners in the area of ATM service and customer satisfaction. The data were analyzed using SPSS version 20. The findings of this study revealed that a positive and significant relationship between reliability, tangibility, Assurance and accessibility with customer satisfaction on CBE’s ATM. Despite responsiveness which is positively related but not significant. Furthermore, this study also manages to present demographic variables effects toward behavioral intention to adopt ATM service, and found that gender revealed a significant difference between females and males using ANOVA statistics age is found as significant. for profession, the analysis
indicates that people at different profession have no same level of satisfaction on CBE’S ATM. Unlike profession monthly income difference has no similar satisfaction on CBE’s ATM and usage rate has significant relation with satisfaction level of CBE’s ATM.

*Key word*- accessibility, assurance, reliability, responsiveness, and tangibility
CHAPTER ONE
INTRODUCTION

1.1. Background of The Study

Automated Teller Machine (ATM) is a Computerized machine that permits bank customers to gain access to their accounts with a magnetically encoded plastic card and a code number. It enables the customers to perform several banking operations without the help of a teller, such as to withdraw cash, make transfer, pay bills, obtain bank statements, effect cash transfers. ATM was invented in the early 1960s by John Shepherd-Barron who was a Scottish national born in India. Automated Teller Machines (ATMs) were the first well-known machines to provide electronic access to customers (Sultan Singh, Ms. Komal, 2009). From the banks perspective the main benefits of electronic banking are cost savings, reaching new segments of the population, efficiency, cross selling, third-party integration, and customer satisfaction (Hiltunen et al., 2004).

According to khan (2010) Bank sector driving in automation of their service delivery of because of that to attain cost-effectiveness which can be used as a strategic competitive weapon. ATMs have been playing a pioneering and pivotal role here. In order to identify the current strength and weakness of the technology measuring customer satisfaction has attracted wide spread research attention, given it is often used as an indicator of success. The main factors which focused when measuring customer’s satisfaction are accessibility, security, convince, reliability and ease to use.

Customer satisfaction is defined as an "evaluation of the perceived discrepancy between prior expectations and the actual performance of the product" (Tse and Wilton, 1988, Oliver 1999). Satisfaction of customers with products and services of a company is considered as most important factor leading toward competitiveness and success (Hennig-Thurau and Klee, 1997). Customer satisfaction is actually how customer evaluates the ongoing performance (Gustafsson, Johnson and Roos, 2005)
Muzammil, Sehrish and Adnan(2010) found that Customer satisfaction is very important because that would create sense of belongingness, emotional binding and brand loyalty among customers. Satisfaction was operationalized as “if needs or demands of customers are fulfilled through particular product or service” or if customer feels that he gets the desired benefits from the goods or services for which they have paid to a particular firm. In recent years, the banking industry around the world has been undergoing a rapid transformation. Today, banking is regarded as a consumer-oriented services industry and banks have started realizing that their business increasingly depends on the quality of the consumer service provided and overall satisfaction of the customer. Relationship marketing has become the most critical aspect to corporate banking success. In addition, the deepening of information technology has facilitated better tracking and fulfillment of commitments, multiple delivery channels for bank customers, and faster resolution of issues (Ankit, 2012).

Sangeetha(2012) states that in service sector technology has been employed to standardize services through the minimization of employee-customer interface and customers prefer a techno-based service offering instead of having interaction with human teller. He further contends that as the interface between the customers and service providers shifted from a customer-employee to a customer-technology in accessing a given organization, various issues are coming to surface regarding the impact of technology on the service quality being delivered and its thereof on customer satisfaction. Also Dabholkar(1996) cited in Sangeetha(2012) contends that regarding customers preference for self-service alternatives little is known, where customers' preference in Ethiopia, By appreciating the actions taken by the CBE in adopting the technology such as a full-fledged ATM and others to move the bank to the "world class" commercial bank, based on the above premises it seems high time to examine the impact of ATM service quality dimensions on customer satisfactions to maintain the momentum and accelerate its growth in such a way that to do its level best to turn over the shortcomings and challenges into better opportunities. Simply put, to provide more insights regarding the pertinent issues in association with the service quality delivery via ATM, the study opts to put in place a model which will be comprehensive enough so that it can be employed to measure the impact of ATM service quality and its
thereof on customers satisfaction. The study was conducted on the CBE ATM card holders with convenient sampling technique to get input into the different factors utilized while conducting the assessment of the ATM service quality.

1.2 Background of the Organization

The history of the Commercial Bank of Ethiopia (CBE) dates back to the establishment of the State Bank of Ethiopia in 1942, CBE was legally established as a share company in 1963. In 1974, CBE merged with the privately owned Addis Ababa Bank. Since then, it has been playing significant roles in the development of the country. Consequently, Addis Bank and Commercial Bank of Ethiopia S.C. were merged by proclamation No.184 of August 2, 1980 to form the sole commercial bank in the country till the establishment of private commercial banks in 1994.

Vision - “becoming a world-class commercial bank by the year 2025.”

Mission- “committed to best realizing of stakeholders’ values 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 public confidence is the basis of our success.”

Values-commercial bank of Ethiopia has the following values Customer Satisfaction, Employee Satisfaction, Learning Organization Teamwork and Collaboration, Public Trust, Value for money, Decentralization, Corporate Citizenship

1.3 Statement of the Problem

An automated teller machine or automatic teller machine (ATM) is a computerized telecommunications device that provides the clients of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. Customers can also access their bank accounts in order to make cash withdrawals, check their account balances as well as purchase prepaid cell phone credit whiles using an
ATM (Sultan Singh, Ms. Komal, 2009). According to Rahman (2008), among electronic banking systems atm service was designed to give 24 hours’ service, reliable service, error free service, continence service, efficient service, minimize carry bulk of paper money, to give personalized service to the customers.

John and John and Rotimi (2014) examined the effect of electronic banking on customer satisfaction in Nigeria. Using survey data, descriptive statistics and Chi-square test, they found that there is a significant relationship between electronic banking and customers’ satisfaction. The study further reveals that e-banking has become popular due to its convenience and flexibility; transportation related benefits like speed, efficiency and accessibility. In the same vein, Adeoye and Lawanson (2012) utilized primary data, descriptive and explanatory survey design methods to evaluate customers satisfaction and its implications for banks performance in Nigeria. Findings reveal that although customers enjoy electronic banking services, they are not satisfied with the quality and efficiency of the services, judging from the number of times they physically visit banks and the length of time spent before the services are received. Similarly, Danlami and Mayowa (2014) carried out an empirical investigation of Automated Teller Machine (ATMs) and customer’s satisfaction in Nigeria, A case study of Ilorin Kwara State. In the study, three commercial banks (First Bank of Nigeria Plc, Guaranty Trust Bank Plc and First City Monument Bank Plc) purposively selected and a sample size of 180, 60 from each bank selected randomly at the banks’ ATM terminals during transaction while tables, percentages, charts and the Chi-square statistical tools were used to analyze the data collected. Findings reveal that there is a significant relationship between ATM usage and customer satisfaction.

Based the report of CBE on 2016/2017 it have 33,365 employees from that 2/3 of employee work on branches and according to the reveal of the information each customers service officer work around 250-300 transaction per day it implies that customers still come into the banking hall for services such as cash withdrawals even when the amount may be withdrawn from the ATM, checking of account balances, printing of account mini statements, transferring of money (etc.) which could be provided by using the ATM. Beside, CBE has spent huge capital of money to design, fabricate, install and maintain for
the ATM banking delivery service, according to the information obtained from Bank card reports of 2016/2017 the usage rate of CARD is still lower than expected and remains smaller compared to the entire bank customer. For instance, the bank has managed to produced 1,512,000 cards to customers into using and out of the total produced card only 766,109 were actively used for the year of 2017.its indicated that since the bank produce cards base on customer request all produced card did not actively used. this imply some of customer did not prefer to use the service. So the existence of the above mentioned problem the researcher would inspire to assess a study in order to identify and evaluate key service quality dimensions affecting customers’ satisfaction on ATM service.

1.4 Research Questions:

The above stated problems lead the researcher to raise some important and crucial research questions while conducting this study. These are

1. What are the customer satisfaction level in ATM service of Commercial bank of Ethiopia?
2. What are the main factors which affects customer’s satisfaction in use of ATM service?
3. Does reliability, responsiveness, tangibility, accessibility and assurance has influence on customer’s satisfaction in use of ATM service?

1.5 Objectives of the study:

1.5.1. General objectives of the study
The main purpose of the study was to examine or identify the impact of ATM service on customer satisfaction in Commercial bank of Ethiopia.

1.5.2. Specific objectives of the study.
The specific objectives of this study are:

➢ To analyze the customer satisfaction level in ATM service of Commercial bank of Ethiopia.
➢ To investigate the factors those affects customer satisfaction in using of ATM service in Commercial bank of Ethiopia.

➢ To weight the influence of reliability on customer satisfaction, responsiveness on customer satisfaction, tangibility on customer satisfaction, assurance on customer satisfaction and Accessibility on customer satisfaction in use of ATM service.

1.6 Research Hypotheses

Formulating reliable hypothesis is very important for success of this research. Based on literature review, the following hypotheses emerge:

• **General Hypothesis 1:** Reliability has a significant relationship with customer satisfaction.

• **General Hypothesis 2:** Responsiveness has a significant relationship with customer satisfaction.

• **General Hypothesis 3:** Tangibility of ATM service have significant relationship with customer satisfaction.

• **General Hypothesis 4:** Assurance of ATM has significant relationship with ATM service quality.

• **General Hypothesis 5:** Accessibility of ATM has significant relationship with ATM service quality.

1.7 Significance of the Study

Bank customers in Ethiopia are becoming accustomed to using ATM in time of need be it in the normal bank working hours or when the banks are closed. ATM users in CBE are in the verge of seeking quality ATM service. This study, therefore, is significant to provide information that would help the management of the bank to evaluate and re-design its current marketing strategies in order to improve the overall customer satisfaction levels and also to rectify problems and provide better service and hence satisfy the customers.

This study is very important as serving as a guide for further researchers who want to continue investigation of their research on this topic, contribute customer feedback about
impact of automatic teller machine service on customer satisfaction and create awareness of customers for electronic banking system in CBE.

1.8 Limitation/Scope of the Study

1.8.1 Scope of the Study

The results of the research would be in a position to address the problem areas of all CBE ATM stations across Ethiopia, if it had been conducted on larger scale. However, as including all CBE ATM users in this study is practically impossible, the study used extensively a quantitative research method in which it confines itself to questionnaire survey on the study delimited itself to CBE ATM card holders that exist in Addis Ababa city from those 8 branch has been selected by using purposive sampling technique under those four districts. according to the theoretical part the researcher tray to asses’ available material like book, journal’s and other researches that has been studied on customers’ satisfaction.

1.8.2 Limitation of Research.

Despite the useful findings of the study, this study has several limitations that need to be acknowledged. Several factors were examined in this study. Future studies should attempt to draw profiles based on characteristics other than these factors used in this study. And also the data for this study was only collected in commercial bank of Ethiopia in Addis Ababa which have technological different environment from some other places and other banks, lack of awareness of the society about the research, one-time study and lack of available access for secondary data for this research so in case of the above mention problems the result may not represent the all population or it is difficulty to conclude (to generalize) the whole impact of ATM service on customer satisfaction level in Ethiopia.
CHAPTER TWO
LITERATURE REVIEW

This section reviews the literature written by different authors and researches conducted by different scholars in relation to the study and present a summary of significant relationship between technologies based self-service (automatic teller machine) service quality and its effects on customer’s satisfactions and review of empirical works. Finally, conceptual framework of the study is included by summarizing literature results.

2.1 Theoretical Review

According to Rahman (2008), the physical location of banks’ delivery channels influence perception of customers about quality. Continuous (24 hours in per seven days in a week, responsiveness of employees to help customers problem, trustworthy processes, user-friend line procedures, ease of use, ensure increased security and control over transaction cost, reduce fraud risk, performs higher volume of transactions with less time, presences of clear communication have positive and significant effect on service technology based service (automatic teller machine service). (Sureshchandar et al., 2002. In response to this requirement, banks have initiated flawless delivery processes to reduce delivery timings to improve service quality.

2.1.1 Definition of ATM

According to Sultan and Komal (2009) Automated Teller Machines (ATMs) were the first well-known machines to provide electronic access to customers. With advent of Automatic Teller Machines (ATM), banks are able to serve customers outside the banking hall. ATM is designed to perform the most important function of bank. It is operated by plastic card with its special features. The plastic card is replacing cheque, personal attendance of the customer, banking hour’s restrictions and paper based verification. ATMs have made hard cash just seconds away all throughout the day at every corner of the globe. ATMs allow you to do a number of banking functions – such as withdrawing cash from one’s account, making balance inquiries and transferring money from one account to another – using a
plastic, magnetic-stripe card and personal identification number issued by the financial institution. ATM does not mean the plastic card and PIN (Personal Identification Number) but the services for which you can use it are the most important part.

In (1993) O’Hanlon and Rocha found out that originally, banks offering an ATM service achieved an advantage over their competitors. There was scant understanding of the customers’ needs or expectations and the role of ATMs large in bank’s retail delivery system was vague. In the early market stage, O’Hanlon and Rocha enlighten that ATM was a product based on a radical technological innovation, and did not represent a solution to a customer need at that point in time. In the mid-1970s, features like cash balance inquiry, deposits and funds transfer that permitted these customers to conduct the majority of their routine transactions without visiting a bank branch.

2.1.2 E-service Quality

Studies show that the age of E-business has been breaking out unconventional way of performing business and one of such astonishing techno-based service delivery (e-business) is e-banking Accordingly studies pointed out that the advent of such e-business which has been accompanied with technological innovations and globalization is urging firms to rethink and redefine their business operations in light of value chain reengineering and restructuring business models. Worldwide, e-banking such as ATM banking service has emerged in the 1990s as one of the fastest means of service delivery in the service industry such as banks (Saleem and Rashied, 2011). According to Allen and Barr(1996) cited in Zaman and Chowdhury (2012) e-service quality/techno-enabled self-service is any banking service which is rendered by employing computer -controlled systems based on the application of IT without involvement of banks usual branch. The trend in the banking industry has undergone through various economic revolutions, passing from cash economy to cheque economy and converted to plastic and card economy (Pahwa and Saxena, 2011). Some call the present globalized era a "digital economy".

Accordingly in the past decade the banking industry has been highly affected by the advancement of information and communication technology by which banks and other financial institutions have made improvement on their services through the
implementations and application of IT. In so doing technology has become as one of the essential tool which facilitates banks' organizational structures, business strategies, customer’s services and related functions (Zaman and Chowdhury, 2012). One of the imputes of such technological advancement in the banking industry is its ability in bringing distant customers come closer (Howcroft and Drukin, 2003) cited in Zaman and Chowdhury(2012).

Rust and Lemon (2001) cited in Seth etal. (2004) defined E-service as "the role of service in cyberspace". According to Saleem and Rashid (2010) the banking industry is driven by technological innovations and market uncertainty and competition, which in turn forced the business firms to shift from traditional banking to technology based banking. Accordingly the technological innovation has provided an astonishing plate form in such a way that to remove obstacles and limitations in the traditional service setting. Simply put the astonishing innovations is in a position to cutoff the requirements of office set up and other utilities ,reduced numbers and cost of staff customers at the branch ,save firms investment on staff employee and thereby allow firms to carry out the required activities under the supervisions of few skilled IT professionals( Saleem and Rashid, 2010).

Moreover, the e- services are revolutionizing the way business is performed in the banking industry. Accordingly the techno based business models have replaced the traditional banking system and banks are reevaluating the business process designs and customer relationship management strategies (Kumbhar, 2011). Zhu et al. (2002) cited in Seth etal. (2004)in their study on IT-based model demonstrated that service providers employ IT for the purpose of cost reduction and creating value-added services for their customers.

And yet studies show that measuring the quality of e- service quality is quite difficult and complicated. The reason behind the difficulties and complication of measuring the quality of e- service quality in light of e-retailing is that unlike the traditional retailing, e-retailing is not a single uniform marketing activities (Francis and White, 2004 ). Voss (2003)states that e-retailing based service systems differ from the traditional one in terms of channel delivery, service content and product type cited in (Swaid and Wigand, 2009).

Wolfinbarger and Gilly (2003) developed an instrument in such a way that to measure e-service quality by taking into account factors like website design ,reliability/fulfillment
Voss (2003) cited in Swaid and Wignad (2009) contends that the SERVQUAL model should be reformulated in such a way that it can fit the unique setting of the online stores. This is to mean that to use for measuring the e-service quality such as online stores the SERVQUAL need to be reformulated and reworded in such a way that it can fit the online store setting applications and addresses the issues related to the requirements of the e-service quality appropriately.

Swaid and Wignad (2009) came out with six dimensions regarding the e-service quality measurement such as website usability, information quality, reliability, responsiveness, assurance and personalization. Accordingly they found out that with the exception of personalization e-service quality dimensions are related to the various types of customers loyalty. Furthermore, they state that the perception of reliability and assurance are the essential factors which have effect on favorable loyalty aspects including repurchase intentions, communicating positive word of mouth and loyalty.

2.1.3 Historical Development of ATM banking in Ethiopia

The development of ATM banking service in Ethiopia is an evolutionary process and its appearance in Ethiopia moved back to the late 2001, when the largest state owned, Commercial Bank of Ethiopia (CBE) introduced ATM to deliver service to the local users (Gardachew, 2010). However, due to lack of modern technology awareness and appropriate infrastructure it failed to provide efficient service. In his study, Dashen Bank was the next bank that has been installed ATMs at convenient locations for its own customers” since 2006. Both banks tried to develop the ATM system by designing in the way to provide a secure electronic data-sharing gateway between clients, banks, and ECX, by facilitating a smooth transaction.

Abiy (2008) cited in Addis. (2015) in his study, Wegagen Bank has signed an agreement with Technology Associates (TA), a Kenyan based information technology (IT) firm, for the development of the solutions for the card payment system and installation of a network of ATMs on December 30, 2008.
Asrat (2010) cited in Addis. (2015) indicated that the previous ATM banking service offered an access to bank statements and exchange rate information, and one step ahead Zemen bank had been developed free account deposit transfer and corporate payroll uploading services offered for its customers for the first time in the country ATM banking system in the year 2010.

In February 2009, the three private commercial banks; Nib International Bank S.C., Awash International Bank S.C., and United Bank S.C, have established separate entity under the name of Premiere Switch Solutions (PSS) with 165 million Br capitals (Amanyehun, Addis fortune newspaper, 2008. It has currently six member banks, including the Addis International Bank, Berhan International Bank, and Cooperative Bank of Oromia S.C. The main objective of PSS formation is for the common ATM operational function and control (PSS card user guide, 2011). This strategy agreement signed to avoid possible underutilization of the ATM system and to improve electronic card payment system in Ethiopia. This agreement is the first significant cooperation between competing banks in Ethiopia, which others should be encouraged to follow as there is no single bank in Ethiopia that can afford to provide Extensive geographical coverage and access (Binyam, 2009).

National bank of Ethiopia (NBE) has embarked upon an important reform to expand technological advance banking service delivery products. Among these modern products, Automated Teller Machines (ATMs) are expected to outreach self-banking services delivery to the nation in a broad range to cover the whole country (NBE Vision and Strategic Framework, May 2009). Since, Ethiopia is still one of the most under bank countries in the world, even for Sub Saharan standards. Only 4.3% of the population has opened a bank account and has access to banking services. Even though, the client base of banks and the branch network of banks are rapidly growing in the country, one bank branch has provide service for about 140,000 inhabitants per nearly 90 million people spread over a large geographic area. NBE has been encouraged banks to use ATM for timeless and low cost automated self-service delivery and developed regulatory framework. Since, ATM technology holds key value for increasing financial inclusion,
efficiency and for the outreach of financial institutions to be more effective in Ethiopia (NBE strategic vision, 2009).

In general, as Anderson (2000) study indicates that ATM is an alternative self-electronic banking service delivery channels, rather than a branch teller, through the internet using secure protocols to outreach banking service and banks are allocating huge capital resource for modern technology to satisfaction of their customers” demand for their better services delivery that are moving toward exciting new technologies to customers, which in turn fulfilling their clients with greater satisfaction for better services, and hence they can able to extend timeless automated services for their customers in the way to process financial transactions related with deposit, withdraw, and transfer funds, pay their bills, inquire about an account balance, and to order cheque preparation through the ATMs.

2.1.4 Benefits of Using ATMs

Tague (2010) observed that a plastic Automatic Teller Machine card linked to your bank account makes financial transactions a breeze by eliminating the waste of writing cheques or the dangers of carrying large sums of cash. The debit cards benefit both the card holders and the banks. Some of the benefits of ATM technology is bank decongestion, reduced cost of transactions for both customers and banks. This has drastically reduced banking time. The ability of ATM card holder to make withdrawal at any point in time and anywhere close to him or her is one of the greatest benefits of ATM technology. This has reduced the agony of one running out of cash.

Another nice opportunity provided by ATM to users is the flexibility to move around with minimal cash and thereby reduce incidence of theft. ATM technology when properly used will make the building of cashless society possible. ATM card has assisted travelers in obtaining cheaper exchange rate. Foreign ATM machines offer users access to the wholesale exchange rate, which is often less expensive than paying service fees when exchanging cash or travelers cheques in foreign bank or currency exchange office (Odachi, GebrielNwabounu, 211).
2.1.4.1 Benefits of ATMs to Banks

Some benefits of ATMs mentioned by ATM gurus Triton (www.atmgurus.com) sited in (Gezahegn2015)

- ATMs reduce queues in banking halls
- ATMs save banks costs of hiring tellers by automating many “teller” transactions
- ATMs create extended service hours provided by banks beyond traditional 9-5 banking hours
- ATMs have become the customer’s most popular and most used interaction with the bank and an important Customer Relations Management (CRM) and customer retention tool
- Each off-premise & branded ATM becomes an advertising and marketing tool by putting the bank’s signage in front of thousands of additional potential banking customers in traditionally non-bank locations
- Branded off-premise ATMs extend the bank’s visibility to current customers, providing visible reassurance of their bank’s reach beyond the branch
- ATMs enable banks to re-design branches into more sophisticated customer services and sales outlets
- ATMs have enabled some banks and non-bank financial institutions to develop successful “branchless” business models
- ATMs reject unfit banknotes, helping maintain banknote standards

2.1.5 Service Quality Concept

Customers usually evaluate the service quality of their banks’ and yet, the criterion they use may be different from customer to customer, based on their individual needs and preferences. Joseph etal.(1999) state that during evaluation of quality of services being delivered customers usually employ various criteria that are likely different from each other in their importance. Most importantly, they sate that though many criteria are important but only a few are so essential. Loudon and Bittea(1988)cited in Joseph
etal.(1999) state that these determinant attributes are those that shall define service quality from customers point of view.

On the other hand, service quality has received much attention due to the fact that it is related to cost, financial performance, customer satisfaction and customer loyalty (Al-Hawari et al., 2005) and it has drawn the attention of managers and researchers due to its great influence on the performance of business firms (Angelova and Zekiri, 2011). So providing quality service is essential as it leads to higher satisfaction, profitability and retention of customers (Ndamnsa and Hamde, 2010). Ahmad and Al-Zu’bi (2011) state that quality has a long lasting effect on customer satisfaction. Clow (1993) cited in Mosahabet al. (2010: 72) claims "quality as the organization's life-giving blood". Mesay's (2012) findings on the Private banks in Ethiopia show that all service quality dimensions are positively correlated with customer satisfaction, showing that the quality of banking service as essential prerequisite for having customers that are satisfied with the service quality being delivered.

Also nowadays commercial banks due to high pressure of globalization and fierce competition among themselves and volatile and dynamic market are continuously looking for new ways so that they will be in a position to add value to their services being offered to their customers (Muyeed, 2012). Accordingly due to the fact that financial services are competing in the market place most of the time with "undifferentiated products" service quality is a prime competitive tool (Stafford, 1996) cited in Muyeed (2012).

Ndamnsa and Hamde (2013) pointed out service quality as one of the basic aspects among other factors which has significant contribution to business growth and leading position in today's fierce competition of the business environment, in which service quality has a significant role in the service sector, because of its untouchable nature which cannot be disclosed to customers to make judgment before reaching the final decision.

Moreover, services are increasingly taken as a tool for sources of revenue across regions, nations and across the globe (Mosahab et al., 2010) Thus building and maintaining relationships with customer has become as service industries' main strategy which enables
them to have long term relations and corporate performance via customer loyalty and customer retention (Angelova and Zeriki, 2011).

According to Rahaman et al. (2011) service quality is an approach which enables to manage the business processes so that it is feasible to ensure full satisfaction of customers and this in turn will result to increasing competitiveness and effectiveness of the given industry. These show that for business firms to improve and maintain a better position in the era of globalization, it demands to evaluate the performance of the services provided to their customers (Ndamnsa and Hamde, 2013). This is due to the fact that service quality is an essential gateway for customer satisfaction (Mosahab et al., 2010). In the old days the game was "best cost " however, in the era of globalization, the game is "best cost and quality " underlying the quality of services being offered as critical issue (Goetsch and Davis, 2000).

On the other hand, Oh (1999) cited in Seth et al. (2004) has developed an integrative model of service quality, customer value and customer satisfaction, whose central focus is mainly on post purchase decision process. His model includes basic variables such as perceptions, service quality, consumer satisfaction, customer value and intentions to repurchase. He contends that the model provides evidence in which customer value has a significant role in customer’s post purchase decision-making process and it is an immediate antecedent to customer satisfaction and repurchase intentions.

2.1.6 Characteristics of Service and service quality

Services can be defined as " any activity or benefits that one part can offer to another that is essentially intangible and dose not necessarily result in the ownership of anything". That is " services are a form of product that consist of activities, benefits or satisfactions offered to, for sale that are essentially intangible and does not result in the ownership of anything" including banks, hotels, airlines (Kotler and Armstrong, 2006)

Regarding the categorization of the services in the techno-based service delivery Dabholkar (1994) cited in Joseph et al. (1999) contends that there are three different classification. One of such classification is “who delivers the service", which is to mean, person to person, by which employee employs the technology or consumer to technology
such as the application of ATM. The concern of the second classification is “where the service is delivered. This is either on the service firms sites themselves, at customer's home or office or at a 'neutral' site such as ATM located in the airport ".The third category is concerned with the "contact the customer has with the service operation, either direct or indirect such as in the case of telephone banking”.

Service quality has three unique features namely: intangibility, heterogeneity, and inseparability of production and consumption and in the absence of objective measures, an appropriate assessment of the service quality of a firm is to measure consumers’ perceptions of quality (Parasuraman et al., 1988 ; cited in Angelova and Zekiri, 2011). There are four basic characteristics of service offerings. Services are "performances or actions" and cannot be touched, tasted, felt or seen. For instance, health care services are actions that will be carried out by the service providers and directed toward patients including surgery and diagnosis treatment. According to this characteristic in one hand, it is quite difficult for service providers to readily display or easily communicate to customers the service which is intangible, on the other, it is quite challenging for customers to assess the quality of the service being delivered (Zeithmal and Bitner, 2004).

The second characteristics of service are heterogeneity. Because services are performances that are performed by humans, there is little chances where two services being performed for two customers will be exactly alike .Moreover, it is a hard fact that there is no way that two customers are exactly alike, as they have their own peculiar experience and performances and evaluate the services being offered to them uniquely in their own ways and perspectives. For instance, a bill collector of "Keffya Financial Technology” PLC in Addis Ababa city may render a different service experience to two different customers on the same day based on their individual needs and personalities and on whether the bill collector is entertaining them when he or she is fresh in the morning and or tired of in the after-noon. It is "impossible for service industry or individual seller of services to standardize output" (Stanton, 1985:35). For instance, the service quality being rendered by a given Airline might not be the same on each trip. Hence, because heterogeneity is not consistent across time, organization and people, ensuring consistent service quality is usually quite challenging to the service providers.
The third characteristics of Services are the "simultaneous production and consumption of services". Unlike the most goods which can be produced first then sold and consumed, most services are sold first and produced at the same time. For instance, a techno mobile can be produced in Bahrdar, shipped to Addis Ababa, sold after some days later and used for some years. However, services which are intangible such as Hotel services have different experiences from that of tangibles goods. Basically, services can't be rendered until they have been sold and the dining experience is actually produced and consumed once at the same time. Moreover, most of the time the customer is present in the moment of the service is being performed and observe and may also sometimes take part or show up in the process of producing the service (Zeithmaland Bitner,2004). Also “services often cannot be separated from the person of the seller" and most services should be created and dispensed at the same time (Stanton, 1985:37).

Hence, due to the fact that services are performed and consumed simultaneously, entertaining mass production is quite difficult. Because of this the quality of service rendered and customer satisfaction would be essentially influenced by the actions of service providers and the interactions between service providers and customers.

The fourth characteristics of services are perish-ability. "Perish- ability refers to the fact that services cannot be saved, stored or returned". For instance, a seat in Ethiopian airlines from Addis to London or a bed room in Raddson BLU hotel, or telephone line capacity not utilized in Ethio-telecom cannot be reclaimed and used or resold at another time. So since it is not possible to store, or resale the services in the latter time, demand forecasting and making creative planning to make available capacity utilization are quite challenging for service providers ( Zeithaml and Bitner ,2004:22).

2.1.7 Dimensions and Determinates of Service Quality

Gronroos (1984)cited in Seth etal.(2004) in his technical and functional quality model states that to compete successfully a firm need to have a comprehensive understanding regarding customers perceptions of the quality and the way the service quality is being delivered is influenced. He contends that managing service quality means the service provider should match the expected and perceived service to each other in such a way that
customer satisfaction will be attained. He further identified that the three components of service quality including technical, functional and image. Technical quality is the quality of what customer really gains following her or his interaction with the service provider and is so essential to her or his evaluation regarding the quality of service. The functional quality refers to how a customer gets the technical outcome, which is so essential to her or his views of the service being delivered to her or him. Finally the image is quite significant to the service provider, by which it can built mostly through technical and functional quality of service including the other factors such as word of mouth, pricing and public relations. Accordingly Gronroos (1984) pointed out that the process of functionality quality shows "how" the service delivered whereas technical quality or outcome meant that "what" customers receive, the benefits of the service being delivered.

### 2.1.8 Dimensions of ATM Service Quality

The review of literature shows that there are different models and dimensions of ATM service quality and different scholars have proposed and developed various ATM service quality dimensions. For instance AL-Hawari et al. (2005) proposed five items of ATM service quality dimensions including sufficient number of ATM, secure locations, user friendly system, conveniently location and ATM functions. Khan (2010) identified convenience, efficient operation, security and privacy, reliability and responsiveness as the dimensions of ATM service quality. Lovelock (2000) cited in Khan (2010) singled out that secure, convenient location, adequate number of ATM, user friendly system and functionality of ATM are the dimensions of ATM service quality. Dilijonas et al. (2009) identified five ATM dimensions namely: sufficient number of ATMs, search locations, user friendly. Convenient locations and ATM functionality (such as withdrawal, money transfer and balance checking). Ganguli and Roy (2010) came out with four dimensions namely customer service, technology security and information quality, technology convenience and technology usage easiness and reliability.

Joseph and Stone (2003) in their study regarding the US bank customers' perception of the impact of technology on service delivery came out with accurate ATM and electronic banking, customer service, excellent telephone and internet banking, secure and flexible
service, easy and convenient banking and personalized service as the essential dimensions of the technology based banking service quality including ATM. Sangeetha(2012) has identified different dimensions of technology interface service quality including ATM, Telephone banking, Internet banking, Call center, Customer perception of price and Core services and Queue systems.

Parasuraman, Berry and Zeithmal (1998) sited in Gezahegn(2015) categorized service quality into five dimensions namely: reliability, tangibles, responsiveness, assurance, empathy whose descriptions are defined below.

SQ dimensions in an ATM study include the following:

- **Tangibles**: It comprises the physical equipment, its appearance, support services and even the appearance of service personnel.
- **Reliability**: It refers the degree to which the ATMs offer accurate, dependable and timely services to the users.
- **Responsiveness**: The willingness of ATM service providers to help their customers and meet their needs and wants. In difficult situations it would also mean the ATM service provider’s ability to respond effectively.
- **Assurance**: It refers the issues of confidence and trust that consumers have towards ATMs and feeling of safety in usage in case of perceived problems.
- **Empathy**: It refers the attention and care that the ATM service provider may offer to its customers and which may also to convenient operating arrangements in the use of ATMs.

**2.1.9 Service Quality and Customer Satisfaction in ATM**

Customer satisfaction has been a central concept in the literature of marketing and a goal of firms to attain. The primary focus of marketing is to connect with customers by building a strong customer relationship so that they can meet customers' expectations and for customer focused firms, customer satisfaction is both a "goal and a tool" (Angelova and Zekir, 2011). The changing business environment following the emerging technology is creating challenges and opportunities to business firms and the change of customers' perceptions about quality service is intensifying the challenge. (Lewis, 1994) cited in (Khan
This means, the development of technological innovations have created a conducive opportunity for organization to provide superior services to improve customer satisfaction and the number of customers having preferences in using self service delivery mode is increasing and the preference is attributed to the increase of innovations in executing the transactions (Omar et al., 2011). Sureshchandar et al. (2002) indicate an existence of two-way relationship between satisfaction and service quality cited in (Mosahab et al., 2010) while Mohammad and Alhamadani (2011) state that customer satisfaction is highly influenced by customers perceptions of the quality of service being delivered.

Pahwa and Saxena's (2011) findings show that customers are highly satisfied with availability of cash in ATMs, quality of currency notes in the ATMs as primary criteria by customers and also equally satisfied with promptness delivery of ATM cards and correctness of cash withdrawal made from the ATM. However, on the other side of the coin their findings show that features such as non-availability of compliant books, location issues and insufficient number of ATMs as well as the failure of not having power back up in case of power break dawn were the source for the dissatisfaction with the service being delivered. Bloemer (1998) cited in Mosahabetal. (2010) proposed a model which shows that the mental picture, service quality and customer satisfaction could influence loyalty. Their findings came out with the view that service quality influences loyalty both directly and indirectly through customer satisfaction. Caruana (2002) cited in Mosahabetal. (2010) in the Malta's banks came out with conclusion that customer satisfaction acts as mediators in the effect of service quality on customer loyalty while Mircholi et al. (2013) state that delivering high quality service will result to an increase in customer satisfaction and profit. Davies et al. (1996) cited in Khan (2010) investigated factors that are influential regarding customers' satisfaction of ATM service quality such as costs related to the use of ATM and efficient functions of ATM. Hokanson (1995) cited in Angelova and Zekiri (2011) identifies factors that affect customer satisfaction including friendly employees, accuracy of billing, competitive pricing and service quality. Angelova and Zekiri (2011) show that factors such as service quality and perceived value are the essential constructs which affects the customer satisfaction with electronic or mobile service.
2.1.10 Automatic teller machines service quality dimensions and customers satisfactions

Satisfaction is consumer’s fulfillment response. It is judgmental that a product or service feature or the product service features or product or service itself provides a pleasurable level of consumption related fulfillment. (Zeithaml and Bitner 2004, p.97)

FIslam et al., (2005) identified that the satisfaction level of ATM card holders of a leading bank (HBSC) in Bangladesh. The study found significant and positive relationship of ATM service quality with customers’ satisfaction. The study identified that convenient location, security and privacy of automatic teller machine service, personnel responsiveness to solve customers’ problem during transactions, ease of use of technology based self-service, quality of currency notes, promptness of card delivery and performance of ATM were positively and significantly related to customer’ satisfaction. Lack private and security of automatic teller machines service, frequent breakdown of machine, and insufficient number of ATM were major contributors of customers’ dissatisfaction.

Banks are able to serve customers outside the banking hall. ATM is designed to perform the most important function of bank. It is operated by plastic card with its special features. The plastic card is replacing cheque, personal attendance of the customer, banking hour’s restrictions and paper based verifications. It is evident that convenience, efficient operation, security and privacy, reliability and responsiveness are not the only characteristics that influence customer satisfaction.

Customer’s satisfaction is a person’s feelings of pleasure or disappointments that results from comparing a products perceived performance (or outcomes) to their expectations. If the performance falls short of expectations, the customer is dissatisfied. If the performance matches the expectations, the customers are satisfied or delighted. Customer’s assessments of products performance depends on many factors, especially the type of loyalty relationship the customers has with the brand. Consumers often form, more favorable perceptions of a product with a brand. Consumers often form more favorable perceptions of products with a brand they already feel a positive about kotler 2009, p: 124
Wolfinbarger and Gilly(2003) cited in Hongxiu et.al.(2009) state that, though studies regarding service quality and e-service quality have been conducted and various scales have already been in place for the purpose of measuring e-service quality, the extant study on e-service quality has been a fragmented one. Above all some models are limited in their focus and others marginalize one or few channels and ignore the attributes of the others. For instance, Zeithaml (2002) cited in Alanezi et.al.(2010) by modifying the SERVQUAL scale in such a way that to fit to the online setting, came out with eleven dimensions including access, ease of navigation, efficiency, flexibility, reliability, customization/personalization, security/privacy, responsiveness, assurance/trust, site aesthetics and price knowledge.

2.2. Empirical Review

Different researchers in different countries investigate factors influencing customer satisfaction from different perspectives. In this sub section, the mythology used and findings identified on studies conducted on customer satisfaction influencing factors are reviewed.

Despite such divergent views, after a wider range of assessment was done on the extant models a structural model was adapted for this study: Parasuraman, et al (2005),”E-SQUAL” with eight dimensions namely Tangibility, Reliability, Responsiveness, Assurance Empathy, Access, Security, Convenience, speed. The very reason for adapting such model was that the technology presented a platform by which companies can be in a position to design out and deliver services which is perceived by customers as superior (Surjadjaja et al.,2003) cited in Al-Hawari etal.(2005) and it addresses the essential constructs of the technology and managers may gain more insights and learn about customers' needs and hence satisfy them. The other reason for adapting this model over others is, it incorporates the possible factors that may shape customer perceptions of ATM banking.

Thus the outcome of this study is essentially paramount and significantly valuable in providing comprehensive insights to the practitioners in general and to the bank in particular, regarding the essential issues of ATM and thereby presenting the cue about
customers' needs, quality service and customer satisfaction which enables the bank to make available the right services at the customers' desire state and hence satisfy and even delight them.

2.2.1 Relationship between Reliability and Customer Satisfaction

The research was conducted in Singapore that aimed to identify the impact of the reliability, assurance, responsiveness, tangible assets and empty on customer satisfaction. The researcher finds out assurance, reliability, empathy, responsiveness have positive relationship on customer satisfaction and loyalty in terms of attitude (Loke, 2011). The researcher finds out service reliability and service validity independently effect on customer satisfaction. The area of study in Netherlands and data was collected through questionnaire (Galetzka, 2006). The researcher identifies the impact of customer satisfaction and customer retention on customer loyalty. The data was collected in mobile industry of Pakistan. The implication of study to find the relationship between customer loyalty and customer satisfaction. The data was collected through questionnaire. Khan I.,(2012) A research on an empirical study of ATM service quality and customer satisfaction in Pakistani banks. He developed a model comparison of five dimensions (price, responsiveness, reliability, security, efficient operations and convenience) that are related to ATM service quality that influence on customer satisfaction. Questionnaire was used in data collection and five hundred respondents selected for data collection. The percentage of marking 1 to 5(one is strong disagree and five is strongly agree) by using convenience sampling technique. All the five dimensions which are used in model had positive relationship with service quality and service quality had positive and significant relationship customer satisfaction.

(Khan, 2010) A study on “customer satisfaction of ATM service: basically the study work was exploratory nature and convenience sampling technique used. Primary and secondary data were used. Score criteria 1 to 5 (1 indicated unsatisfied but 5 indicated satisfied) in
data collection tools questionnaire were used through convenience sampling technique. It involves two concepts, dependability and uniformity in performance. Reliability also means honoring the commitments in areas such as billing accuracy, proper record maintenance and delivering the service within acceptable time limit (Saha and Zhao, 2005). It also “refers to the correct technical functioning of a self-services technology and the accuracy of service delivery” (Weijters et al., 2005, p. 9). Many authors have detected that reliability is significant in the determination of service quality (Bagozzi, 1990; Davis et al., 1992; Parasuraman et al., 1988; Zeithaml & Bitner, 2000). In addition, Van Gorder (1990) posited that reliability is the most crucial characteristics for customers in the evaluation of service quality. Zeithaml and Bitner (2000) advised that customers should be specifically influenced by the reliability of new technology because they might be associated with risks such as the technology malfunctioning (Sham Dasani et al., 2008).

Parasuraman et al. (1988) also considered reliability of the service as an important factor of service quality. Furthermore, Van Gorder also discovered that reliability is the most crucial determinant of service quality (Van Gorder, 1990). Research on the use of computers or technologies which share similar characteristics also affect performance (or dependability) as it is an important attribute (Davis et al., 1989; Bagozzi, 1990; Davis et al., 1992). Finally, Dabholkar (1996) in his study revealed that reliability and accuracy are appropriate measure for assessing service that has to do with technology.

2.2.2 Relationship between Responsiveness and Customer Satisfaction

Responsiveness as Tewodros and Bhaskat (2011) showed that due to continuous power interruption, the modern technology including ATM failed or operational error occurred frequently, and hence they are unable to rectify the problem on time that may negatively effect on the customers satisfaction. Hatta and Liyama (1991) in their study claimed that programmable machines are often capable of making decisions during their operation. The decision-making capacity is contained in the control program in the form of logical instructions that govern the operation of such a system under varying circumstances. Less than one set of circumstances, the system responds one way; under different circumstances, it responds in another way. Their study indicated that there are several reasons for
providing an automated system with decision-making capability, including (1) error
detection and recovery, (2) safety monitoring, (3) interaction with humans, and (4) process
optimization, which is stated here below in detail.

1) Computer generated monthly statements are unlikely to contain any errors unless they
arise during manual entry of check amounts. Error detection and recovery is concerned
with decisions that must be made by the system in response to undesirable operating
conditions. In the operation of any automated system, malfunctions and errors sometimes
occur during the normal cycle of operations, for which some form of corrective action
must be taken to restore the system. The usual response to a system malfunction has been
to call for human assistance. There is a growing trend in automation and robotics to enable
the system itself to sense these malfunctions and to correct for them in some manner
without human intervention. This sensing and correction is referred to as error detection
and recovery, and it requires that a decision-making capability be programmed into the
system.

2) Safety monitoring is a special case of error detection and recovery in which the
malfunction involves a safety hazard. Decisions are required when the automated system
sensors detect that a safety condition has developed that would be hazardous to the
equipment or humans in the vicinity of the equipment. The purpose of the safety-
monitoring system is to detect the hazard and to take the most appropriate action to remove
or reduce it. This may involve stopping the operation and alerting maintenance personnel
to the condition, or it may involve a more complex set of actions to eliminate the safety
problem.

3) Automated systems are usually required to interact with humans in some way. An
automatic bank teller machine, for example, must receive instructions from customers and
act accordingly. In some automated systems, a variety of different instructions from
humans is possible, and the decision-making capability of the system must be quite
sophisticated in order to deal with the array of possibilities.

4) A fourth reason for decision making in an automated system is to optimize the process.
The need for optimization occurs most commonly in such processes there is an economic
performance criterion whose optimization is desirable. For example, minimizing cost is usually an important objective in manufacturing. The automated system might use adaptive control to receive appropriate sensor signals and other inputs and make decisions to drive the process toward the optimal state. Customers’ experience on the service provider responsiveness to solve problems will have a positive significant influence on customer satisfaction. Jannatul M. N. (2010) indicated that waiting to identify problems following customers complain in the service delivery system might gauge the ATMs’ transactions progress and hinder of modern technological practice development culture. Accordingly, his study revealed that actions related with compliant handling or prompt responsiveness to solve operational problem is determinant element regarding to customer satisfaction. Zairi (2000) in his study revealed that the major gains in customer satisfaction derive from changes in service quality and service characteristics that include successful customer complaint handling.

2.2.3 Accessibility Impact on Customer Satisfaction

Accessibility is another measurement dimension as adapted from Jahan, Pathik, Parvez and Habib (2004) stated that a modern banking service technology provides higher degree of accessibility that enables customers to access their account at all times and places. Thus, accessibility is one element of service quality determinant that will have a positive significant influence on customers’ satisfaction and measured by frequent connection breakdown, Easy to navigate the bank site due to smooth speed, Transition is efficient or no waiting time, Response speed to complaint is satisfactory, and Speed of ATM transactions flow is faster than traditional banking channels.

In other study, Johnston, 1995; Joseph et al., 1999; Oppewal & Vriens, (2000) stated accessibility as very fast speed to access all automated services that avail on the integrated server. Moreover, they claim that to make ATM more approachable and accessible they should be made available in visible and public places such as supermarket, airport, malls/shopping area. The ATM delivery system should make automated services available in both on the bank and off banks premises to reduce the workload from traditional teller
environment. Therefore, customers’ experience regarding ATMs service accessibility has a positive significant influence and important towards customers” satisfaction.

2.2.4 Tangibles Impact on Customer Satisfaction

Gefen (2002) cited in Amirzadeh and Mousavi (2011) contends that in the process of evaluating the online service quality, the five traditional dimension of SERVQUAL model (Parasuraman et.al., 1985) should be collapsed into three tangibles, combined dimension of responsiveness, reliability and assurance, and empathy before employing to measure the eservice quality. Accordingly he tried to examine and find out the links among the dimensions of e-service quality, perceived risk, trust and cost to switch and the variable of customer loyalty. Santos(2003) cited in Amirzadeh and Mousavi(2011) came out with a model including: ease of use, appearance, linkage, structure and layout and content and the active dimensions consist of reliability, efficiency, support, communication, security and incentives. Broderick and Vachirapornpuk( 2002) cited in Seth et al.(2004) by using participant observation and narrative analysis of UK internet web site community have explored the perception of internet banking customers. Alanezi etal.(2010) state that because of the differences between the methods of measuring service quality in e-government and the physical market services( traditional service), there is a need to reword and modify the SERVQUAL scale items before employing these scales to measure the online context. Unlike the traditional service quality, the dimensions of the electronic banking system are new and different than the traditional service quality model. Accordingly Amirzadeh and Mousavi(2011:102) state that many models are in traditional service quality setting such SERVQUAL, whereas there are different models of the electronic service quality in which many different dimensions are taken into account and "insights from studies dealing with people-technology interactions imply that customer evaluation of new technologies is a distinct process". As a result to measure the e-service quality dimensions new instrument dimensions and a comprehensive framework need to be in place to identify the dimensions of e-service quality (Hongxiuetal., 2009). Studies show that customers prefer using a combination of automated service channels (Al-Hawari.,2005).
Even there are divergent views among the scholars regarding the use of ATM and its service quality measurement. For instance, Dilijonas et al. (2009) in the Baltic States assessed the five most dominate lever for ATM delivery channels service quality improvement that can be articulated in terms of sufficient number of ATMs, secure locations, system user friendly, convenient locations, and ATM functionality. Al-Hawari et al. (2005) identified ATM service quality dimensions such as sufficient number of ATM, secure locations, user friendly system, conveniently location and ATM functions. In the "old days" the process of long term relationship building has been practiced predominantly through face to face contact (Zeithmal and Bitner, 2004) while in the digital era where technology is the interface regarding communication between the service provider and the customer, the trend is totally shifted (Sangeetha, 2012). Zineldin (2000) cited in Sangeetha (2012) argues that technology plays a significant role for the development of such long term relationship. For instance, through self-service technologies customers can serve themselves in more effective and efficient manner which has never been imaginable in the "old days". Hence "Advances in communication technology have made people from all over the world electronic neighbors and electronic customers" (Goetsch and Davis, 2000:34). Kapoulas et al. (2002) cited in Sangeetha (2011) refers to such kind of relationship as "technological-ship" marketing.

### 2.2.5 Assurance Impact on Customer Satisfaction

According to Parasuraman, Berry and Zeithmal (1998) sited in Gezahegn (2015) Employees who instill confidence in customers, making customers feel safe in their transactions, employees who are consistently courteous and employees who have the knowledge to answer customers questions. For instance, Al-Hawari et al. (2005) argues that studies that have been conducted so far and available to be used to measure ATM service quality are quite limited in their focus and the emphasizes is only on one electronic channels, called internet banking and the attributes of the others such as ATM are ignored. They contended that several models have been presented to measure the customer perceptions of service quality in face to face interaction among customers and the employees of the firms so that it is possible to conceptualize a service quality measurement models in the traditional service setting and yet regarding the technology based banking
very few are done. They came out with five factors of customer perception of automated banking service quality which have demonstrated strong uni-dimensionality, reliability, convergent, discriminate and criterion related validity. They have conceptualized the automated service quality in banks as a five factor structure including ATM service quality, telephone banking, internet banking service quality, core service quality and price quality. Jun and Cai( 2001 ) cited in Al-Hawarietal.(2005)state that there have been a lot of studies that recognized the main service quality factors in the traditional banking setting, where the interaction between employees and customers is the basic communication channel while a few studies have inspected in automated service quality attributes in banking. Moreover, though extensive research has been conducted regarding the traditional service quality, only a limited number of scholarly articles are directly concerned with how customers assess e-service quality and its antecedents and consequences (Parasuraman etal.,2005).

John and John and Rotimi (2014) examined the effect of electronic banking on customer satisfaction in Nigeria. Using survey data, descriptive statistics and Chi-square test, they found that there is a significant relationship between electronic banking and customers’ satisfaction. The study further reveals that e-banking has become popular due to its convenience and flexibility; transportation related benefits like speed, efficiency and accessibility.

In the same vein, Adeoye and Lawanson (2012) utilized primary data, descriptive and explanatory survey design methods to evaluate customers satisfaction and its implications for banks performance in Nigeria. Findings reveal that although customers enjoy electronic banking services, they are not satisfied with the quality and efficiency of the services, judging from the number of times they physically visit banks and the length of time spent before the services are received.

Similarly, Danlami and Mayowa (2014) carried out an empirical investigation of Automated Teller Machine (ATMs) and customer’s satisfaction in Nigeria, A case study of Ilorin Kwara State. In the study, three commercial banks (First Bank of Nigeria Plc, Guaranty Trust Bank Plc and First City Monument Bank Plc) purposively selected and a sample size of 180, 60 from each bank selected randomly at the banks’ ATM terminals
during transaction while tables, percentages, charts and the Chi-square statistical tools were used to analyze the data collected. Findings reveal that there is a significant relationship between ATM usage and customer satisfaction.

Also, Adeniran and Junaidu (2014), undertook an empirical study of Automated Teller Machine (ATM) and user satisfaction in Nigeria using United Bank for Africa (UBA) Sokoto as case study, Cross-sectional survey design with questions on ATM services, customers of UBA within Sokoto metropolis as the population, sample size of 100 customers who are users of ATM services while the data collected were analyzed using Multiple Logistic Regression Analysis. It was found that the impact of ATM services in terms of their perceived ease of use, transaction cost and service security is positive and significant. With questionnaires to collect data from a sample of 125 employees conveniently selected from five banks in Lagos State with interswitch network, Software Package for Social Science (SPSS version 20.0 for Student Version) and Chi-square Statistical Technique, Jegede (2014) examined the effects of Automated Teller Machine on the performance of Nigerian banks. Findings reveal that the employment of ATMs terminals has averagely improved the performance of the Nigerian banks because of the alarming rate of ATM fraud.

2.2.6 CUSTOMER SATISFACTION

Customer satisfaction is the extent to which a product’s perceived performance matches a buyer’s expectations Kotler (2006). It further argues customer satisfaction depends on the product’s perceived performance relative to a buyer’s expectations. If the product’s performance falls short of expectations, the customer is dissatisfied. If performance matches expectations, the customer is satisfied and if performance exceeds expectations, the customer is highly satisfied or delighted (Kotler, 2006). Oliver (1997) defines customer satisfaction as the customers’ evaluation of a product in terms of whether that product has achieved their needs and expectations. If it fails to do so, dissatisfaction would occur. Satisfaction commonly has thresholds at a lower level (under fulfillment) and at an upper level (over-fulfillment). A consumer’s satisfaction may drop if he “gets too much of a good thing”. People focus upon the lower threshold and neglect the potential for an upper
threshold. Outcomes of satisfaction feelings may involve intent to repurchase, word-of-mouth and complaints.

2.3. Conceptual Frame Work

This study examines the customer satisfaction level in using ATMs services in the dimensions of services quality including reliability, responsiveness Tangibility, Assurance, and Accessibility, stated as independent variables and customer satisfaction is dependent variable. The conceptual framework of the study was developed from different authors findings (Parasuraman, Zeithamal and Berry (1988); Gronros (1990); Dilijonas et al. (2009); Lovelock (2000) and Parasuraman et al. (1985). The study was guided by conceptual framework. The interaction of variables in the model determines the effectiveness of service quality on customer satisfaction. The developed research framework stated here below indicated.

Independent variables

- Reliability
- Responsiveness
CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

The aim of this study was to examine the effects of ATM service quality dimensions on customer satisfaction. To achieve such objective, the research design, research methods, data Collection tools, data collection methods, sampling, target population, sampling
frame, data analysis and methods were briefly discussed which are the essential components for the study.

### 3.1 Research Design

A research design is the logic that links the data to be collected (and conclusions to be drawn) to the initial questions of a study (or a strategy or plan of action that links methods to outcomes) Creswell, (2003). This study used descriptive research design and inferential statistics in order to gather quantitative data. According to Sekaran (2003), a descriptive study is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation. The techniques also use in analysis as well as presentation of data collected, because it tries to describe and explain the data for the purpose of describing the nature of existing conditions finally to describe facts in the field.

Regression Analysis and Hypothesis Testing Results Multiple regression is used when the researcher wants to explore the predictive ability of a set of independent variables on one continuous dependent variable. It shows the degree by which the independent variables explain the variance in the dependent variable, at the same time it indicates the respective contribution of each of these independent variables, and helps to determine whether the results are statistically significant or not. As an inferential statistics tool, multiple regression was used for hypotheses testing (Pallant, 2007). In this study, multiple regression was employed to examine the effect of ATM service quality dimensions (independent variables) such as reliability, responsiveness, Tangibility, Assurance, and Accessibility on customer satisfaction (dependent variable). To have good results, the independent variables should not be highly correlated with each other. In multiple regression analysis, multicollinearity refers to the correlation among the independent variables (Pallant, 2007). Therefore, to make sure there is low multicollinearity, the values of Tolerance and VIF (Variance Inflation Factor) should be checked. According to Pallant (2007), tolerance indicates to what extent the independent variables do not explain much of the variability of a specified independent variable and the value should not be small (more than 0.10) to indicate the absence of multicollinearity.
3.2 Research Approach

As per Creswell (2003) there are three approaches that are used in conducting a given research. These are quantitative, qualitative and mixed research approach. Quantitative research approach focuses primarily on the construction of quantitative data, and quantitative data is a systematic record that consists of numbers constructed by researcher utilizing the process of measurement and imposing structure (Kent, 2007). The quantitative research approach employs measurement that can be quantifiable (Bryman & Bell, 2007).

Since this research was quantitative in nature, the quantitative methods were applied to analyze survey data and discover factors that affect customer’s satisfaction toward CBEs ATM service in commercial bank of Ethiopia. Relationships between the factors were computed, and compare similarities and differences across customers groups based on gender, age, profession, monthly income and usage rate of ATM.

3.3 Target Population

Any person who is currently using CBE ATM card banking under Four districts of the bank across Ethiopia has been taken as the target population of this study. According to the data obtained from the CBE ATM e-payment department office at the end of 30, June, 2016 the total number of ATM card holders under the district of the bank is 214,932 which is the target population of this study.

3.4 Sampling Techniques and Sample size determination

The researcher used non-probable sampling technique for this research specifically purposive sampling technique. Although CBE classifies Addis Ababa in to four districts which is south, north east and west. the researcher selected two branches in each districts which is total of 8 branch The reason for selecting these branches are since they are pioneers branches in commercial bank of Ethiopia they have high number of customers’ base and daily transaction, the other justification is the number of active card holder in this branches are high comparing to other branches.
By using statistical sample size determination formula of Tayo Yemane (1967). Because of time and budget constraint, the samples were restricted purposely to select branches which is in Addis Ababa region

\[ n = \frac{N}{1 + N(e)^2} \]

Where, \( n \) = is the sample size
\( N \) = is the population size,
\( E \) = is the level of precision or sampling error = (0.05)

\[
n = \frac{214932}{1 + 214932 (0.05)^2} = \frac{214932}{538.33} = 399.25
\]

Thus, sample size of 399 customers from total population of 214,932 customers.

Table 3.1 Total number of customers in Addis Ababa region and sample taken from each district.

<table>
<thead>
<tr>
<th>Districts</th>
<th>Branch</th>
<th>Total No of ATM user</th>
<th>Sample taken from each branch</th>
<th>Sample proportion from each branch</th>
</tr>
</thead>
<tbody>
<tr>
<td>South</td>
<td>Finfine</td>
<td>32361</td>
<td>60</td>
<td>15.04%</td>
</tr>
<tr>
<td></td>
<td>Lideta</td>
<td>17999</td>
<td>33</td>
<td>8.27%</td>
</tr>
<tr>
<td>North</td>
<td>4 killo</td>
<td>19691</td>
<td>37</td>
<td>9.27%</td>
</tr>
<tr>
<td>Region</td>
<td>Branch</td>
<td>Customers</td>
<td>Respondents</td>
<td>Satisfaction</td>
</tr>
<tr>
<td>------------</td>
<td>---------------</td>
<td>-----------</td>
<td>-------------</td>
<td>--------------</td>
</tr>
<tr>
<td>East</td>
<td>Megagna</td>
<td>25665</td>
<td>48</td>
<td>12.03%</td>
</tr>
<tr>
<td></td>
<td>Bole</td>
<td>14126</td>
<td>26</td>
<td>6.51%</td>
</tr>
<tr>
<td>West</td>
<td>Tekl haymanot</td>
<td>19981</td>
<td>37</td>
<td>9.27%</td>
</tr>
<tr>
<td></td>
<td>Selasse</td>
<td>27036</td>
<td>50</td>
<td>12.54%</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>214932</td>
<td>399</td>
<td>100%</td>
</tr>
</tbody>
</table>

Base on the above table the total of 399 questioners was distributed to potential respondents’ by using convince sampling technique who were customers of each selected branches. The questionnaires were distributed for collecting primary data when they were entering the bank and also while they were served. The purpose for using this specific sampling method was due to the respondents being easily available & accessible, as well as it being less time consuming and inexpensive to gather the required data. Researches stated that “the advantage of non-probability samples is that they are less complicated and more economical than probability samples.

3.5 Data Sources

To collect valid and reliable data for this research, the researcher was used both data sources (primary and secondary source of data). Primary source of data was mainly using questionnaire which is adopted from previous researchers. Secondary source was gathered from different kind of resource such as report of commercial bank of Ethiopia, brochures, e-commerce books, service marketing books, journals, company website and internet etc...

3.6 Instruments of Data collection

Furthermore, the research is focused on assessing the factors (service dimensions) affecting customer satisfaction in ATM service in CBE. The study was focused on identifying determinants of ATM service on customer satisfaction, the relationship among the dimensions and their effect on service quality in the Bank from which an insight was
revealed to spot the significant dimensions that determine customers’ satisfaction in ATM banking. The study was carried out at different Branches of CBE in Addis Ababa.

The survey instrument consisted of items which were identified through a comprehensive review of the e-service quality literature. By employing Self-administered questionnaire, participants of the study were contacted in person and support was given in time of need to clarify the concepts in the items. A total of 19 items for 5 categories of customer satisfaction dimensions each consists of 3 up to 4 items were primarily distributed to customers of CBE.

The instrument was divided into two main sections; the first section was related to demographic information of the respondents and the second related to survey of ATM overall satisfaction. Statements in the second section represented each groups of items measuring a particular dimension ATM using a five Likert rating scale of 1 to 5 where; strongly Disagree (SD) = 1, Disagree (D) = 2, Neutral (N) = 3, Agree (A) = 4 and Strongly Agree (SA) = 5. The use of Linker scale is to make easier for respondents to answer question in a simple way from the selected respondent. Moreover, the central issue to argue that likert scales is that it produces ordinal data.

3.7 Data analysis methods

After completion of both primary and secondary data, Pearson Correlation analysis and regression were used to analysis and present the data. Pearson’s correlation analysis was used to find out whether any relationship exists between the independent and dependent variables. Correlations analysis is the statistical tool that can be used to describe the degree to which one variable is linearly related to another (Levin and rubin, 1998). After collecting the data, correlation metric for the variables were prepared and the researcher looked for significant correlation.

For the analysis of quantitative data both descriptive and inferential statistics were used. To aid computation a Statistical Package for Social Science (SPSS) version 20 was employed. After the data get collected, the data analysis was done as follows:
Coding is assigning separate code number to each variable in the study. Then the process of eliminating coding and data entry errors," clearing the data' (Rubin and Babbie, 2010) was done.

3.8 Validity and Reliability Testing

The level of reliability of the instrument is measured by the consistency of the variables and it check with the Cronbach’s alpha statistics. Cronbach’s alpha is an index of reliability associated with the variation accounted for by the true score of the “underlying construct” (Nunnaly, 1978). Cronbach’s Alpha’s can only be measured for variables which have more than one measurement question. Nunnaly (1978) has stated that 0.5 is a sufficient value, while 0.7 is a more reasonable Cronbach’s alpha.

Moreover, to secure the content validity of the instrument, the researcher refers previous researcher’s questionnaires that fit the purpose and let the advisor to review the instrument before distributing to the respondents.

3.9 Ethics

This study like other academic researches abides by ethical issues, moral conducts and commercial confidentiality to the bank's data and for the privacy of respondents. The questionnaires were designed out in such a way that respondents are not required to write their names and reveal their personal information on the questionnaire and the confidentiality of the data being collected is handled with due care and used for academic purpose only.

CHAPTER FOUR

Data analysis and presentation

4.1 Result Analysis
In this chapter data editing and coding, response rate, results of test of normality of data, reliability testing, Multicollinearity test, correlation, regression and the demographic profile briefly detailed.

Since this research was quantitative in nature, the quantitative methods were applied to analyze survey data, discover factors affecting the customer satisfaction in commercial bank of Ethiopia ATM and relationships between the factors, and compare similarities and differences across customers groups based on gender, age, professions and monthly income.

4.1.1. Data Editing and Coding

Once the primary data was collected, prior to the analysis the questionnaire was reviewed and this is to certify that if questionnaires were filled out appropriately. Any incomplete or missing response was discarded from the subsequent analysis. The steps which were stated in the data analysis section such as Coding, eliminating coding and data entry errors, known as "clearing the data"(Rubin and Babbie, 2010) were performed were used.

4.1.2 Response Rate

To analyze the collected data SPSS (statistical package for social science) version 20 was used to compute and analyze the collected data. for a sample size of 399 questionnaires were prepared to potential respondents to fill the structured questions and collected.

4.2 Survey Analysis

4.2.1. Analysis of demographic profile of respondents

4.2.1.1. Gender

Based on table 4.1 Analysis show that 57.6% of the customers who are using automatic teller machine service were male and the remaining 42.4% were females.
Table 4.1 Gender

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>230</td>
<td>57.6</td>
<td>57.6</td>
<td>57.6</td>
</tr>
<tr>
<td>Female</td>
<td>169</td>
<td>42.4</td>
<td>42.4</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>399</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Own Survey, 2017

4.2.1.2. Age

The table here under explains, the age between 18 and 25 consists of the highest percentage (51.4%) from among all other respondents in the sample. The remaining users are 24.6% (26-30), 9.8% (41-50), 9.3% (31-40), 5 % (>50) and the lowest percentage goes to the age of above 50(only 5%). The outcome of this demographic variable describes Majority of the customer’s which is (75.9%) of the respondent lays between 18-30 age group.

Table 4.2 Age

<table>
<thead>
<tr>
<th></th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-25</td>
<td>205</td>
<td>51.4</td>
<td>51.4</td>
<td>51.4</td>
</tr>
<tr>
<td>26-30</td>
<td>98</td>
<td>24.6</td>
<td>24.6</td>
<td>75.9</td>
</tr>
<tr>
<td>31-40</td>
<td>37</td>
<td>9.3</td>
<td>9.3</td>
<td>85.2</td>
</tr>
<tr>
<td>41-50</td>
<td>39</td>
<td>9.8</td>
<td>9.8</td>
<td>95.0</td>
</tr>
<tr>
<td>&gt;50</td>
<td>20</td>
<td>5.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>399</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Own Survey, 2017

4.2.1.3. Profession

People who are employees of different organization cover 76.7% or 306 of the total respondents whereas self-employed and other people represent 22.8% and 0.5% respectively. This shows that employed people are the foremost users of CBE ATM service.
### Table 4.3 Profession

<table>
<thead>
<tr>
<th>Profession</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Employed</td>
<td>306</td>
<td>76.7</td>
<td>76.7</td>
<td>76.7</td>
</tr>
<tr>
<td>Self employed</td>
<td>91</td>
<td>22.8</td>
<td>22.8</td>
<td>99.5</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>.5</td>
<td>.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>399</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

**Source:** Own Survey, 2017

#### 4.2.1.4. Monthly income (in birr)

Personal income level of the customers who are using automatic teller machine in CBE in Addis Ababa include 49.1% of the customers getting up to 3001-5000 personal income monthly, 29.1% of the customers getting 1001-3000 personal income monthly, 13.5% of the customers getting 5001-10000 personal income monthly, and only 8.3% of the customers getting above 10,000 personal income monthly in terms of birr. In a clear manner the personal monthly income level customers who are using CBE bank ATM in Addis Ababa were shown in the following **Table**.

### Table 4.4 Income

<table>
<thead>
<tr>
<th>Income Range</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1001-3000</td>
<td>116</td>
<td>29.1</td>
<td>29.1</td>
<td>29.1</td>
</tr>
<tr>
<td>Valid 3001-5000</td>
<td>196</td>
<td>49.1</td>
<td>49.1</td>
<td>78.2</td>
</tr>
<tr>
<td>5001-10000</td>
<td>54</td>
<td>13.5</td>
<td>13.5</td>
<td>91.7</td>
</tr>
</tbody>
</table>
4.2.1.5. Status of ATM usage

This variable indicates how long the respondents used ATM banking since they hold CBE ATM card. The following table clearly portrays those respondents who used ATM service. Based on the finding, 1 to 2 years’ accounts about 60.2% of the total sample are using the service well whereas the other categories above two years cover the remaining 39.8%.

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;6 months</td>
<td>47</td>
<td>11.8</td>
<td>11.8</td>
<td>11.8</td>
</tr>
<tr>
<td>6 to 1 year</td>
<td>82</td>
<td>20.6</td>
<td>20.6</td>
<td>32.3</td>
</tr>
<tr>
<td>1-2 years</td>
<td>240</td>
<td>60.2</td>
<td>60.2</td>
<td>92.5</td>
</tr>
<tr>
<td>above 2 years</td>
<td>30</td>
<td>7.5</td>
<td>7.5</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>399</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Source: Own Survey, 2017

4.2.1.6. Frequency of ATM usage per Month

This variable shows how frequently respondents used ATM service within a Month. According to the finding respondents use CBE ATM service 1-3 times are accounts (50.4%) where as 19.3% used 4-8 times, 14.5% 9-12 times and 15.8% over 12 times per month. This depicts that customers are using the service 6 times on average.

<table>
<thead>
<tr>
<th>Valid</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-3 times</td>
<td>201</td>
<td>50.4</td>
<td>50.4</td>
<td>50.4</td>
</tr>
<tr>
<td>4-8 times</td>
<td>77</td>
<td>19.3</td>
<td>19.3</td>
<td>69.7</td>
</tr>
</tbody>
</table>

43
4.3. Descriptive statistics for all surveyed item

This section reports each variable statistics used in this study. The respondents were asked to rate each item on a scale ranging from 1 (strongly disagree) to 5 (strongly agree), for conducting this research. The following table contains descriptive statistics for all items. The factor reliability, means range from 2.6 to 2.7, responsiveness item means range from 3.3 to 3.6, tangibility item means range from 4.1 to 3.5, assurance item means range from 3.04 to 3.09, accessibility item means range from 3.89 to 3.31 and finally the dependent variable satisfaction item means is 3.4 Frequency tables of the selected dependent and independent variables are presented in terms of mean, and standard deviations in the following tables.

Table 4.7 Reliability Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability1</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>2.7469</td>
<td>.94767</td>
</tr>
<tr>
<td>Reliability2</td>
<td>399</td>
<td>1.00</td>
<td>4.00</td>
<td>2.5739</td>
<td>.82907</td>
</tr>
<tr>
<td>Reliability3</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>2.6617</td>
<td>.90687</td>
</tr>
<tr>
<td>Reliability4</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>2.6015</td>
<td>.91008</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>2.6015</td>
<td>.91008</td>
</tr>
</tbody>
</table>

Table 4.8 Responsiveness Statistics
### Table 4.9 Tangibility Statistics

<table>
<thead>
<tr>
<th>Tangible</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible1</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>3.7268</td>
<td>.93403</td>
</tr>
<tr>
<td>Tangible2</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5990</td>
<td>1.13845</td>
</tr>
<tr>
<td>Tangible3</td>
<td>399</td>
<td>2.00</td>
<td>5.00</td>
<td>3.9373</td>
<td>.74252</td>
</tr>
<tr>
<td>Tangible4</td>
<td>399</td>
<td>3.00</td>
<td>5.00</td>
<td>4.1529</td>
<td>.64907</td>
</tr>
</tbody>
</table>

### Table 4.10 Assurance Statistics

<table>
<thead>
<tr>
<th>Assurance</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance1</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>3.0652</td>
<td>.88583</td>
</tr>
<tr>
<td>Assurance2</td>
<td>399</td>
<td>2.00</td>
<td>5.00</td>
<td>3.0977</td>
<td>.86412</td>
</tr>
<tr>
<td>Assurance3</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>3.0426</td>
<td>.90542</td>
</tr>
</tbody>
</table>

Source: Own Survey, 2017
Table 4.11 Accessibility Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility1</td>
<td>399</td>
<td>2.00</td>
<td>5.00</td>
<td>3.8221</td>
<td>.88022</td>
</tr>
<tr>
<td>Accessibility2</td>
<td>399</td>
<td>1.00</td>
<td>5.00</td>
<td>3.3183</td>
<td>1.38964</td>
</tr>
<tr>
<td>Accessibility3</td>
<td>399</td>
<td>2.00</td>
<td>5.00</td>
<td>3.4837</td>
<td>1.07466</td>
</tr>
<tr>
<td>Accessibility4</td>
<td>399</td>
<td>2.00</td>
<td>5.00</td>
<td>3.8972</td>
<td>.80324</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Own Survey, 2017

Table 4.12 Satisfaction Statistics

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction</td>
<td>399</td>
<td>2.00</td>
<td>5.00</td>
<td>3.4687</td>
<td>.83178</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.4. Reliability Test

A value of .70 or greater is deemed to be indicative of good scale reliability. Table 4.13 shows the results of the calculated composite’s reliability to support construct reliability. The reading of composite reliability of the latent variables is above 0.70. Therefore, all latent variables have good reliability.
Table 4.13 Reliability Test

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Cronbach's Alpha</th>
<th>N</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reliability</td>
<td>.890</td>
<td>399</td>
<td>4</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.825</td>
<td>399</td>
<td>4</td>
</tr>
<tr>
<td>Tangibility</td>
<td>.789</td>
<td>399</td>
<td>4</td>
</tr>
<tr>
<td>Assurance</td>
<td>.911</td>
<td>399</td>
<td>3</td>
</tr>
<tr>
<td>Accessibility</td>
<td>.879</td>
<td>399</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Own Survey, 2017

4.5. Multicollinearity Test

Multicollinearity refers to the extent to which an independent variable can be explained by other independent variables in the analysis and if too high this can have harmful effect on regression.

After the normality of the data in the regression model is met, the next step was to determine whether there is similarity between the independent variables in a model, it is necessary to test Multicollinearity problem.

Similarities between the independent variables will result in a very strong correlation. In addition, Multicollinearity test done to avoid habits in the decision making process regarding the partial effect of independent variables on the dependent variable. Good regression model should not happen correlation between the independent variables or not happen Multicollinearity. Test Multicollinearity as a basis the VIF value of Multicollinearity test results using SPSS version 20. Making process in Multicollinearity test if the VIF value lies between 1-10, then there is no Multicollinearity and if the VIF less Than 1 or greater than 10 then there is Multicollinearity problem.

Based on the above assumption the correlations between constructs were checked for Multicollinearity and the results showed that on (Table 4.15: Regression Weights) the correlations between all constructs were below 0.90 or between 1 and 10, which suggests that the constructs were redundant and that Multicollinearity problem was not an issue.
4.6. Correlations Analysis

Correlations are a measure of the linear relationship between two variables. A correlation coefficient has a value ranging from -1 to 1: values closer to the absolute value of 1 indicating that there is a strong relationship between the variables being correlated whereas values closer to 0 indicate that there is little or no linear relationship. The sign of a correlation coefficient 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: as one variable increases in value, so does the other. A negative value indicates a negative linear relationship between variables.

In this research to find the inter-relationship between the factors, correlation has been derived from SPSS. The following table shows the correlation of all the factors, representing the direction and strength of inter-relationship between these factors. Correlation matrix is shown in Table 4.14.
### Table 4.14 Correlations MATRIX

<table>
<thead>
<tr>
<th></th>
<th>Reliability</th>
<th>Responsiveness</th>
<th>Tangibility</th>
<th>Assurance</th>
<th>Accessibility</th>
<th>Satisfaction</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Reliability</strong></td>
<td>Pearson</td>
<td><strong>1</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>399</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Responsiveness</strong></td>
<td>Pearson</td>
<td><strong>.102</strong>*</td>
<td><strong>1</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>399</td>
<td></td>
<td>399</td>
<td></td>
<td>399</td>
</tr>
<tr>
<td><strong>Tangibility</strong></td>
<td>Pearson</td>
<td><strong>.292</strong>**</td>
<td><strong>.372</strong>**</td>
<td><strong>1</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>399</td>
<td>399</td>
<td>399</td>
<td>399</td>
<td>399</td>
</tr>
<tr>
<td><strong>Assurance</strong></td>
<td>Pearson</td>
<td><strong>.654</strong>**</td>
<td><strong>.395</strong>**</td>
<td><strong>.045</strong></td>
<td><strong>1</strong></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>399</td>
<td>399</td>
<td>399</td>
<td>399</td>
<td>399</td>
</tr>
<tr>
<td><strong>Accessibility</strong></td>
<td>Pearson</td>
<td><strong>.394</strong>**</td>
<td><strong>.546</strong>**</td>
<td><strong>.348</strong>**</td>
<td><strong>.040</strong></td>
<td><strong>1</strong></td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>399</td>
<td>399</td>
<td>399</td>
<td>399</td>
<td>399</td>
</tr>
<tr>
<td><strong>Satisfaction</strong></td>
<td>Pearson</td>
<td><strong>.409</strong>**</td>
<td><strong>.203</strong>**</td>
<td><strong>.286</strong>**</td>
<td><strong>.512</strong>**</td>
<td><strong>.175</strong>**</td>
</tr>
<tr>
<td></td>
<td>Correlation</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sig. (2-tailed)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>N</td>
<td>399</td>
<td>399</td>
<td>399</td>
<td>399</td>
<td>399</td>
</tr>
</tbody>
</table>

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

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

For example, the positive correlation coefficient between satisfaction and Reliability (.102) indicates that there is a statistically significant \((p < .001)\) linear relationship between these two variables such that the more Reliability the ATM is, the larger satisfaction a person has.

The significant relationship between Tangibility and customer satisfaction was investigated using the Pearson’s correlation coefficient. There is a positive relationship between the two variables \((r = 0.654, n = 399)\), with significant level of reliability \((p < .001)\) being associated with the Tangibility of ATM operation.
### 4.7. Regression Weights

Regression is a technique that can be used to investigate the effect of one or more predictor variables on an outcome variable. Regression analysis allows making statements about how well one or more independent variables will predict the value of a dependent variable.

#### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>T</th>
<th>Sig.</th>
<th>Collinearity Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
<td>Toleranc</td>
</tr>
<tr>
<td>(Constant)</td>
<td>4.631</td>
<td>.283</td>
<td></td>
<td>16.38</td>
<td>.000</td>
</tr>
<tr>
<td>Reliability</td>
<td>.213</td>
<td>.068</td>
<td>.200</td>
<td>3.123</td>
<td>.002</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>.089</td>
<td>.080</td>
<td>.059</td>
<td>1.115</td>
<td>.266</td>
</tr>
<tr>
<td>Tangibility</td>
<td>.433</td>
<td>.053</td>
<td>.361</td>
<td>8.217</td>
<td>.000</td>
</tr>
<tr>
<td>Assurance</td>
<td>.413</td>
<td>.058</td>
<td>.405</td>
<td>7.073</td>
<td>.000</td>
</tr>
<tr>
<td>Accessibility</td>
<td>.361</td>
<td>.050</td>
<td>.395</td>
<td>7.265</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Satisfaction

**Table 4.15: Regression Weights**

The results of regression table shows that Reliability has positive effect on customer satisfaction on ATM service ($\beta=.213$, and $P=0.02$) in fact $P$ value is significant at 0.02 which is greater comparing to significant level <.000 but as a rule of tamp if $P$ value is less than 0.05 it is significant.

The construct Responsiveness has also positive effect on customer satisfaction on ATM service ($\beta=.089$ and $P=0.266$) the analysis for Responsiveness show that as Responsiveness increases customer satisfaction on ATM service also increases. But in this case the significant value is greater than .005 which is not acceptable so the independent variable for the analysis cannot explain the dependent value.
Tangibility is essential determinants of customer satisfaction. The regression coefficients B=0.433, p<0.05 shows positive relationship between the constructs moreover. Furthermore the variable Tangibility has the most positive value of β from all independent variables. The largest positive beta value indicates the higher explaining power of the dimension on the overall customer satisfaction.

Assurance has positive value of beta β=0.413 and significant at P value <.000. Which indicate by the fact that when Assurance of the ATM service increases the satisfaction of ATM users also increases. In this research finding Assurance is the second most determinant of customer satisfaction on ATM service next to Tangibility.

Accessibility is significantly and positive influence on customer satisfaction on ATM service because of β=0.361 and P=.000, it shows that when Accessibility of ATM for the service increases satisfaction on ATM service also increases.

4.8. Group Analysis
4.8.1. T-Test

Independent samples t-tests were conducted it was to determine if there was a significant difference on satisfaction level of customers about the ATM service between female and male user ATM service; As in Table 4.17, Levene statistics of tests indicate variance homogeneity at significant levels of 0.002 (p <0.05). Thus, the two-tail significance for equal variances estimates was used to determine whether the difference existed between two groups of ATM service user’s i.e. for male and female.

As presented in Table 4.16 and 4.17, the results for tests suggested that there is significant difference between the ATM users groups. Table 4.17 gives the mean test result of two gender-oriented independent-sample T tests for customer satisfaction on ATM. In the homogeneity test of variance, p=0.002 (less than the significance level p=0.05), meaning that the variance is not homogeneous. In the two-sided test, p=0.000 (less than the significance level p=0.05), meaning that the test on gender revealed a significant difference between females and males on customer satisfaction regarding ATM service.
Table 4.16 Group statistics of satisfaction level by gender

<table>
<thead>
<tr>
<th>Gender</th>
<th>N</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Std. Error Mean</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction Male</td>
<td>230</td>
<td>3.7348</td>
<td>.71424</td>
<td>.04710</td>
</tr>
<tr>
<td>Female</td>
<td>169</td>
<td>3.1065</td>
<td>.84545</td>
<td>.06503</td>
</tr>
</tbody>
</table>

Table 4.17 T-test for the Relationship Between Gender And customer satisfaction on CBE’s ATM and Levene’s test for equality of variances

<table>
<thead>
<tr>
<th>Levene’s Test for Equality of Variances</th>
<th>t-test for Equality of Means</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Sig.</td>
</tr>
<tr>
<td>10.016</td>
<td>.002</td>
</tr>
<tr>
<td>7.824</td>
<td>.000</td>
</tr>
</tbody>
</table>

4.8.2. ANOVA Tests

Four ANOVA tests were computed to determine if there was a significant difference on satisfaction level of customer over CBE’s ATM based on their age, Profession, Monthly Income in birr and usage rate of ATM card per month.
**ANOVA Tests for Age**

**Table 4.18 Test of Homogeneity of Variances AGE category**

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>33.974</td>
<td>4</td>
<td>394</td>
<td>0.00</td>
</tr>
</tbody>
</table>

For the age variable, the F test in the one-way analysis of variance is adopted, as shown in Table 4.18 and 4.19. In the homogeneity test of variance for age qualification, p=0.00 (less than the significance level p=0.05), meaning that the variance is not homogeneous. In the significance test of difference, p is lower than the significance level, indicating that people at different ages have different satisfaction level of the ATM service of CBE.

**ANOVA Tests for profession**

**Table 4.20 Test of Homogeneity of Variances profession category**

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>131.604</td>
<td>4</td>
<td>32.901</td>
<td>90.175</td>
<td>0.00</td>
</tr>
<tr>
<td>Within Groups</td>
<td>143.754</td>
<td>394</td>
<td>.365</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>275.358</td>
<td>398</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4.21 ANOVA Test for the Relationship Between profession And customer satisfaction on CBE’s ATM**

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>43.366</td>
<td>2</td>
<td>21.683</td>
<td>37.012</td>
<td>0.00</td>
</tr>
</tbody>
</table>
Within Groups | 231.992 | 396 | .586 |
Total | 275.358 | 398 |

For the profession variable, the F test in the one-way analysis of variance is adopted, as shown in Table 4.20 and 4.21. In the homogeneity test of variance for profession, \( p=0.000 \) (less than the significance level \( p=0.05 \)), meaning that the variance is not homogeneous. In the significance test of difference, \( p \) is lower than the significance level \( P=0.000 \), indicating that people at different occupation have no same level of satisfaction on CBE’S ATM.

**ANOVA Tests for monthly income**

Table 4.22 Test of Homogeneity of Variances monthly income category

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>51.029</td>
<td>3</td>
<td>395</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 4.23 ANOVA Test for the Relationship Between income And customer satisfaction on CBE’s ATM

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>116.451</td>
<td>3</td>
<td>38.817</td>
<td>96.488</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>158.908</td>
<td>395</td>
<td>.402</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>275.358</td>
<td>398</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For the Monthly Income variable also, the F test in the one-way analysis of variance is adopted, as shown in Table 4.22 and 4.23. In the homogeneity test of variance for Monthly Income, \( p=0.00(\text{less than the significance level } p=0.05) \), meaning that the variance is not homogeneous. In the significance test of difference, \( p \) is lower than the significance level \( P=.000 \), indicating that people at different Monthly Income have no similar satisfaction on CBE’s ATM.
ANOVA Tests for Usage rate

Table 4.24 Test of Homogeneity of Variances usage rate category

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Levene Statistic</th>
<th>df1</th>
<th>df2</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>86.929</td>
<td>3</td>
<td>395</td>
<td>.000</td>
</tr>
</tbody>
</table>

Table 4.25 ANOVA Test for the Relationship Between usage rate And customer satisfaction on CBE’s ATM

<table>
<thead>
<tr>
<th>Satisfaction</th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>86.531</td>
<td>3</td>
<td>28.844</td>
<td>60.337</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>188.827</td>
<td>395</td>
<td>.478</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>275.358</td>
<td>398</td>
<td>.478</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Usage rate of ATM per month as shown in Table 4.24 and 4.25. In the homogeneity test of variance for Usage rate, p=0.00 (less than the significance level p=0.05), meaning that the variance is not homogeneous. In the significance test of difference, p is lower than the significance level P=0.000, indicating that people having different Usage rate have different satisfaction level of CBE’s ATM.
CHAPTER FIVE
DISCUSSION OF RESEARCH FINDINGS

5.1 Introduction

The main purpose of the study was to examine the impact of ATM service on customer satisfaction in Commercial bank of Ethiopia. The case study was Commercial bank of Ethiopia eight branches from four districts that are found in Addis Ababa were selected by convenience sampling methods. Those, The Selected Eight Branches Are Finfine, Lideta, Tekele Haimanot, Addis Ababa, Megnenanga, Bole, Arat Kilo And Silase Branches.

This study is concerned with examine the impact of ATM service on customer satisfaction in Commercial bank of Ethiopia. In this study five independent and one dependent variable is selected, these factors include

Reliability, Responsiveness, Tangibility, Assurance, Accessibility and the dependent factor is customer satisfaction on CBE’s ATM the finding on those mention factors are discussed as follows.

The result of multiple regression as shown in Table 4.15 indicates that the relationship between Reliability of ATM and satisfaction is significant at P value .002 and Beta= 0.213. Accordingly, H 1 which stated that Reliability of ATM has significant relationship with customer satisfaction is supported at the P value 0.02 significance level. Therefore, hypothesis H1 is accepted.

Responsiveness of ATM service has significant relationship with customer satisfaction is not significant with significance level of (Beta= 0.089, p= 0.266). This result does not support the existence of a positive relationship between Responsiveness of ATMs and the customer’s satisfaction.
Likewise the $\beta$ coefficient shows a positive relationship for Tangibility with customer satisfaction of ATM users because it has a significant P value of <.05 and show a positive B coefficient i.e. $B=.433$, in respect to the hypothesis, hypothesis H3 is supported.

The factor Assurance has positive value of beta $\beta=.413$ and significant at P value <.000. Which indicate by the fact that when Assurance of the ATM service increases the satisfaction of ATM users also increase. This result supports the existence of a positive relationship between Assurance of ATMs and the customer’s satisfaction.

The last factor for this study Accessibility is significantly and positive influence on customer satisfaction on ATM service because of $\beta=.361$ and $P=.000$, it shows that when Accessibility of ATM for the service increases satisfaction on ATM service also increases.

**Table 5.1 Summary of Major Findings and Hypothesis Test Result**

<table>
<thead>
<tr>
<th>Statement of Hypothesis</th>
<th>Accepted/Rejected</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>H1</strong>: Reliability of ATM service has a positive and significant relationship with customer satisfaction.</td>
<td>Accepted</td>
</tr>
<tr>
<td><strong>H2</strong>: Responsiveness of ATM service has a positive and significant relationship with customer satisfaction.</td>
<td>Rejected</td>
</tr>
<tr>
<td><strong>H3</strong>: Tangibility and privacy of ATM service have a positive and significant relationship with customer satisfaction</td>
<td>Accepted</td>
</tr>
<tr>
<td><strong>H4</strong>: Assurance has a positive and significant relationship with ATM service quality.</td>
<td>Accepted</td>
</tr>
<tr>
<td><strong>H5</strong>: Accessibility has a positive and significant relationship with ATM service quality.</td>
<td>Accepted</td>
</tr>
</tbody>
</table>

Finally the demographic factor which includes gender, age, profession, monthly income and ATM usage rate were tested using T test for gender and ANOVA test for the other demographic variables. The T test for gender show interesting finding, the test on gender revealed a significant difference between females and males on customer satisfaction regarding ATM service previous research showed that gender differences have shown to exist in technology acceptance (Venkatesh & Davis, 2000; Wolin & Korganmkar, 2003; Gefen & Straubd, 1997). Wolin and Korganmkar (2003) found that males and females
differ significantly in several dimensions with males exhibiting more positive beliefs and attitudes about technology in this context ATM.

Using ANOVA statistics age is found as significant indicating that people at different ages have different satisfaction level of the ATM service of CBE. Also for profession, the analysis indicates that people at different profession have no same level of satisfaction on CBE’S ATM. profession and monthly income difference have no similar satisfaction on CBE’s ATM. At last usage rate has significant relation with satisfaction indicating that people having different Usage rate have different satisfaction level of CBE’s ATM.

5.2. CONCLUSION AND RECOMMENDATION

5.2.1. Conclusion

The rapid increase in number of automated delivery channels and customers’ preference to use ATM because of multifaceted attributes are placing pressure on banks to respond aggressively to meet the customers’ needs. The study provides 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. The rapid diffusion of ICT in Ethiopian banking sector provides a platform to use innovative technologies to enhance operational efficiency and quality of service to attain and retain customers. The rapid growth in use of ATMs in Ethiopia offers opportunities to banks to use customers’ passion for this innovative service for strategic advantage.

This study investigates automated teller machine user’s customer and customers’ satisfaction in Addis Ababa, Ethiopia on CBE’s ATM service. The result of the study indicates positive relationship between Reliability, Responsiveness, Tangibility, Assurance and Accessibility with customer satisfaction on CBE’s ATM. Despite Responsiveness which is positively related but not significant.
Furthermore, group analyses were tested using Independent samples t-tests and ANOVA to measure the relationship between demographic factors and customer satisfaction. The test of gender vs. satisfaction and Levene’s test for equality of variances on gender revealed a significant difference between females and males on customer satisfaction regarding ATM service satisfaction. Like gender, using ANOVA statistics age is found as significant indicating that people at different ages have different satisfaction level of the ATM service of CBE. Using ANOVA statistics for profession, the analysis indicate that people at different profession have no same level of satisfaction on CBE’S ATM. monthly income difference have no similar satisfaction on CBE’s ATM. At last usage rate has significant relation with satisfaction indicating that people having different Usage rate have different satisfaction level of CBE’s ATM.

5.2.2. Recommendation

The banks should proactively monitor customers’ preferences with regard to use of this delivery channel for effective response. In conclusion the banks should also augment and diversify their offerings through ATM and use this medium to build a strong and sustained relationship with customers.

Based on the findings of this research work, the following recommendation has been drawn up to help enhance service quality of automated teller machines (ATM).

- **Regarding Reliability**, The bank should increase ability to provide accurate and dependable services to consistently performing the right service.
- The bank should be willing to assist its customers by providing fast and efficient service performances; the willingness that the bank employees will exhibit should, promptly, continuously and efficiently must solve customer requests and problems regarding ATM service issue.
- the physical characteristics associated with the ATM should be attractive, clean, easily understandable
The Diverse features such as the banks employee specific service knowledge about the ATM, polite and trustworthy behavior can provide confidence to customers. Hence the bank must give attention to those characteristics of its employee to increase the satisfaction level of its ATM users.

Regarding Accessibility the bank’s ATM and offices should be convenient for customer service and office operation hours should be suitable for customer and be supposed to be suitability for service delivery process.

Improving the customer experience in using the technology based services and facilitating awareness creation ventures in such a way that customers may learn and get aquatinted with the technology and the use of techno-based banking will be availed by the general public.

5.2.3. Implications and Suggestions for Future Research

Despite the useful findings of the study, this study has several limitations that need to be acknowledged. Several factors five were examined in this study. Future studies should attempt to draw profiles based on characteristics other than these factors. And also the data for this study was only collected in commercial bank of Ethiopia in Addis Ababa which have technological different environment from some other places and other banks, thus the results may not be generalized. The sample for this study was biased in terms of gender. The gender distribution of the study subjects was 57.6 % male and 42.4 % females. Thus, men were overrepresented. Therefore, future research is required to see if the same results could be achieved using different samples. To generalize the findings of this study, more research is encouraged on other samples. Furthermore, Opinion of unbanked and non-user of ATM people was not factored in to this study and the factor identified would be predominantly users of ATM services who had existing bank account only in CBE.
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APPENDIX

St. Mary's university masters in (MBA) general management


(To be filled by Addis Ababa Residents who are CBE Bank ATM card Holders)

Dear Respondent;

I am a post graduate student of st.mary’s university in general management department. I would like first of all to thank you for your cooperation in filling out this questionnaire. It is considered as part of the research thesis for the partial fulfillment of the requirements of Master of Arts in General Management department which is designed for gathering information on how you feel about the quality service of the ATM-banking service of the CBE. As your responses to the statements below have great bearing to my Thesis work, thus I kindly request you to fill it out carefully and genuinely. This information is going to be used just only for academic purpose and apart from that your responses will be treated with great confidentiality For further information please contact the student researcher telephone: +2510913025784 and email: hiwotgessese123@gmail.com hiwot gessese :Candidate of MA Degree

General Instruction:
There is no need of writing your name
Please put ( √ ) Mark to indicate your preference
Thank you for your valuable response and timely co-operation

1. General Information

a. gender

Male □ Female □

b. Age

18 - 25 years □ 41 – 50 years □
26 - 30 years □ 51 – 60 years □
31 – 40 years □ □ Above 60 years □

C. Profession

Employee □ □ Retired □
Self-employed □ □ Other (please specify) _______

d. Monthly Income (in birr)

Up to 1,000 □ □ 5,001-10,000 □
1,001- 3,000 □ □ Above 10,001 □
3,001-5,000 □

e. Status of ATM usage

Less than 6 Months □ □ 1 – 2 years □
6 Months – 1 year □ □ Above 2 years □

f. How frequently do you use ATM card per month?

1-3 times □ □ 9-12 times □
4-8 times □ □ Over 12 times □

2. Survey Questions-

The following section contains eight customer satisfaction dimensions, please evaluate your experience in regard to each item Strongly disagree ‘disagree ‘ Neutral ‘ agree strongly agree .
### Reliability dimension

<table>
<thead>
<tr>
<th>S.no</th>
<th>Items</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I believe that current ATM service provide accurate transaction</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Cash withdrawal limit from a specific account in a day is sufficient</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>ATM banking provides power backup and data recovery system to avoid interrupted transactions in case of electric power failure</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>4.</td>
<td>Cash is available in the ATMs at any time</td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

### Responsiveness dimension

<table>
<thead>
<tr>
<th>S.no</th>
<th>Items</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>CBE makes the effort to understand the customer’s needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>There is quick response and the ability to get help if there is a problem or question</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>3.</td>
<td>CBE provides timely help-desk services and online help facilities for its ATM service customers</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. There is Willingness or readiness of employees to provide ATM services (timeliness of service, giving prompt service)

**Tangibles dimension**

<table>
<thead>
<tr>
<th>S.no</th>
<th>Items</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Appearance of the ATM is Attractive</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Mini statement printing is available</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>The currency note received from ATM is of good quality</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>The card design is attractive and easy to hold</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Assurance dimension**

<table>
<thead>
<tr>
<th>S.no</th>
<th>Items</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Employees of CBE possess the required skills and knowledge to perform the service</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>There is respect, Politeness, consideration and friendliness of contact personnel</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
3. CBE provides 24/7 e-based monitoring and assistance for ATM services that need immediate support

**Accessibility dimension**

<table>
<thead>
<tr>
<th>S.no</th>
<th>Items</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Customers can access ATM services with different language</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>ATM services provided by CBE allow easy access to transaction data both recent and historical.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>There are sufficient number of ATM at a reasonable distance to access financial transaction in time of need</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Customers can access ATM services at anytime and anywhere</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

**Overall Customer Satisfaction**

<table>
<thead>
<tr>
<th>S.no</th>
<th>Items</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I am satisfied with the overall ATM service of commercial Bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
የአንግር የስራ በተጨማሪ የወንድ ጋር ይምህርቱ በአገሌግልት ያለል ያስወሰኑ የሚወስኑ መሇኪያዎች ወስሱ ያሸል;

**የእንግል**

1. **የአንግር የስራ**
   - ያ/ እቶ
     - መፌት
     - ሞት
   - ሳ/ እፇዉ
     - 18-25
     - 26-30
     - 31-40
   - ሳ/ የተሰማሩበት የሆኔ የበቃ የሆኔ ሳፌ / √ የስወስኑ ይቕር

**የአንግር የስራ ይመሇከታሌ፡፡**

**ው/ እንግል**

- ይህ ከፍተኛ የእንግል የበር የስራ የሚመሇከቱት ከስራ የሚወስኑ የሚሇክት ያስወሰኑ

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<th>የሚወስኑ የስራ</th>
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<tbody>
<tr>
<td>1-3,000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3,001 -5,000</td>
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</table>

1. ይህ ከፍተኛ የእንግል የበር የስራ የሚመሇከቱት ከስራ የሚወስኑ የሚሇክት ያስወሰኑ
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<th>የተፈቀዯው የገንዘብ መጠን</th>
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<tr>
<td>1</td>
<td>የሠርአ ከከለተኛ ከማሇት የሚቀጣ የአስተማማኝነት ከለው እወጨ ከት ሦ ከት ሦ</td>
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<td>2</td>
<td>የሠርአ ከከለተኛ ከማሇት የሚቀጣ የአስተማማኝነት ከለው እወጨ ከት ሦ ከት ሦ</td>
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**የምሊሽ ከሰጡት ወይም የሚያረግ የሀይሌ ይሆን**

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<th>የሚያረግ የሀይሌ ይሆን</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<tr>
<td>2</td>
<td>የሠርአ ከከለተኛ ከማሇት የሚቀጣ የአስተማማኝነት ከለው እወጨ ከት ሦ ከት ሦ</td>
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<tr>
<td>3</td>
<td>የሠርአ ከከለተኛ ከማሇት የሚቀጣ የአስተማማኝነት ከለው እወጨ ከት ሦ ከት ሦ</td>
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