ASSESSMENT OF CUSTOMERS' ATTITUDES AND SATISFACTION LEVELS WITH TECHNOLOGY BASED SELF SERVICE: A CASE STUDY ON ATM USER OF DASHEN BANK IN ADDIS ABABA

BY

WUBSHET FIKRU

A Thesis Submitted to the School of Graduate Studies in Partial Fulfillment of the Requirements for the Degree of Master of Arts in Marketing Management Education

ADDIS ABABA UNIVERSITY

SCHOOL OF GRADUATE STUDIES

ADDIS ABABA UNIVERSITY
LIBRARIES
P.O.BOX 1176
ADDIS ABABA ETHIOPIA

May, 2011

Addis Ababa

Letter of Certification

This is to certify that Wubshet Fikru carried out his study on the topic entitle **"Assessment of Customers' Attitudes and Satisfaction Levels with Technology Based Self Service: A Case Study on ATM User of Dashen Bank in Addis Ababa".** This work is original and is suitable for submission for the award of Master of Marketing Management Education.

Dr. Bose K.S. (The Research Advisor)

Declaration

I, Wubshet Fikru declare that this research entitled **"Assessment of Customers' Attitudes and Satisfaction Levels with Technology Based Self Service: A Case Study on ATM User of Dashen Bank in Addis Ababa"**, is the outcome of my own effort and study and that all sources of materials used for the study have been acknowledged. I have produced it independently except for the guidance and suggestion of the Research Advisor.

This study has not been submitted for any degree in this university or any other university. It is offered for partial fulfillment of the degree of MA in Marketing Management Education

By; Wubshet Fikru (GSR/1208/)

Signature _____

Date 27/05/2011

ACKNOWLEDGEMENTS

This master thesis has been written in the MA Marketing Management program at the division of College of Business Education and Behavioral Studies, Addis Ababa University during the fall term 2003 E.C.

First of all, I would like to thank my advisor Dr. Bose K.S for his guidance and support during the whole process of the thesis writing. Without his valuable comments and inspiration, the feasibility of this thesis could be more difficult.

I also would like to thank deeply and sincerely again to my thesis partner (ATM users of Dashen Bank), who have understood and supported me along the way during this time, even in the most difficult moments. I also express gratitude to my dear friend, Yared Geremu, for all his support during my studies. Finally, I am very grateful to my family and all the persons those in one way or another supported me during my period at Addis Ababa University.

ABSTRACT

In the present situation companies have many possibilities to realize service offerings with huge investment in self-service technologies, as the technology became the driving force to service the customers effectively and helpful in delivering the services. Now a days it become challenging for the companies to serve customers effectively with in a prescribed time providing the right products with lower cost. To get rid of this issue most of the organizations are showing interest to employ self-service technologies (like ATMs, ticket vending machines, online auctions etc.).

The purpose of this thesis concentrates on service marketing and service quality in order to provide a better understanding of customers' attitudes and preferences with technology based self service. The study specifically aimed at investigating the attitudes and satisfaction levels of Dashen Bank ATM card holders with respect to various aspects (efficiency, convenience, speed, risk, reliability, complexity, physical appearance etc.) of using Dashen Bank ATM. The study also includes the opinions of customers on various other related issues such as positive and negative features of Dashen Bank ATM, recommendations to improve the service quality etc.

To achieve the purpose, the researcher used questionnaire to collect the data from a sample size of 172 ATM card holders of Dashen Bank. Though the sample were selected on a convenience basis and it may not represent the whole population, but still it is no less important for the Dashen Bank management to consider the recommendations with due care for better customer service and for being in a better competitive position.

The data analysis is based on both qualitative and quantitative methods, supported by the qualitative information and literature reviews. Finally, in terms of important findings, most of the users are male, younger and more educated people who earns a highly income. In addition, with regard to speed, risk, ease of use and physical appearance, the majority of the respondents have positive attitudes with ATM service of Dashen bank. But, with regard to efficiency (waiting time), convenience (accessibility), and reliability (consistency) attributes: the majority of ATM card holders has a negative or unfavorable attitudes with the ATM service of Dashen bank.

TABLE OF CONTENTS

LIST OF TABLES

CHAPTER ONE

1. INTRODUCTION

1.1 BACKGROUNG OF THE STUDY

Service is difficult to define and there is no clear or common definition of service. But one thing that cannot be denied is that services have four distinct characteristics (intangibility, simultaneity, heterogeneity and perishable). The word service includes industrial service sector and public service sector offers, both of them are intangible in offerings.

A service is an activity or series of activities of more or less intangible nature that normally, but not necessarily, take place in interactions between the customer and service employee and/or physical resources or goods and/or systems of the service provider, which are provided as solutions to customer problems (Gronroos,1990:27)

Services constitute an important part of the economy of the industrialized countries, in both production and consumption. The national accounts commonly refer to the private service sector as trade/retailing, consumer services, transportation & communication, consultant services, banks & insurance, hotels & restaurants, and real estate.
A service is an activity or a series of activities that take place in interactions with a contact person or a physical machine which provides customer satisfaction (Gronroos, 1990:26).

In the continuously growing service sector, customers' involvement in production process even in the industrial service sector and to delivery for him/her-self, so called self service. The implementation of machines and self-service go hand in hand, so we see parts of the main characteristics in services changing from personnel based person-to-person service to Technology-Based Self-Service. Technology Based Self Service (TBSS) refers to the technological interfaces that allow customer to produce the service independent of any direct involvement with service employee (Meuter and Bitner 2000). One of the most important tools that help companies to arrange self service to the customer is technology.

more effectively and in a timely manner in the way to cut down their production cost, which will benefit for the organization and the customer.

1.2. RATIONALE OF THE STUDY

The main objective of this study was to understand customer's attitude and satisfaction with ATMs service of Dashen bank in Addis Ababa. Thus, the findings of the study will provide information to use in analyzing the current situation of Dashen bank. As the use of ATM services is increasing day-by-day, on the part of the bank, it is important to have an idea about what the ATM users are thinking about various features of ATM, what attitudes do they have, what are their levels of satisfaction, what are their problem areas, how do they compare the ATM service of this bank with that of any other banks etc. The bank's marketing department also needs to have idea about the results of such types of study to determine appropriate marketing strategy.

Thus, the findings of the study will be very useful to them and it will also help the ATM section to identify their positive and negative features and the customer recommendation. The bank management can take actions on the basis of customer recommendations to improve the services and further growth assuming that the customers selected on the basis of convenience represent the whole population.

1.3. STATEMENT OF THE PROBLEM

TBSS is a recent phenomenon to the customers of Ethiopia in the banking sector. ATM (Automated Teller Machine) is one of the most widely used TBSS in the banking sector throughout the world. In Ethiopia, four different banks are now offering ATM services to their valued customers. These banks are Commercial bank of Ethiopia (CBE), Dashen bank, Zeman bank and Wegagen bank. Zeman and Wegagen were joined the business recently.

Commercial bank of Ethiopia was the first bank who introduces and installed ATM machines in Ethiopia in 2001. However, due to lack of appropriate infrastructure it failed to reap the fruit of its customers. Despite being the pioneer in introducing ATM based

transaction system and acquired Visa membership, CBE lagged behind Dashen Bank, which worked aggressively to maintain its lead in electronic payment systems.

Dashen bank, a forerunner in introducing e-banking in Ethiopia, has installed ATM's at convenient locations for its own customers. The Dashen Bank's ATM is available 24 hours a day, seven days a week and 365 days a year providing service to Dashen Debit Cardholders and International Visa Cardholders coming to the country. At the end of June 2009, Dashen bank has installed more than 40 ATM's in its area branches, university compounds, shopping mall, restaurants and hotels. Available services on Dashen Bank ATM's are: Cash withdrawal, Balance Inquiry, Mini-statement, Fund transfer between accounts attached to a single card and PIN (Personal Identification Number) change. Currently, the bank gives debit service only for Visa cards. Dashen bank clients can withdraw up to 3,000 birr in cash and can buy goods and services of up to 5,000 birr per day.

In Ethiopia, even if ATM is effective and efficient than other forms of service delivery (personnel based service delivery), it is not widely used by customer in comparison with personnel based service (Gardachew Worku, 2010). This means that still more of customers are using the traditional way of service delivery system. When we compare the number of visa card holder (which are 60,000) and account book holder (which are 600,000) of Dashen bank, the numbers of visa card holder are very few (only 10% of account book holders).according to Gardachew, one of the main reasons for this is customers' socio-cultural issue such as resistance to changes in technology due to:

- Lack of awareness on the benefits of new technologies
- Fear of risk,
- Illiteracy
- Resistant to new payment mechanisms

Therefore, as mentioned earlier, it is important to have an idea about what the ATM users are thinking about various features of ATM, what attitudes do they have, what are their levels of satisfaction, what are their problem areas, how do they compare the ATM service of this bank with that of any other banks etc.

Thus, it is important to study the attitudes and satisfaction levels of ATM users. Therefore, the basic questions that are going to be addressed in this study are the following:

- What type of attitude do customers have towards ATM service of Dashen bank?
- What is the socio-economic profile of ATM card holders of Dashen bank?
- How frequently they use ATM?
- What factors influence them to use ATM?
- What are customers' attitudes and satisfaction levels with ATM attributes of Dashen bank?
- Are the customers satisfied with the ATM service of Dashen bank?

1.4. OBJECTIVES OF THE STUDY

Understanding customer's perception and satisfaction towards actual use of TBSS delivery from a service quality perspective will be helpful for the organization to serve customer more effectively and to generate more customer. This study was investigated attitudes and satisfaction levels of customers with ATM service of Dashen bank in Addis Ababa. Thus, the **general objective** of this study was to understand customer's attitudes and satisfaction levels with Technology Based Self Service, especially with the ATM users of Dashen Bank in Addis Ababa.

This study was also having the following specific objectives:

- ✓ To find out the socio economic profile of the ATM card holders of Dashen bank,
- ✓ To analyze their usage patterns of ATM's,
- ✓ To assess customers attitudes and satisfaction levels with ATM's attributes of Dashen bank, and
- ✓ To investigate customers level of satisfaction towards the ATM services of Dashen bank.

1.5. THE SIGNIFICANT OF THE STUDY

Any research, whether it is qualitative or quantitative, should contribute something to concerned parties of the areas. Therefore, the expected contributions from this study were the following:

- The study tries to contribute to provide better understanding about the technology based self-service especially ATMs with a customer perspective, based on previous literature reviews and theories.
- The study will also reveal the level of customer satisfaction with TBSS (ATM). Thus, such understanding will be helpful for the technology based self service providers(especially those of banks) to enhance or improve customers satisfaction by adding appropriate services or avoiding some identified problems that affect customers satisfaction while customers interact with the technology.
- Finally, the study will be used as an input for individuals who are interested in the subject matter to undertake similar as well as in depth studies.

1.6 SCOPE OF THE STUDY

The main focus of this study was to understand the customers' attitude and satisfaction towards TBSS, especially with ATM user of Dashen Bank in Addis Ababa. Even though there are much technology based self service such as ticket vending machines and parking machines, this study was mainly focused on ATM (Automated Teller Machine). Hence, attitudes of customer with respect to other technology based self services was not taken into account in this research. The study was also focused only on the customer of Dashen Bank in Addis Ababa who uses its ATM services. Thus, the study will not be representative for all users of ATM.

1.7. LIMITATIONS OF THE STUDY

The main focus of this study was to understand the customers' attitude towards technology based self service especially on ATM user of Dashen Bank in Addis Ababa. Even though the research topic is interesting and important, it will have the following probable limitations:

First, the study was mainly focused in one type of TBSS (ATM). Thus, the findings of this study will not be generalized for all technology based self service. But, it will be helpful for other TBSS providers because it provides some basic in formation.

Second, due to different reasons, the study was investigated the attitudes and satisfactions of customers towards TBSS with mainly ATM user of Dashen Bank in Addis Ababa. Thus, it is not representative for all of its customers through Ethiopia and for other banks. This is because attitudes and satisfactions of customers will change based on different factors such that of regions and service provider.

Thirdly, studying the attitudes and satisfaction levels of customers is difficult and is a function of different factors. But, this study was mainly focused on demographic characteristics of respondents, personality characteristics of respondents, technology attributes and general attitudes to determine customer's attitudes and satisfaction levels with TBSS (ATM).

Finally, in this study because of acute time shortage and organizational restriction, non probability sampling technique (convenience sampling) was used. So, it is inappropriate to project the results of the survey beyond the specific sample.

1.8. ORGANIZATION OF THE STUDY

To provide better overview to the reader, a brief presentation of the coming chapters will be given below.

The first chapter discuss introduction consisting of the background of the study, rationale of the study, the statement of the problem, objective of the study, scope of the study, the expected contribution of the study and limitation of the study. Chapter two is all about the theoretical review mainly based on technology based self-service theories to describe what factors relate to customer participation and customer satisfaction and discusses the concept of service quality.

Chapter three will discuss the methodology including sampling techniques, the sample size, the type of data, method of data collection and the analytical tools. Chapter four is about the data presentation and analysis. Finally, the fifth chapter provides the

conclusions in comparison with the previous researchers and possible recommendations based on the findings.

1.10 Evolution of ATM

Today, self-service technology is challenging the notion that provider-client interaction is an essential feature of services marketing. Nowadays automated teller machine services (ATMs) are widely used by the customers rather than personal based banking services. In the starting period ATMs were used to only for cash withdraw proposal without concern of bank timings, but present the scenario changes rapidly, more banking operations like withdrawing, transferring and checking account balance can be carried out with ATMs.

Customers' are saving time and money with the use of ATMs. Even most of the financial organizations are using the ATMs to serve customers more effectively and in a timely manner in a way to cut down their production cost, which will be benefit for the organizations and customers.

ATMs first came in 1968. Don Wetzel was the co-patentee and chief conceptualist of the automated teller machine, an idea he thought of while waiting in line at a Dallas bank. At the time Wetzel was the Vice President of Product Planning at Docutel, the company that developed automated baggage-handling equipment. The other two inventors listed on the patent were Tom Barnes, the chief mechanical engineer and George Chastain, the electrical engineer. It took five million dollars to develop the ATM. The concept of the ATM first began in 1968, a working prototype came about in 1969 and Docutel was issued a patent in 1973. The first working ATM was installed in a New York based Chemical Bank. *(http://www iceman.strana.de/atmwp.doc)*

The first kind of ATMs were off-line machines, money withdrawn from an account could not be performed automatically because of the accounts are not connected by computer network to the machine's. There was no single bank account was connected by a computer network to the ATM.

CHAPTER TWO

2. REVIEW OF RELATED LITRATURE

2.1. Concept of Services

The attempt to define services is a multi-faceted challenge. An early definition stated that services "are activities, benefits or satisfactions which are offered for sale, or are provided in connection with the sale of goods" (AMA 1960, p. 21). The inherent process dimension has been described as the main characteristic of services (Gronroos 1998, p. 322).

Services are viewed as the dominant part of value creation in which the customer actively participates. Goods merely act as means that render services, geared to create utility and satisfaction for their consumers. Therefore, the traditional separation of services and goods has been unclear.

There exists a plethora of definitions for the term "service". Without trying to provide an exhaustive review of the specter of dimensions, some examples of the most pertinent definitions shall be given here.

Gronroos provided a rather product-dominant definition of services as "sources of additional customer value added to or accompanying products" (Gronroos 1997, p. 412). He further characterized services as consisting of two inherent processes taking place simultaneously: service production and service consumption (outcome) (Gronroos 1984, p. 38). While the production process corresponds to the actual phase of creating and delivering the requested service, the consumption process refers to the act through which the requesting party benefits from the outcome of the production process (Gronroos 1978, p. 591).

A more general service definition is purported by Lovelock and Wright, who state that "a service is an act or performance offered by one party to another" (Lovelock and Wright 1998, p. 5, citied in Thomas F. Schroder). Although the process may be tied to a physical product, the performance is essentially intangible and does not normally result in ownership of any of the factors of production.

In very basic terms, services can be classified as "deeds, processes, and performances" (Zeithaml and Bitner 2000, p. 2).

2.2. Personal Service Delivery

Personal services are performed by the company's service personnel, usually in the presence of the customer. Therefore, service production and consumption are inextricably linked to the service employee performing the service.

During this performance, the potential for service customization is very high, due to the personal interaction between customer and service employee, as well as their ongoing internal information processing on the site of service creation. Accordingly, their ongoing personal interaction is viewed as a vital part of the customer's evaluation of service quality, as well as of the relationship between him and the service provider.

In a lot of cases, the service employee *is* the service for the customer (Bitner 1990, p. 69).The service employee assumes two fundamental functions in the process of service delivery: he represents the company in the perception on the customer, and he has to act as a marketer for both the company, as well as the service itself (Zeithaml and Bitner 2000, p. 287). The fact that the service employee embodies the service proffers the risk of switching behavior whenever a service employee leaves the company as a result of mere salesperson-owned loyalty.

Recent findings though discovered that even when customers associate a service out come with a single employee, and that person leaves the company, customer loyalty may be maintained, because the customer associates service worker behavioral loyalty with service business behavioral loyalty (Bove and Johnson 2006, p. 88, as citied in Thomas F. Schroder).

In a personal service situation, the customer usually plays a significant role in the production of the service; understanding this role is a key to understanding his behavior in personal service situations. Since the service is delivered personally, service failure may be attributed to the service employee (Bitner et al. 1994, p. 96). At the same time, very good opportunities for service recovery exist, because customer and service

employee interact directly. Therefore, a customer can immediately voice his disappointment whenever the service level performed did not meet his expectations.

Service employees have the chance to act accordingly, and to safeguard that the customer is satisfied with the service performed. Bitner et al. (1990) found the following sources of customer dis/satisfaction with interpersonal service encounters: (1) employee response to customer needs and requests, (2) employee response to service delivery failures, and (3) unprompted and unsolicited employee actions.

Some research has shown that effective service recoveries may actually increase the customer's perceived level of service quality, compared to situations where no service failures occur (Bitner et al. 1990, p. 75). In personal service situations, customers can influence the outcome of the service process directly through interactions with the service personnel. It has been found that some customers perceive such interactions as enjoyable; for them, they constitute an integral part of the service experience. At the same time, other consumers consciously try to avoid personal service situations, as they are not comfortable dealing with the service personnel (Dabholkar et al. 2003, p. 74).

2.3. Technology

During recent years technology has become one of the key aspects for the organizations to deliver their services. As the companies started giving importance to new technologies, lead for the development of self-service technologies. In self service technology the word technology is crucial; because self services are related with technological aspects where companies have to strive on to improve their technological features that will increase the quality level in delivering the services.

"The ability to customize is one of the key benefits of implementing technology into the delivery of services." (Bitner, Brown and Meuter 2000, p. 142)

The term "technology" need not refer to machines or equipment. The term technology can be separated into 1) Hard, 2) Hybrid and 3) Soft technologies (Levitt 1976, citied in Annam and Narasimha).

- **Hard technology** is physical technology that replaces both manual labor and brainpower is usually termed as automation.

- **Hybrid technology** is machines or equipment that manages, limit and organize work or service processes in such a way that they can be performed faster and more efficiently.
- **Soft technology** in terms of techniques or organized ways of working that replaces more ad hoc methods.

Normann (2000), as citied in Annam and Narasimha, offers five reasons for the service company to offer technology-based service delivery:

1. To reduce costs
2. To control quality
3. To increase quality level
4. More direct customer connections
5. Technology as moderator of behavior

2.4. Service Encounters and the Role of Technology in Service Delivery

In order to discuss about different kinds of service delivery, first it's better to mention and talk about service encounter. Service encounter is known as "moment of truth. It is the duration that the customer directly interacts with the firm and its service (Bitner, 1990; Bitner et al., 2000).The image of a company is created in customer's mind during the service encounter.

Service encounter can occur with or without the presence of employee. In traditional service encounter which is called person-to-person service encounter the firm's employees involves in interaction with the customer; some companies trained their employees some techniques to keep and satisfy their customers such as say "have nice day" to customers and answering the phone on or before the third ring (Bitner et al., 1990). But sometimes the human interaction element is not necessary in a service encounter. So customers can serve themselves without employees' help; they could serve themselves in traditional ways like self-services in restaurants which they choose their foods and take them or they can use new technologies to perform the service which is known as person-to-technology Service delivery (Dabholkar, 1994). In person-to-technology service encounter people can use different kind of machines or computers and etc to perform service by themselves.

The growth of technology in service encounters has good potential to benefit customers and service firms (Dabholkar, 1994).

2.5. Self Service

Self service can be described as a customer that perform a service by him/herself, self service options can existed with or without technology factor (Bateson, 1985,citied in Salar Habib). For service industries switching their customers from traditional service delivery to self service have some difficulties in marketing issues, the reason is that "Self service options generally assumed as an unattractive option and are often offered at a discount" and also in some industries self service options are launched to provide service for customers in the hours which the traditional kinds of service are not available, but nowadays in a competitive market developing alternative ways of service delivery is crucial for service industries. When a company want to offer self-service instead of full service it should consider the role of the customer; it should explain the new procedures and advantages to the customer (Wang and Namen, 2004).

Some researchers have been done and indicate that the existing of self-service option and participation of customer in service delivery is very important for customers and service industries (Bitner et al., 1997). Also in order to enhance service delivery one of the good ways is to customized the service for customers; the service can be customized better and easier if the customer play an effective role and participate in the service delivery .Recently many service firms in different industries offer various kinds of self service options in which they use new technologies to provide the service for their customers.

2.6. Technology-Based Self-Service (TBSS)

As mentioned, in order to perform services customers can interact with the Technology (Person-to-Technology) in service encounters and serve themselves (Dabholkar, 1994). The combination of technology with self service options will provide great choices for customers to serve themselves without the presence of the employees. The newest term for this kind of service delivery is "Technology-Based Self- Service (TBSS)", there are some other terms such as "Self-Service Technology (SST)" and "Technology-enabled service". But TBSS more involves with customer activity of the self-service and the others are more

related to the technology itself. So, Technology-based self- service (TBSS) term is more applicable for this research.

TBSS can be any activity or benefit based on hard technology which service provider offers so that customers can perform the service, or parts of the service, by themselves without employees' help (Dabholkar, 1996). There are two main categories of TBSS delivery which are off-site and on-site service delivery options (Dabholkar, 1994). Also the interaction between the customer and technology can be either direct or indirect. In off-site TBSS the interaction between customer and technology is take place at the customer's home or office, the examples of this kind of TBSS are online shopping , internet banking , telephone banking and etc. In on-site TBSS customer interacts with technology in order to perform the service at the service site, the examples of this kind of TBSS are automated teller machines (ATMs), vending machines, self check-in machines (electronic kiosks) for self check-in and baggage check-in and get boarding pass at airports, electronic in-store blood pressure checking devices, automated car rental machines,, touch free electronic car washers, self-checkout systems at retail stores, service computers with internet connection at airports, electronic self-ordering systems at fast-food restaurants and Using in-room TV to check out of hotel (Dabholkar, 1994).

2.6.1. Classification Schemes for TBSS Delivery

Dabholkar (1994) proposed a new classification for service delivery. This classification is very useful for understanding the characteristics of different types of services. All service industries which are able to offer TBSS delivery can use this classification and it will fit into these industries. This frame work shows the similarities as well as differences of service delivery options based on technology. It identifies and shows the role of human in delivering services by using technology and also shows the role of technology without the presence of employee in delivering services. In other cells but in opposition this classification applies to any service industry that can offer technology-based service delivery. Dabholkar classifies services based on three dimensions as following:

D1-Who delivers the service? Or who is operating the technology? If the service employee is providing the service for the customer, the service delivery is Person-to-

which the customer can use it to serve him/herself, the form of service delivery is Person-to-Technology

D2- Where is the service delivered? The technology could be operated at the service site or at the customer's site (home/workplace).

D3- How is the service delivered? The service could be delivered through either direct or indirect contact; direct contact means that user interact with the technology at company's site and the indirect contact is when the customer use technology over the phone or from his/her home or work place.

The Dabholkar classification scheme which is an 8 cells classification is shown in table 2.1.

Table 2.1 Classification Scheme for TBSS Delivery Options

		Person-to-person (service employee uses technology to provide service)	**Person-to-technology** (customer uses technology to perform service for sell
At service site	Physical Proximity (direct contact)	**CELL 1A** Customers goes to service provider (employee) who uses technology to deliver the service	**CELL 2A** Customers goes to service site and uses technology to provide service for him/herself
	Physical distance (indirect contact)	**Cell 1B** Customers go to the service site but interacts by phone with the service provider who uses technology	**CELL 2B** Customers goes to service site and uses automated telephone system to provide service for him/herself
At customer's home/place of work	Physical Proximity (direct contact)	**CELL 3A** Service provider goes to customer with portable technology to deliver the service	**CELL 4A** Customer uses technology from home/work to provide service for him/herself
	Physical distance (indirect contact)	**CELL 3B** Customer calls service provider from home/work and service provider uses technology to deliver the service.	**CELL 4B** Customers calls automated telephone service from home/work to provide service for him/herself

At one extreme we have a delivery system which includes customer physical and perceptive interaction in a way where customer need to have experience with these kind of services to be efficient at the task. Other extreme would be a TBSS where the

customer only interacts through automated voice prompts over telephone without need for prior instructions. Coming to the lower cells, customers only contact the service company through interaction with their own hard technology (like regular telephone). In Cell2 customers also use their own hard technology (like a computer); with this they can only interact directly with the software technology of the service provider.

If the technology-based self-service system is based at the service provider's, the atmosphere and the physical surroundings might be relevant to the customer's evaluation of the system.

2.6.2 Adoption of TBSS

There is a logical relationship between consumer behavior and service quality. Research looking at customer adoption of self service technologies found that "customer readiness" was a major factor in determining whether customers would even try a self-service option. Customer readiness results a combination of personal motivation, ability, and role clarity. Previous research on the adoption of computer technology has shown that perceived ease of use and fun influence usage interactions. Research shows that customers who view technology-based service as easy to use, reliable, and enjoyable also perceive higher service quality in such delivery options (Dabholkar, 1991). Rogers (1995), as citied from Annam and Narasimha, suggests five main and general characteristics that affect rate of adoption and diffusion (Relative advantage, compatibility, complexity, trial ability and observe ability).

Adoption/diffusion research into TBSS has however treated the role of customer characteristics. Research results show that younger, better educated, socially active people are likely to adopt technological innovations such as technology based service and self-service options. Hence, with the expectation of generalized attitudes, the relationship between customer characteristics and customer-perceived service quality of TBSS has not yet been empirically investigated. From the perspective of service firms, it would be valuable to know what segments are to target or not to target with TBSS.

2.7 Technology-Based Self-Service Attributes

Previous research on TBSS (Dabholkar 1996) has initiate that perceived attributes of technology play a critical role to determine whether the customers are willing to use like this options or not. According to Dabholkar (1996), from customer point of view speed, enjoyment, control, and ease of use are all important attributes in measuring and using the TBSS.

2.7.1 Speed of delivery

Dabholkar (1996) initially suggested that expected speed of delivery is an important factor for choosing and evaluating TBSS options. He suggests that the time it takes to accomplish a certain task is one of the most important factors when users evaluate the quality of computer technology. Several empirical studies have proven speed of delivery and waiting time to be important factors in customers' evaluation of both self-service and personnel-based service.

2.7.2 Enjoyment

Normann (1983), as citied in Annam and Narasimha suggests that customers in the self-service store accept greater physical effort and less personal interactions. Foley et al. (1990), as citied in Annam and Narasimha, found pleasure to be a very important factor in determining how users evaluated quality of computer technology. Dabholkar (1996) found enjoyment to be the most important determinant of expected service quality and suggested that enjoyment may depend on the novelty of the technology.

2.7.3 Control

Control means the amount of control that customer feels he/she has over the process out the come. Control is most important factor for customer's in using self-service technologies. Control is a rather a complex term and can be conceptualized as behavioral, cognitive or decisional (Dabholkar, 1996).

Behavioral control means the ability to influence the process. Cognitive control means understanding and anticipating the process. Decisional control concerns the ability to set or change the objective or outcome in a particular situation. A person's belief that he/she

has control, even in the absence of real control, will result in benefits similar to those associated with real control.

2.7.4 Reliability

Reliability refers about the outcome in use of new technological self-service options, whether it's reliable and perfect, or is there any risk involved in this process (Dabholkar, 1996). He suggests four types of risks that make customer more resistant to innovations in general:

1. Functional risk: the fear of performance uncertainty
2. Economic risk: the fear of economic loss
3. Social risk: the fear of social obstruction
4. Psychological risk: the fear of psychological discomfort.

Parasuraman et al. (1985) found that the safer bank customers feel when conducting their business at an automatic teller, the more likely they are to use the ATM. Reliability has a positive effect on service quality.

2.7.5 Ease of use

Ease of use found to be important factor in adoption and evaluation of self-service option (Dabholkar, 1996). He suggests that ease of use is an important attribute for customers, if they are to contribute with their own efforts. Foley et al. (1990) deal with ergonomic qualities in a computer environment and distinguish between three kinds of efforts: cognitive, perceptive and motor. Dabholkar (1996) suggests several aspects of ease of use within an impact on service quality evaluations of self-service that could be related to physical effort.

2.7.6 Communication/Education

Just as Parasuraman et al. (1985) stress the importance of knowledgeable personnel to high service quality, time set aside for training and knowledge of the customer leads to better service delivery and better perceived service quality. Perceived level of information and communication during the introductory phase has a positive effect on quality.

2.7.7 Personnel-Based Support

Dabholkar (1996) suggested that, when rationalizing and replacing personnel with equipment and customer participation, the importance of the remaining personnel increases. He suggests that the customer who chooses the human teller instead of the ATM expects high social content of service delivery. This suggests that, although we may speak of a TBSS system, the support of staff when needed may be significant in the evaluation of service quality. Personnel-based support may conceptually be separated in to two aspects; courtesy and responsiveness.

2.7.8 Physical Appearance

Parusuraman (1991) presented a model capturing physical aspects of service delivery systems called ''components of the physical environment'', which is based on two types of equipment related factors; ambient and design. The so called ambient factors can only be neutral or negative. Design factors are qualities such as physical appearance and modernity of the equipment. Physical appearance has an effect on service quality.
Some researches begun to explore personality and demographic factors related to the acceptance of technology-based service.

- Dabholkar (1991, 1992) personality factor, "need for interaction" with a service provider, had a significant negative effect.
- Forman and Sriram (1991, as citied in Annam and Narasimha) some customers resist TBSS, they feel lonely and crave social interaction.
- Prendergast and Marr (1994, as citied in Annam and Narasimha) banking customers resist technology because they prefer human interaction.
- Evans and Brown (1988, as citied in Annam and Narasimha) suggest that safety and convenience are important factors.

Past research (Dabholkar, 1996) has also examined whether TBSS options increase or decrease perceived control for customers, and whether perceived control translates into perceived quality. Some people feel more in control when they perform the service for themselves, whereas others feel more in control having someone else wait on them

(Dabholkar 1990), a sense of "behavioral" control. Some TBSS offers the customers not only control but also privacy.

Consumer familiarity with technology has a direct bearing on strategies for service design and introduction. Also, with increasing familiarity, consumers are likely to use less complex decision making and choice models for TBSS options (Dabholkar 1994). Further, TBSS options represent a unique form of service delivery, and the dimensions of service quality suggested in traditional models may not apply. Interviews with potential customers of TBSS options and an examination of past studies on service delivery, self-service, and the use of technological products must suggest the appropriate dimensions of service quality.

Figure 2.2 illustrates Self-Service Technology attitudes and the intention of customer to use

TBSS and make the readers understandable about technological attributes.

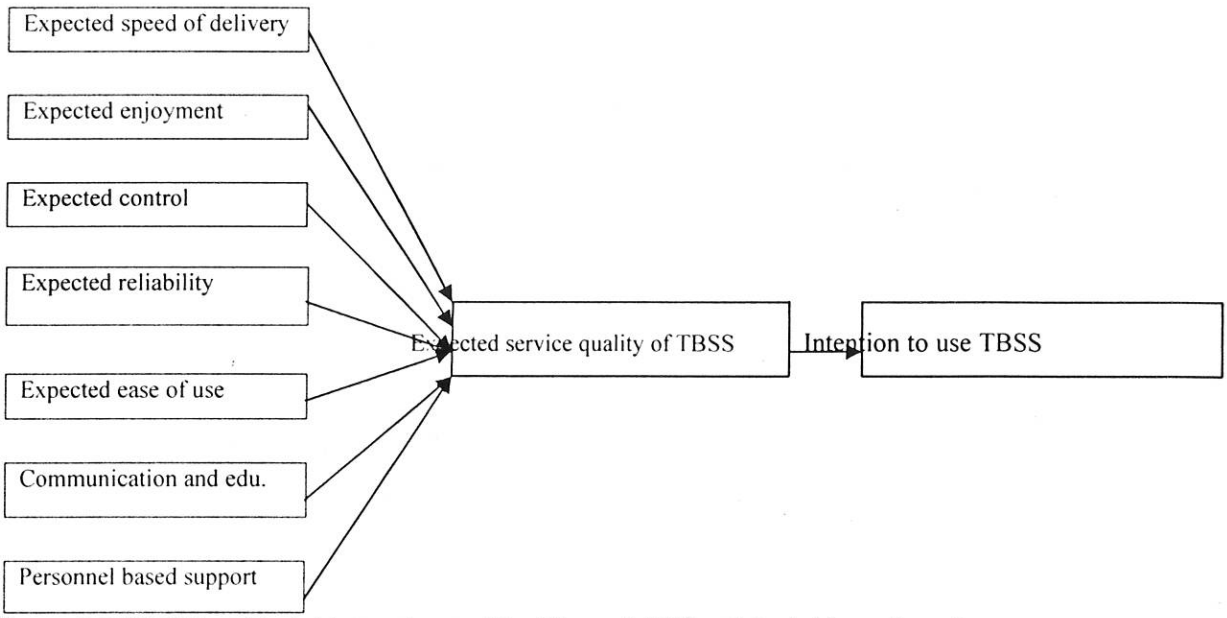

Figure 2.2 TBSS attitude/ intention to Use/Overall Effect Model based on James Matthew (2005), as citied in Annam and Narasimha

Customers today are highly sensitive to the speed of service delivery, and studies have shown that they usually over-estimate the time taken to deliver a service. Thus, if customers expect that a service will be delivered speedily, they are likely to evaluate the service more highly. These two characteristics – effort and complexity – appear to be related and encompassed in 'ease of use,' found to be an important attribute to customers

in using computer technology. Customers may be concerned about ease of use for several reasons. One reason may be related to saving actual effort expended.

Another reason may be to reduce the fear of social obstruction. If customers expect the technology to be difficult to use, they may become concerned about social risk and will view this as a low quality option. If they expect the technology to be easy to use, they will view the service delivery based on this technology as a high quality option.

2.8. Customers' Attitude

As the service company invests money in technology and in informing, convincing, educating and training the customer, it is important that customers keep using the service option. Some factors impacting on customer's preferences to participate in technology-based service systems may be easily explained in terms of satisfaction. Satisfaction is recognized as having more antecedents, being a wider attitude and a better predictor of behavior.

Drawing on human-factor research, the basic viewpoint is that interaction with a computer involves three basic human processes (Foley et al 1990, as citied in Annam and Narasimha).

- Perceptual (involving perceptions)
- Cognitive (reducible empirical knowledge)
- Motor

Based on the three processes and using an ergonomic approach, Foley et al. (1990) have put forward seven measures of criteria of ergonomic quality in order to understand the satisfaction of the user.

1. Speed
2. Accuracy
3. Pleasure
4. Convenience
5. Learning and recall time
6. Memory load
7. Error and fatigue susceptibility

2.9 Perceived Service Quality

Gronroos was among the first to introduce the term "perceived service quality" as well as the initial conceptual framework of service quality. Gronroos (1982) based his initial framework on ideas borrowed from consumer-behavior research and after purchase evaluations. Dabholkar et al (1996) found five basic service-quality dimensions in retailing;

- Physical aspects (convenience, appearance)
- Reliability (promises, doing it right)
- Personal interaction (inspiring confidence, courtesy)
- Problem solving (handling complaints, accepting merchandise in return)
- Policy (credit, opening hours etc.).

Garvin (as citied in Annam and Narasimha) classifies the definitions of quality found in strategic management literature into five categories:

- ✓ Quality synonymous with excellence and almost the converse of mass production.
- ✓ Quality as product-based, which suggests that differences between products can be objectively measured on the basis of different attributes.
- ✓ Quality as user-based, a subjective measure assuming that delivering high quality means satisfying the needs of the customer and efforts to satisfy the target customer.
- ✓ Quality as manufacturing-based.
- ✓ Quality as value-based.

Perceived service quality is a subjective customer evaluation. If we relate to TBSS, it may be argued that some aspects are less abstract and less heterogeneous than personnel-based service. Perceived service quality is an overall evaluation process similar to an attitude. In TBSS there would also be an evaluation process related to satisfaction. Satisfaction is a wider judgment involving more determinants than service quality and in the case of TBSS; it could mean that there are attributes about the TBSS that do not concern service quality, but rather satisfaction.

2.10 Effect of Consumers' Previous TBSS Experience on Attitudes and Satisfaction

Consumers who frequently use a variety of TBSS options tend to have more positive attitudes toward using TBSS in general and toward using new TBSS options (Dabholkar 1992). Dabholkar suggested that consumers with greater experience in using different types of TBSS options have more positive attitudes toward service providers who offer such options. Based on this background, it is expected that consumers with greater previous experience in using TBSS (in general) will have more positive attitudes toward any offered TBSS as well as toward the service provider who offers it.

2.11 Customer Characteristics

Parasuraman et al. (1988) found that the characteristics of the personnel, such as accuracy, willingness to serve etc., impacted on service quality. Thus, the characteristics of the customers, such as self-motivation and experience, should also matter, if they are to produce and deliver the service by themselves.

Generally, customer characteristics can be based on age, education and their level of social integration, self motivation, technological experience, and attitude towards using the technological products as an option rather than personal based service offerings.

Adoption/diffusion research into TBSS has however treated the role of customer characteristics. People who are younger, better educated, socially active people are likely to adopt technological innovations such as technology-based service and self-service options. Hence, with the expectation of generalized attitudes, the relationship between customer characteristics and customer-perceived service quality of TBSS has not yet been empirically investigated. From the perspective of service firms, it would be valuable to know what segments are to target or not to target with TBSS.

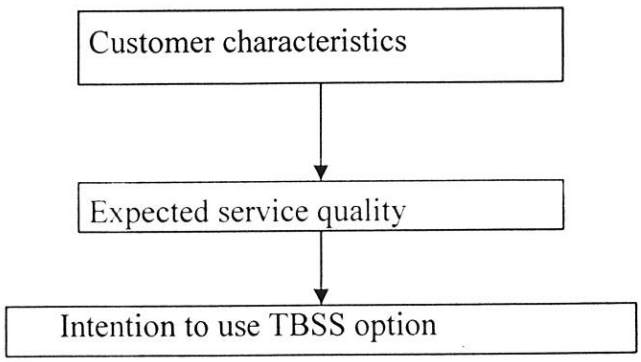

Figure2.1 Customer characteristics/ intention to Use Model

2.12 Customer Satisfaction

The literature identifies service quality, among other aspects, as an antecedent of customer satisfaction. Satisfaction is a complex human response with both cognitive and affective components (Mano and Oliver 1993, p. 465, citiedin Thomas F. Schroder). According to the disconfirmation paradigm, it results from stimuli compared with an expected standard that act as a reference. It therefore consists of an unobservable construct that measures customer perceptions; the literature contains two different conceptualizations of satisfaction (Gupta and Zeithaml 2006, p. 720, citied in Thomas F. Schroder).

Whereas satisfaction traditionally has been regarded as a transaction-based evaluation, a different stream of research considers it an overall, cumulative evaluation similar to attitude. Traditionally, satisfaction has been regarded as a prime means to reduce switching behavior and a constituent element of longer-term consumer behaviors, such as loyalty. Customer satisfaction thus is paramount to a customer's motivation to maintain a relationship with a service provider.

Service benefits refer to customer perceptions of the inherent quality of a service offering that constitute an important antecedent of customer loyalty. While the link from the global construct of service quality, composed of an established series of service quality dimensions, to customer satisfaction has been proven on various occasion, the perspective of viewing service quality as an amalgamation of various benefits consumers perceive with respect to a given service offering has not been taken before. It is therefore

not clear whether service benefits really exert an influence on customer satisfaction, and if so, what direction this influence acts in.

Because the relationships between service quality and satisfaction and between satisfaction and loyalty are well established, service benefits are here regarded as antecedents of customer satisfaction. The perception of benefits pertaining to service delivery is expected to cause a certain level of satisfaction, which affects the customer's inclination to maintain a relationship with the company. Benefits might not contribute equally to satisfaction, because some benefits will be more important in this process than others (Herzberg 1968, p. 57, citied in Thomas F. Schroder).

2.13. Sources of Customer Satisfaction and Dissatisfaction

In order for a TBSS to succeed in making customer's happy, firms must learn and know what drives customer satisfaction.

A formal definition of Customer Satisfaction is: "Satisfaction is the customer's fulfillment response. It is a judgment that a product or service feature, or the product or service itself provides a pleasurable level of consumption related experience". (http://www.bing.com/search?q=sources of customer satisfaction

In layman terms, satisfaction is the customer's evaluation of a product or service in terms of whether that product or service has met their needs and expectations. Failure to meet the needs and expectations can then result in dissatisfaction with the product or service

2.13.1 Sources of Customer Satisfaction

Customer's satisfaction is an outcome of the interaction between customer and the SST. If the outcome falls in the following category of results, the customer is always satisfied.

1. Solved my immediate needs

The most satisfying encounter will occur when the SST in question provides an immediate relief to the customer's most pressing problem. For example, Customer's parent is sick & he needs to travel immediately. The online ticket booking helped the

customer book a flight ticket and reach his destination. Another example: A customer needs cash immediately to meet a sudden expense - ATM solved the problem.

2. Better than the alternative

The second most satisfying encounter happens when SST provides service which is better than the other alternatives.

3. Easy to use

If the TBSS is easy to use than the interpersonal service alternative, then TBSS leads to customer satisfaction. For example booking a ticket over the Internet is better than doing it over the phone for a Computer know-how person.

4. Avoid service personnel

TBSS provide an alternative to customers who prefers to avoid customer service personnel for various reasons: Customer may have difficulty in talking in a particular language, may feel that salesperson is trying to sell something he/she does not need or customer is shy. DELL's online computer order is another classic example. Customers can configure their PC, know the price and order online. For many people, this is easier than interacting with the salesperson over the phone.

5. Saves time

Most customers are satisfied when SST saves time. For a busy individual, time is precious. If SST saves time when compared to other alternatives, customers are satisfied. For example, getting a SMS alert when a Bank check is cleared gives the required information to the customer - and customer does not have to spend time either logging online or calling the bank.

6. When I want and where I want

Customers like to be serviced when they want and not when it can be provided. For example, many of us like to buy a book or something when we want to do so, and need not have to wait for the store to open. Amazon.com provides Internet based option to buy books any time - anywhere and is shipped to where ever the customer wants.

6. Saves money

SST provides platform for customers to provide their own service. Therefore customer will be delighted if the service alternative from an SST is cheaper than the interpersonal alternative. For example, online banking is offered for free of charge and the bank charges a small fee for using the services of a bank teller to check the account status. This will make customers move towards SSTs and avoid bank personnel.

7 Did its job

Once the customer is used to providing his/her own service via SST, customer is satisfied when the SST did the job like expected. For example, if the banks ATMs work flawlessly all the time - and customer had no issues, then it leads to customer satisfaction.

2.13.2 Sources of Customer Dissatisfaction

Technology has to potential to agonize the customer and make the customer totally dissatisfied with the SST. Customer dissatisfaction arises from:

1. Technology Failure

TBSS is driven by technology and technology can (and in many circumstances will) fail. When TBSS fails to perform as expected, customers are dissatisfied. Typical examples are: Web server is down - thus customer cannot log in, or ATM machine is broke. Companies cannot do much in terms of service recovery when technology breaks down, however it can take steps to alleviate customer dissatisfaction by providing alternatives. For example providing a list of the nearest ATMs at all ATM locations or providing a

telephone at the ATM booth so that the customer can use phone banking. In case of Web service related failure, the company can provide a phone number for the customer to call in and place an order or do an inquiry etc.

Customers have become accustomed to some level of technology failure - but they expect the service provider to fix the problem at the earliest - if that happens, and then the level of customer dissatisfaction is reduced. In the above example, if the bank fixes the ATM within few hours of failure or if the web site is back in operation within few hours, then customers not likely to hold it against the service provider. But if the ATM is not fixed even after one week - then the bank has lost the customer for good.

2. Process failure

Process failure is an outcome of unintended consequences. Here the TBSS functioned but delivered a wrong result. To understand this, consider the following example: Customer logs in to Amazon.com and orders a book, the system records the order and gives an acknowledgment - but automated shipment processing machine sends the wrong book to customer.

3. Poor design

Designing a TBSS which meets the requirements of all customers is tough. Often there will be situations where the TBSS fails to meet the requirement of all the customers. Poor design manifests itself in two forms:

A. Technology design problem

There are instances where the TBSS performed as it was designed to, but the technology performed in such a way that the customer was unhappy with the encounter. For example, Online Train Schedule information offered by Indian Railways - the system works the way it is designed, but for the user, it is almost impossible to read the train schedules - as all the data is presented in cryptic format. Technology design problems are most common

in Web based services & in automated telephone systems. This happens because the persons designing the system do not use the system.

B. Service design problem

There are some instances where TBSS performed as they are designed to, but the design has a flaw. For example, Web sites which provide you an option to retrieve your password, but it insists on you entering your old password (which you are trying to retrieve)

In these cases, technology did not fail, the TBSS performed perfectly as per the design. But, the design was flawed.

4. Customer-driven failure

For TBSS's to work, customers have to be technology savvy. There are times when companies have moved to SST and have removed all other service options. When customers are not technology savvy, they get intimidated or annoyed - and dissatisfied with the TBSS. For example, my father does not know how to use all the features in the cell phone and finds using the voice mail facility to be very challenging - as a result, he is dissatisfied with this new service.

CHAPTER THREE

3. METHODOLOGY

The aim of conducting a research is to formulate questions and to find out the answers for those questions. Research can be explanatory (why), exploratory (what) or descriptive (how). It's important to choose right strategy which will fit the purpose of research. According to Sekaran (2000) exploratory studies will be preferred when there is little information available about the problem or when no resources are available to solve the problem or research problems that have not been solved in past. Descriptive study is undertaken in order to ascertain and be able to describe the characteristics of the variables of interest in a situation (Sekaran, 2000).

This research is basically descriptive, but also to some extent explanatory and exploratory. It cover three questions what, how, and why, e.g. what customer characteristics are the relevant quality determinants; how do customers evaluate service quality of ATM; why do customers prefer ATM. Thus, since the purpose of this study was to know and find out the customers attitude and satisfaction towards self service technologies (ATM) with service quality perspective, it is largely descriptive in nature.

ATMs are one of the TBSS which are more widely used by the customers in the banking sector. So, ATMs of Dashen bank in Addis Ababa was chosen for this empirical study. There are mainly four banks offering ATM services to their customers in Ethiopia. These banks are Dashen Bank, Commercial Bank of Ethiopia (CBE), Zemen and Wegagen bank who joined the business recently. The reason Dashen Bank was selected is that in relation to other it has many ATM users (which are more than 60,000 and 35,000 in number in Ethiopia and Addis Ababa respectively), so that the researcher can reach them easily. Therefore, the customer of this bank who holds visa card was the population of this study.

3.1. SAMPLING TECHNIQUE AND SAMPLE SIZE

The idea of sampling was to select representative elements from the total population of the study (in this case the population were those customers who use ATM services of

Dashen bank or who hold ATM cards of Dashen Bank). The reason for using the sample was to reduce the costs, time, provide accurate information and the like.

There are four alternatives for probability sampling: systematic sampling, stratified sampling, cluster sampling and simple random sampling and three alternatives for non probability sampling: convenience sampling, judgmental sampling and quota sampling (Cooper and Schindler, 2003.p.188-200). For the purpose of this research convenience (non probability) sampling was used. The reason the researcher selected this type of sampling technique is that it is fast, easy and inexpensive. Based on these techniques, a sample size of 196 ATM users was selected by following statistical approach.

As mentioned, statistical population of this research is customer who uses the ATM service of Dashen bank. Since, the volume of statistical population was large, in order to acquire the sample size, Cochran (1996) formula which is for large and unlimited population was used:

$$n = \frac{Z^2 * pq}{\epsilon^2}$$

Which is a valid were n is the sample size, Z^2 is the abscissa of normal curve that cuts of the area at the tails (which is 1.96 for 95% confidence, 1.6449 for 90% and 2.5758 for 99%), epsilon (ϵ^2) the desired level of precision (which can be from 0.05 to 0.08. i.e., 0.03,0.05, 0.1 for 3%, 5%, 10% respectively), p is the estimated proportion of an attribute that is present in the population (0.5 for 50-50,0.3 for 70-30), and q is 1-p. The value of Z is found in statistical tables which contain the area under the normal curve. When there is large population but that we do not know the variability in the proportion that will adopt the practice; therefore, assume p=.5(maximum variability). Thus, the sample size was calculated as follows:

$$n = \frac{1.96^2 * 0.5 * 0.5}{0.075^2} = \frac{0.9604}{0.0056} = 171.5 \approx \mathbf{172}$$

3.2. TYPE OF DATA AND METHOD OF DATA COLLECTION

Data is often divided and categorized in to two parts: qualitative and quantitative. To achieve the research objective both the primary and secondary data were used. The primary data were collected through questionnaires which was the main tool used in this research to understand the customers' attitudes and satisfaction levels with self-service technologies.

Questionnaire is basically depends up on research questions. The questionnaire was structured in different sections. It includes questions like demographic profile of the respondents such as gender, age, education, occupation and income; personal based characteristics of respondents such as technological experience of respondents, need for independence, and self esteem/pride; technological based self service (ATM) attributes such as speed, reliability, ease of use, and physical appearance; general attitudes of respondents towards technology based self service (ATM); and respondents level of satisfaction.

Every section has its pool of questions, which were close-ended questions with multiple responses directing the respondents to choose, open ended questions and a five point Likert scale (1=strongly disagree, 2=disagree, 3= neutral, 4=agree, 5=strongly agree). Questions are made as sensible and easy to understand as possible.

In this study, in order to understand the attitude of the respondents', attitude related data was analyzed using "likert scale". As per this scale, the statements are quoted in the questionnaire with the corresponding five checkboxes to be ticked as Strongly Agree, Agree, Neutral, Disagree, and Strongly Disagree. The data collected was converted into table and with the help of weighted averages the attitude were assessed.

The weights are 5 for strongly Agree, 4 for Agree, 3 for Neutral, 2 for Disagree, and 1 for strongly Disagree. Therefore, weighted means above the table mean of 3 indicate agreement with the statement by the majority while those below 3 indicate disagreement with the statement by the majority.

Secondary data, on the other hand, was used to get better insights on the research topic, to develop better understanding of the customer's attitudes towards TBSS and to design the sample frame and questionnaire for retrieving the primary data. The data were collected from different sources such as course literatures, journals, articles and reports from different technology based self service providers such as banks.

3.3. ANALYTICAL TOOLS

Once the data were collected through different methods and techniques, it was presented and analyzed by different statistical methods such as tables, percentages, and means. Finally, based on the result of these statistical tools the data was summarized in a proper manner.

CHAPTER FOUR

4. DATA PRESENTATION AND ANALYSIS

INTRODUCTION

The main objective of this study was to assess customers' attitudes and satisfaction levels with TBSS. For the purpose of assessing customers' attitudes and satisfaction levels with ATMs Dashen bank, a sample size of 172 ATM users was taken as a sample size based on Cochran formula. In order to gather data from the selected customers, the main tool used is questionnaire. Based on this method 172 questionnaires containing 43 questions were distributed to ATM users of Dashen bank. Most of the questions were developed as likert five-point rating scale. Therefore, the calculated weighted mean above the table mean of 3 shows an agreement with the statement by the majority while those below table mean of 3 indicate disagreement with the statement by the majority. Based on this and other statistical method, the gathered data was presented in the form of various tables and analyzed as follows.

4.1. Demographic profile of Respondents

As stated in the chapter one, one of the objectives of the research is to assess the socio-economic profile of customers. So, assessing the demographic profile of the respondents is significant to reach the research objectives. In order to assess the demographic profile of the respondents, question related to demographic characteristics of the respondents such as gender, age, education, occupation, and income was asked and the result is summarized in the following table.

Table 4.1 Demographic profile of respondents

S.N.	Demographic Profile of Respondents	Respondents	
		No.	%age
1	**Gender :** Male	141	82
	Female	31	18
2.	**Age :** Below 20 years	6	4
	20-29 years	94	55
	30-39 years	47	26
	40-49 years	16	10
	Above 50 years	9	5
3	**Education:** under diploma	23	13
	Diploma	30	18
	Bachelor	82	48
	Master degree	35	20
	PHD and above	2	1
4	**Occupation:** Student	7	4
	Business men/women	76	44
	Employee(private and gov't)	84	49
	Housewives	5	3
	Other categories	-	
5	**Monthly income(ETB) :** Below 2,500	25	15
	2,500-5,000	79	46
	5,000-7,500	40	23
	7,500-10,000	22	13
	Above 10,00	6	3

Table 4.1 shows that 82% of ATM card holders are male and only 18% of them are female. From this data, it is clearly depicted that the prevalence of usage of ATM card among men is wider than women. This may be due to the fact that in our country, not only in our country, but also in the world, men are more educated than women and they are economically stronger than women.

Age is one of an important demographic factor that is used to determine the needs, wants, interests and capabilities of a person, as they vary with age. From table 4.1, it can be seen that 55% of ATM card users fall in the age group between 20 and 29 years, 26% of them fall in the age group between 30 and 39 years, 10% of them fall in the age group between 40 and 49 years, 5% of them were below 20 years and 4% of them were above 50 years. From the above information it will be concluded that more than half (55%, N=94) of the ATM card holders fall in the age group between 20 and 29. This may be due to the fact that this age was where most of people complete their education and enter into earning phase. At this age most of the time they spend their time outside with friends and colleagues. They find pleasure in spending the money, as many of them do not have family responsibilities at this age. They spend substantial amount on personal consumption items, food, clothing, transportation, luxury goods, entertainments, etc. On the other hand the lowest frequency of ATM usage is related to the age group with above 50 years and below 20 years. Therefore, the prevalence of ATM card usage is more among younger people (between age group of 20 and 29) compared to other age groups.

Since ATM is technological products, educational background of the user have an effect on customers' attitude and satisfaction level. Table 4.1 also shows that 48% of ATM card holders hold bachelor degree, 20% of them hold master degree, 18% of them have diploma, 13% of them have an educational background under diploma and 1% of them have PHD and above. From this data we can understand that the highest frequency of ATM card usage is related to the people who have Bachelor degree and lowest frequency is related to those who have PHD or higher. The lowest frequency is observed among the PHD and above may be due to small number of people in the country who have PHD and above compared to other. Therefore, form the above data it is concluded that the

prevalence of ATM card usage is more common among people with higher education level as majority (69%, N=117) of the respondents have BA degree and above).

Occupation also influences the consumption patterns of Technology Based Self Service (TBSS) like ATM. Table 4.1 indicates that 49%, 44%, 4%, and 3% of the respondents are employees (both government and private employees), business men/women, students, and housewives respectively. From this data it was observed that, compared to other people, all most equal to half (49%, N=85) of ATM card holders are employees (both government and private employees) followed by business men/women (44%, N=76) with small difference of percentage. Thus, the usage of ATM card became more observed among employees. This is due the fact that their organization and the bank make some arrangements (institutional agreement) for them to withdraw their salaries by using the ATM card. Based on this, their organization directly deposits their salaries to the specific bank and employees draw their salaries by using ATM card of that specific bank. The main reason behind here is that first of all it minimizes the activities of their organization and it, in turn, promotes the saving habits of the employees. Entoto TVET and Gondar University is a good evidence for this. Business men/women follow employees in the usage of ATM card. This may be due to the fact that ATM helps business men/women to make their transaction easy and fast as they involve in withdrawing money and other financial transaction daily. Thus, it is clearly understood that the prevalence of usage of ATM card is more among employee's (both government and private employees) and business men/ women.

It is also important to consider the monthly income of ATM card users. This is because of the fact that the spending level and saving of customers depends upon their economic position. From the above table, it can be seen that 46% of ATM card holders earns a monthly income of 2,500 to 5,000 ETB, 23% of them earns a monthly income of 5,000 to 7,500 ETB, 15% of them earns a monthly income below 2,500 ETB, 13% of them earns a monthly income of 7,500-10,000 ETB, and 3% of them earns a monthly income above 10,000 ETB. Form this data it has been revealed that all most half (46%, N=79) of the ATM card holders earns in the income level between 2,500 and 5,000 ETB.

4.2. General Information about Respondents

4.2.1. Type Account Customers Hold

Table 4.2 Types of account customer hold.

S.N.6	Which types of Dashen bank account do you have?									
	Students		Business men/wom.		Employees		Housewives		**Total**	
Types	No	%	No.	%	No.	%	No.	%	**No.**	**%**
Saving Account	7	4	47	27	79	46	5	3	**138**	**80**
Current Account	-	-	29	17	5	3	-	-	**34**	**20**
Total	**7**	**4**	**76**	**44**	**84**	**49**	**5**	**3**	**172**	**100**

Dashen bank provides different types of account. Among this the most widely used accounts by customers are saving account, current account and Diaspora account. With regard to account, only saving and current account members are allowed to use the ATM service. This means that one of the eligibility factors to have the ATM card is to open either a current account or saving account in any of the Dashen bank branch. Table 4.2 shows that 80% and 20% of the respondents have saving and current account respectively. Among those respondents who hold a saving type account the majority (46% out of 80%) of them was employees and among those respondents who holds current account, most (17% out of 20%) of them were business men/women. From this we can understand that the majority of the respondents hold a saving type of account.

4.2.2. Parties Influenced the User to have ATM Card of Dashen Bank

Table 4.3.Parties influenced the user to have ATM card of Dashen bank

S.N.7	Who influence you to have the ATM card of Dashen bank?	**Respondents**	
		N0.	**%age**
	• The bank employee	45	26
	• Friends	33	19
	• Advertisement	12	7
	• Magazine and websites	9	5
	• Other factor (e.g. institutional agreement)	73	43

Influencing factor play an important role in people's usage and attitude of ATM cards as the interest of a person to purchase a product depends to a large extent on them. Table 4.3 shows that surprisingly the majority (43%) of ATM card holders were influenced by other factors such as institutional agreements (agreement between different organization and the bank). As stated in section 4.1.4, the majority of the respondents are employees and they are using ATM cards for withdrawing their salaries. So, as most of them are employees, it is their organization that influences them to have the ATM card. This could be the main reason for the other factor (institutional agreement) ranked as a major influential factor for ATM card holders to have ATM card. On the other hand, 26% of ATM card holders were influenced by bank employees in having the card, 19% of them were influenced by their friends, 7% of them are influenced by the advertisement and 5% of them were influenced by magazines &websites.

4.2.3. The Purpose for Which ATM Card is most Often Used by the Card Holders

Table 4.4.The purpose for which ATM card is most often used by the card holders

S.N.8	By using the ATM service of Dashen bank, which service do you mostly use?	Respondents	
		N0.	%age
	• Cash withdrawal	172	100

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. These services are cash withdrawal, balance inquiry, mini-statement and fund transfer between accounts attached to a single card. The above table shows that all respondents were responded that they were most frequently using the ATM card for the purpose of withdrawing cash than any other services. Therefore, the mostly often used service in the Dashen bank ATMs is cash withdrawal.

4.2.4. Awareness of User about the Features of Dashen Bank ATM and Their Experience with Features

Table 4.5.Awareness of user about the features of Dashen bank ATM and their experience with features

S.N.9	Do you know all the features of Dashen bank's ATM?	Respondents	
		N0.	%age
	• Yes	77	45
	• No	95	55
S.N.10	If yes, have you tried ever to use the facilities other than cash withdrawal?	No.	%age
	• Yes	58	75
	• No	19	25

The ATM users were requested to answer whether they know all the features of Dashen bank ATM and whether they ever use the facilities other than cash withdrawal. The result on the above table shows that about 45%(N=77) of them know about the various features of Dashen bank's ATM. Out of those respondents who know the features, the majority975%) of them use the facilities other than cash withdrawal like balance inquiry, mini-statement, PIN change and fund transfer between accounts attached to a single card . But, about more than half (55%) of the ATM card holders do not know all the features of the Dashen bank.

4.2.5. Frequency of Usage of ATM Cards by the Respondents

Table 4.6.Frequency of usage of ATM cards by the respondents

S.N.11	How many times have you used the ATM service of Dashen bank?	Respondents	
		N0.	%age
	• Once a month	34	20
	• Twice a month	17	10
	• Thrice in month	52	30
	• Four or more times in month	69	40

Consumption pattern of ATM is important in studying customers' attitude and satisfaction level towards ATM. This is because if customer uses ATM frequently it indirectly shows that they have good feeling towards it. From table 4.6, it can be observed that 40% of ATM card holders were using the ATM card four or more times in a month, 30% of them were using it thrice in a month, 20% of them were using it once in a month, and 10% of them were using it twice in a month.

This data show that the majority (70%) of the respondents were using the ATM frequently (more than thrice in a month). This may be due to the fact that ATMs are available at any place so that people feel easy to carry less cash and withdraw cash from ATMs at any centers they visit. This also may be due to the limitation of cash withdrawal and transaction limits. As stated earlier, Dashen bank only allows its ATM card holders to withdraw cash up to 3,000ETB per day and to make transaction up to 5,000ETB within a day. This also makes them to use ATM card again and again, so that it increases the frequency of usage.

4.2.6. Time Taken by the Card Holders at the ATMs

Table 4.7.Time taken by the card holders at the ATMs

S.N.12	How much time it will take you to use the ATM service to withdraw cash?	Respondents	
		N0.	%age
	• Less than 1 minutes	29	17
	• 1-2 minutes	57	33
	• 2-3 minutes	43	25
	• 3-4 minutes	29	17
	• More than 5 minutes	14	8

In fact the idea of getting ATM card is to save time of going to the bank for cash withdrawals and other purposes. So, time was taken as important factor in the study. Table 4.7 indicates that 33% of the ATM users will take 1-2 minutes time in withdrawing cash from ATMs, 25% of will take 1-3 minutes, 17% of them will take 3-4 minute, 17% of them will take less 1 minute at ATMs and 8% of them will take more than five minutes at the ATM center to withdraw money. From this we can understand that most (58%) of

them were taking 1-3 minute time in using ATM (a time that is very low compared to traditional teller system).

4.3. Comparison of ATM with Regular Teller System

Table 4.8.Comparison of ATM with Regular Teller System

S.N.13. In general, I prefer to use the ATM rather than regular bank teller system in withdrawing cash.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	43	86	16	27	0	**172**
Weights	**5**	**4**	**3**	**2**	**1**	**15**
%age	25	50	9	16	0	**100**
Weighted fre.	215	344	48	54	0	**661**
Calculated weighted mean			**3.84**			
S.N.14. ATM has relative advantage(s) compared with regular teller system						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	43	75	33	21	0	**172**
Weights	5	4	3	2	1	**15**
%age	25	44	19	12	0	**100**
Weighted fre.	215	300	99	42	0	**656**
Calculated weighted mean			**3.81**			
S.N.15. To withdraw money using Dashen bank's ATM is fast when compared to personal or regular banking system.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	115	19	38	0	0	**172**
Weights	5	4	3	2	1	**15**
%age	67	11	22	0	0	**100**
Weighted fre.	575	76	114	0	0	**765**
Calculated weighted mean			**4.45**			

The above table shows the perceptions of customers with ATMs by comparing it with regular teller banking system. From this table the following data were observed.

a) The calculated weights mean for the question "In general, I prefer to use ATM rather than regular teller banking system to withdraw cash" is 3.84 which is greater than the table mean of 3 leading the conclusion that the majority of the respondents agree with the statement. From this we can understand that, in general, ATM card holders have a favorable attitude towards ATM than regular teller system in withdrawing cash.
b) In terms of advantage, the majority of customers also agree that ATM has a relative advantage over regular teller banking system. The calculated weighted means for this statement is 3.81 which is greater than table the mean.
c) Finally, the calculated weights mean for the question "To withdraw money using Dashen bank's ATM is fast when compared to personal or regular banking system" is 4.45 which is greater than the table mean of 3 leading the conclusion that the majority of the respondents agree with the statement. From this we can understand that, ATM card holders have a positive attitude towards the speed of Dashen bank's ATMs compared to regular banking system.

4.4. Personality Characteristics of Respondents

Personality of the customers was considered as a primary attribute that could influence the individuals use of technology especially ATMs or modern banking services. It was established from past research that different factors of customers' personality (Self esteem, extraversions, agreeableness, emotional stability, carefulness, and openness to experience) could influence his/her behavior towards use of technology. The following tables show the personality characteristics of ATM card holders such as technological experience of respondents, need for independence, and self esteem.

4.4.1. Technological Experience of Respondents

Table 4.9.Technological experience of respondents

Technological Experience of Respondents						
S.N.16. I am very familiar with technological products (e.g. computers, internet, cellular).						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	56	73	24	19	0	**172**
Weights	5	4	3	2	1	**15**
%age	33	42	14	11	0	**100**
Weighted fre.	280	292	72	38	0	**682**
Calculated weighted mean			**3.97**			
S.N.17. I am the first to adopt technological innovations (e.g. computers, internet, cellular).						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	29	49	43	34	17	**172**
Weights	5	4	3	2	1	**15**
%age	17	28	25	20	10	**100**
Weighted fre.	145	196	129	68	17	**555**
Calculated weighted mean			**3.30**			
S.N.18. I see mostly benefits from using technological products in general. (E.g. computer, the internet, ATM, etc)						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	96	76	0	0	0	172
Weights	5	4	3	2	1	15
%age	56	44	0	0	0	100
Weighted fre.	480	304	0	0	0	784
Calculated weighted mean			**4.56**			

S.N.19. I think technological experience have an effect on service quality and satisfaction of ATM service						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	34	57	46	23	12	**172**
Weights	5	4	3	2	1	**15**
%age	20	33	27	13	7	**100**
Weighted fre.	170	228	138	46	12	**594**
Calculated weighted mean			**3.45**			

Technological experience plays an important role in assessing the attitudes of customers' with technological products like ATM. This is because as more customer experiences technological products, the more positive attitude they have towards TBSS (ATM) and positively effects on seeing service quality. The above table shows that the majority of the respondents agree that they are familiar with technological products and they like to adopt new technological innovation like computers, cellular and the like. The calculated weighted mean for both statements are 3.97 and 3.30 which is greater than the table mean of 3. In terms of percentage, 75% of respondents agree (agree + strongly agree) that they are familiar with technological products and 45% of them agree (agree + strongly agree) that they like to adopt technological innovations.

Table 4.9 also show the response of respondents to the question "I see mostly benefit from using technological products in general (E.g. computer, the internet, ATM, etc)". The calculated weighted mean for this statement is 4.56 which is greater than the table mean of 3 leading the conclusion that the majority of the respondents agree with the statement. In terms of percentage all (100%) of the respondents agree (agree +strongly agree) with the statement. Therefore from this we can understand that in terms of benefits ATM card holders, in general, have a positive attitude towards technological products like ATMs, computer, cellular, etc...

Finally, the above table shows the effect of technological experience on service quality and satisfaction of ATM service. Since the calculated weighted mean (3.46) for this

statement is greater than the table mean of 3, the majority of ATM card holders agree that technological experience have an effect on service quality and satisfaction of customers.

4.4.2. Respondents Need for Independence

Table 4.10.Respondents need for independence

Need for Independence						
S.N.20. I choose self service to avoid interaction with service employees.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	14	17	34	69	38	**172**
Weights	5	4	3	2	1	**15**
%age	8	10	20	40	22	**100**
Weighted fre.	70	68	102	138	38	**416**
Calculated weighted mean			**2.42**			
Table mean			**3.00**			
S.N.21. It is important to get personnel assistance by request when I use ATM service.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	39	63	23	31	16	**172**
Weights	5	4	3	2	1	**15**
%age	23	37	13	18	9	**100**
Weighted fre.	195	252	69	62	16	**594**
Calculated weighted mean			**3.45**			
S.N.22. I look positively on technological development towards the customer managing by him/herself.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	32	70	37	22	11	**172**
Weights	5	4	3	2	1	**15**
%age	19	41	21	13	6	**100**
Weighted fre.	160	280	111	44	11	**606**
Calculated weighted mean			**3.53**			

In TBSS customers assume two roles, the role of the service customer and the role of partial employee. Therefore, studying the attitude and interest of customer towards managing service by themselves is very important. With regard to customers' need of independence, the response of ATM card holders were analyzed as follows:

a) The calculated weighted mean for the question "I choose self service to avoid interaction with service employees" is 2.42 which is less than the table mean of 3. This indicates that the majority of ATM card holders disagree with the statements. The percentage of respondents who says agree (agree + strongly agree), neutral and disagree agree (disagree + strongly disagree) were 18%, 20%, and 62% respectively. From this we can understand that those ATM card holders are not choosing self service to avoid interaction with service employees. They choose it for other reasons.

b) The second question on the same table tries to show the importance of getting personal assistance when using ATMs. Since the calculated weighted mean for this statement (3.45) is greater than the weighted mean, the majority of the respondents agree on getting a personal assistance by request when using ATM. When we put their response in percentage; 60% of them agree (agree + strongly agree), 13%of them were neutral, and 27% of them were disagree (disagree + strongly disagree) with the statement. Therefore, customers will have a positive attitude with ATM service of Dashen bank and will be satisfied if they get personal assistance by request when using its ATM service.

c) Finally, the table shows that the majority (70%) of ATM card holders like to manage service by themselves. The calculated weighted mean for this statement is 3.53 which is greater than that of table mean, leading to the conclusion that the majority of them agree with the statements. Therefore, we can understand that customers want to manage self service option by themselves.

4.4.3. Self Esteem Characteristics of Respondents

4.11. Self esteem characteristics of respondents

Self-Esteem						
S.N.23. I consider there to be a degree of value/respect associated with self-service options like the ATM.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	33	68	41	18	12	**172**
Weights	5	4	3	2	1	**15**
%age	19	40	24	10	7	**100**
Weighted fre.	165	272	123	36	12	**608**
Calculated weighted mean			**3.54**			

Table 4.11 shows the respondents' feeling (self- esteem) when they use ATMs. The response for the statement shows that the calculated weighted mean is 3.54 which is greater than the table mean leading to the conclusion that the majority of them agree that they feel a degree of respect/ value when using self service option like ATMs. In terms of percentage 59% of respondents agree (agree + strongly agree) that they feel a degree of respect/ value when using self service option like ATMs. On the other hand 24% and 27% of the respondents were neutral and disagree with the statements respectively. This shows that the majority of ATM card holders feels a degree of value and respect when they use ATMs.

4.5. ATM attributes

Perceived ATM attributes plays an important role in determining customers attitudes and satisfaction levels. This section analyzes the effect of ATM attributes on the users' attitudes & satisfaction levels and on service quality.

4.5.1. Efficiency of ATMs of Dashen Bank

Table 4.12.Efficiency of Dashen bank's ATM

Efficiency						
S.N.24. ATMs of Dashen bank is Efficient/no wait time						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	14	46	18	63	31	**172**
Weights	5	4	3	2	1	**15**
%age	8	27	10	37	18	**100**
Weighted fre.	70	184	54	126	31	**465**
Calculated weighted mean			**2.70**			

The above table shows that the calculate weighted mean for the statement "ATMs of Dashen bank is Efficient/no wait time" is 2.70 which is less than that of the table mean of 3. This shows that the majority respondents disagree with the statement. When we sees the percentage, 55% of ATM card holders disagree (disagree + strongly disagree) with the statement. The percentage of respondents who are neutral and agree (agree + strongly agree) with the statement is 10% and 35% respectively. Thus, from this we can understand that, in terms of efficiency, the customers have a negative [redacted] with ATM service of Dashen bank and their levels of satisfaction are less.

4.5.2. Convenience/Accessibility of Dashen Bank's ATM

Table 4.13.Convenience/Accessibility of Dashen Bank's ATM

Convenience/Accessibility						
S.N.25. ATM service of Dashen bank is available with convenient hours of operation (7 days, 24 hours).						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	16	28	20	65	43	**172**
Weights	5	4	3	2	1	**15**
%age	9	16	12	38	25	**100**
Weighted fre.	80	112	60	130	43	**425**
Calculated weighted mean			**2.47**			

S.N.26. ATM service of Dashen bank will provide additional options, e.g. non-English program						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	52	74	26	14	6	**172**
Weights	5	4	3	2	1	**15**
%age	30	43	15	9	3	**100**
Weighted fre.	260	296	78	28	6	**668**
Calculated weighted mean			**3.88**			

The above table shows convenience /accessibility related question. To know the attitude of the ATM card holders towards convenience of Dashen bank's ATM service, two questions were raised and they have been analyzed as follows.

a. Firstly, the response for the statement "ATM service of Dashen bank is available with convenient hours of operation (7 days, 24 hours)"shows that the majority of the respondents disagree with statement. This is because the calculated weighted mean (2.47) for the statement is less than the table mean. When we put their response in terms of percentage, 63% of them disagree, 25% of them agree and 12% of them were neutral. From this we can understand that ATM service of Dashen bank is inconvenient and not available 24 hours a day and 7 days a week.

b. Second, respondents were asked their level of agreement for the statement "ATM service of Dashen bank will provide additional options, e.g. non-English program" and their response show that the majority of them agree with the statement. The calculated weighted mean for this statement is 3.88 which is greater than the table means of 3 leading to the conclusion that the majority agree with the statement. The percentage of their response show that 73% of them agree with the statement. Only insignificant numbers of the respondents were neutral and disagree with the statement.

4.5.3. ATMs Speed

Table 4.14.ATMs speed of Dashen bank

Speed						
S.N.27. I always get prompt service while withdrawing money from ATM of Dashen bank.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	45	60	30	22	15	**172**
Weights	5	4	3	2	1	**15**
%age	26	35	17	13	9	**100**
Weighted fre.	225	240	90	44	15	**614**
Calculated weighted mean			**3.57**			

Speed (the time it takes to accomplish a certain task) is one of the most important factors when users evaluate the quality of the technological products like ATMs. With regard to speed, the calculated weighted mean is 3.57 which is greater than table mean. Since the calculated weighted mean is greater than table mean, the majority of the ATM card holders agree that they get prompt service while they withdraw moneys from the ATMs of Dashen bank. In terms of percentage, 61%, 17%, 22% of them agree, neutral, and disagree with statements. From this we can understand that in terms of speed ATM card holders have a positive attitude with ATM service of Dashen bank.

4.5.4. Risk

Table 4.15.ATM Risk of Dashen bank

Risk						
S.N.28. There is no risk to use the ATM service of Dashen bank.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	36	54	28	38	16	**172**
Weights	5	4	3	2	1	**15**
%age	21	32	16	22	9	**100**
Weighted fre.	180	216	84	76	16	**572**
Calculated weighted mean			**3.32**			

In terms of risk, table 4.15 show that above half (53%) of the respondents agree (strongly agree + agree) on that there is no risk to use the ATM service of Dashen bank. The calculated weighted mean for this statement is 3.32 which is greater than the table mean, leading to the conclusion that the majority of the respondents agree with the statement. Therefore, in terms of risk the majority of customers have a favorable attitude with ATMs of Dashen bank.

4.5.5. Reliability of Dashen Bank's ATMs

Table 4.16.Reliability of Dashen Bank's ATMs

Reliability						
S.N.29. ATM of Dashen bank is often broken or out of order (is not reliable or consistence).						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	46	60	33	20	13	**172**
Weights	5	4	3	2	1	**15**
%age	27	35	19	12	7	**100**
Weighted fre.	230	240	99	40	26	**365**
Calculated weighted mean			**3.69**			

Consistency of service is one of a common factor which affects the quality of service and the attitude of customer. The above table shows that the calculated weighted mean for the statement is 3.69 which is greater than the table mean of 3, leading to the conclusion that the majority of the respondents agree with the statement. This indicates that ATMs of Dashen bank is not reliable and consistent. That means it frequently broken and out of order. Therefore, in terms of reliability ATM card holders has a negative attitude with ATMs of Dashen bank.

4.5.6. Ease of Using the ATMs of Dashen Bank

Table 4.17.Ease of using the ATMs of Dashen Bank

Ease of use						
S.N.30. Using ATM is not complicated and easy to understand in how to use.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	46	55	31	23	17	**172**
Weights	5	4	3	2	1	**15**
%age	27	32	18	13	10	**100**
Weighted fre.	230	223	93	46	23	**615**
Calculated weighted mean			**3.58**			
S.N.31. ATM educates customers in how to use						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	42	65	32	22	11	**172**
Weights	5	4	3	2	1	**15**
%age	24	38	19	13	6	**100**
Weighted fre.	210	260	96	44	11	**621**
Calculated weighted mean			**3.61**			

Complexity of the product is also one of the main factors that affect customers' perceived service quality. Thus, it is important to study the complexity of the ATMs of Dashen bank to assess customers perceived service quality. The above table tries to show the customers' attitude with ATM service of Dashen in terms of ease of use and the result show that above half (59%) of the respondents agree that the ATMs of Dashen bank is not complicated and ease to understand in how to use. The calculated weighted mean for this statement is 3.58 which is greater than that of the table mean, leading to the conclusion that the majority of ATM card holders agree with the statement. Therefore, in terms of ease of use, ATM card holders have a favorable attitude with ATMs of Dashen bank.

The above table also show that the calculated weighted mean for the statement "ATM will educate customers in how to use" is 3.61 which is greater than the table mean of 3.

This shows that the majority of the respondents agree with the statement. When we see the percentage, 62% of ATM card holders agree with the statement. The percentage of respondents who were neutral and disagree agree (disagree + strongly disagree) with the statement is 19% and 19% respectively.

4.5.7. Physical Appearance of Dashen Bank's ATMs

Table 4.18.Physical Appearance of Dashen Bank's ATMs

Physical appearance						
S.N.32. ATMs of Dashen bank seems to be properly serviced and well maintained.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	41	53	36	24	18	**172**
Weights	5	4	3	2	1	**15**
%age	24	31	21	14	10	
Weighted fre.	205	212	108	48	18	**591**
Calculated weighted mean			**3.44**			

The place where the ATMs were installed also has an effect on the service quality of ATM and customer satisfaction. As stated in the literature, the ATMs of Dashen bank was installed at different places such as in its branches, hotels, universities, trade centers and the like. The calculated mean for the statement "ATMs service of Dashen bank seems to be properly serviced and well maintained" is 3.42 which is greater than the table mean of 3. This shows that the majority of the respondents agree with the statement. The percentage figure shows that 55% of the respondents agree (agree + strongly agree) with the statement, 21% of them were neutral and 24% of them disagree (disagree + strongly disagree). From this one can infer that the ATMs of Dashen banks are properly installed and well maintained. Thus, we can say that users have a positive attitude with physical appearance of ATMs of Dashen bank.

4.6. Attitude towards Using ATM

Table 4.19.Attitude towards using ATM

Attitude towards Using ATM						
S.N.33. I have favorable attitudes or feelings with ATM service quality rendered by Dashen bank						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	43	61	30	25	13	**172**
Weights	5	4	3	2	1	**15**
%age	25	35	17	15	8	**100**
Weighted fre.	215	244	90	50	13	**612**
Calculated weighted mean			**3.56**			
Table mean			**3.00**			

The above table shows customers' general attitude towards ATM service quality of Dashen bank. Since the calculated weighted mean is greater than the table mean, the majority of the respondents agree that they have a favorable attitudes and feelings with the Dashen bank ATM service quality. The table also shows that 60%, 17%, and 23% of the respondents agree, neither agree nor disagree, and disagree with the statement respectively. Therefore, even if the respondents have negative attitudes with some aspect (efficiency, convenience and reliability) of the ATM service of Dashen bank, they have positive attitudes with the service quality rendered by the bank.

4.7. Behavioral Intention to Use ATM/ Commitment

Table 4.20.Respondents behavioral Intention to use ATM

Commitment						
S.N.34. I trust the ATM service of Dashen bank and I am loyal towards the bank.						
	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**	**Total**
Total	39	55	41	25	12	**172**
Weights	5	4	3	2	1	**15**
%age	22	32	24	15	7	**100**
Weighted fre.	195	220	123	50	12	**600**
Calculated weighted mean			**3.49**			

The customers' behavioral intention/ commitment to use the service of specific company plays important role in determining customers perceived service quality and attitude. The more committed the customer is to the company, the more positive perception of the service and positive effect on service quality (customers committed to a service origination will contribute to higher levels of technical (output) and functional (process) quality to the service encounters.

Table 4.20 shows customers' commitment with ATM service of Dashen bank and the result shows that the calculated weighted mean for the statement "I trust the ATM service of Dashen bank and I am loyal towards the bank" is 3.59 which is greater than the table mean of 3. This shows that the majority of the respondents agree with statement. The percentage of respondents who says agree (agree + strongly agree) were 52%. Therefore, from this we can understand that the little over half of ATM card holders trust their service providers and will remain loyal with the bank and use ATM service of Dashen bank in the future.

4.8. Respondents Satisfaction Levels

In this section we will see the satisfaction levesl of customers with ATM service of Dashen bank. It deals with the survey findings relate with the question that demanded the ATM users' perception about the level of satisfaction with respect to various issues. The survey findings with respect to the level of customer satisfaction with various aspects can be shown in the following table:

Table 4.21.Respondents level of satisfaction with different aspects of ATMs

Customers Level of satisfaction with;						
S.N.35. The promptness of card delivery						
	Very Satisfied	**Satisfied**	**Neutral**	**Unsatisfied**	**Very Unsatisfied**	**Total**
Total	45	59	30	22	16	**172**
Weights	5	4	3	2	1	**15**
%age	26	35	17	13	9	**100**
Weighted fre.	225	236	90	44	16	**611**

Calculated weighted mean			**3.55**			
S.N.36. The performance of Dashen bank ATM						
	Very Satisfied	**Satisfied**	**Neutral**	**Unsatisfied**	**Very Unsatisfied**	**Total**
Total	19	31	64	33	25	**172**
Weights	5	4	3	2	1	**15**
%age	11	18	37	19	15	**100**
Weighted fre.	95	124	192	66	25	**502**
Calculated weighted mean			**2.92**			
S.N.37. The service quality of ATM personnel (Query response, timely action on request etc)						
	Very Satisfied	**Satisfied**	**Neutral**	**Unsatisfied**	**Very Unsatisfied**	**Total**
Total	17	34	76	33	12	**172**
Weights	5	4	3	2	1	**15**
%age	10	20	44	19	7	**100**
Weighted fre.	85	136	228	66	12	**527**
Calculated weighted mean			**3.06**			
S.N.38. The quality of notes (currency)						
	Very Satisfied	**Satisfied**	**Neutral**	**Unsatisfied**	**Very Unsatisfied**	**Total**
Total	53	89	11	19	0	**172**
Weights	5	4	3	2	1	**15**
%age	31	52	6	11	0	**100**
Weighted fre.	265	356	33	38	0	**692**
Calculated weighted mean			**4.02**			

The above table indicates that with respect to the promptness of card delivery and the quality of notes customers were satisfied. The calculated weighted mean for these two

statements is 3.55 and 4.02 respectively, which are greater than the table mean of 3. When we see the percentage response of the respondents for the promptness of ATM card delivery and the quality of notes, 61% & 83% of the respondents were satisfied (satisfied + very satisfied), 17% & 16% of them were neutral (neither satisfied nor dissatisfied), and 22% & 11% of them were dissatisfied (dissatisfied + strongly dissatisfied) with the promptness of card delivery and the quality of notes respectively. From this we can understand that, in terms of the promptness of the card delivery and the quality of notes, ATM card holders were satisfied and have a favorable attitude.

But, with respect to the performance of the ATM and the quality of the ATM personnel the majority of the respondents were neutral (neither satisfied nor dissatisfied). The calculated weighted mean for these two statements is 2.92 and 3.06 which are approximately equal to the table mean leading the conclusion that they are neutral. In this case 37% & 44% of the respondents are neutral (neither satisfied nor dissatisfied), 29% & 30% of them are satisfied (satisfied + very satisfied), and 34% & 26% of them were dissatisfied (dissatisfied + very dissatisfied) with the performance of the ATMs and the quality of the ATM personnel respectively.

4.9. Comparison of the ATMs of Dashen bank with other

Table 4.22.Comparison of the ATMs of Dashen bank with other

S.N.39. Do you use the ATM service of any other bank?	**Number**	**Percentage**
Yes	9	5
No	163	95
S.N.40. If yes, how can you compare the ATM service of Dashen bank with the same of any other bank in Addis Ababa?	**Number**	**Percentage**
Very poor	0	0
Poor	1	11
Average	1	11
Good	5	56
Very good	2	22
Total	**9**	**100**

- Avoid machine breakdowns
- Increase in the number of ATMs
- More withdrawal limit
- Better customer service by installing updated machines
- Increase safety security

4.12. SUMMARY OF THE MAJOR FINDINGS

- In order to know the socio economic profile of ATM card holders question related to demographic factors such as gender, age, education, occupation, and income were asked and the summary of the findings are presented as follows. With regard to gender, the majority (82%) of ATM card users are male. Most of them are younger people (20-29 years old) and they are more educated people. In terms of occupation and income, most of ATM card holders belongs to employees (both private and government employees) and business men/women who earn an income between 2,500 and 5,000.

- The finding also shows that the majority (80%) of the respondents holds a saving type of account and only 20% of them hold a current account. The finding also shows that the majority of the ATM card holders were influenced by other factors such as institutional agreement and some of them were influenced by bank employees, friends, advertisements and magazines. Furthermore, the majority of the ATM card holders use the ATM card only for cash withdrawal purpose. So, the most frequently used service in Dashen bank ATM by ATM card holders is cash withdrawal.

- In terms of awareness of users about the features of Dashen bank ATM, though Dashen bank has some positive features such as account activity enquiry, PIN change, statement request, etc... more than half (55%) of the respondents did not know all the features of Dashen bank ATM. As a result for facilities other than cash withdrawal, they normally have to depend on the branch services. Only 45% of them know all the features of Dashen bank ATM and among them, 75% of them were using these features.

ADDIS ABABA UNIVERSITY LIBRARIES P.O.BOX 1176 ADDIS ABABA ETHIOPIA

- With regard to frequency of usage, the majority (70%) of the customers are using the ATM card more than thrice in month. While they use the ATM service, most (58%) of them take 1-3 minute time, which is very low compared to the traditional banking system.

- In order to compare ATM service of Dashen bank with regular banking system three questions related to preference. relative advantage and speed of ATM's were asked and the finding shows that the majority of ATM card holders have a positive attitude towards ATM than regular or personal banking system. The calculated weighted mean for these three factors (preference, relative advantage and speed) are 3.84, 3.81, and 4.45 respectively which are more than the table mean of 3 leading the conclusion that the majority of the respondents agree that they prefer ATMs and believe that it has speed and relative advantage over traditional banking system.

- As stated earlier, different factors of customers' personality could influence his/her behavior towards use of technology. In order to know the personality characteristics of ATM card users of Dashen bank, different question related to technological experience, need for independence and self-esteem are raised. With respect to technological experience the majority of the ATM card holders are familiar with technological products and they like to adopt new technological developments. They also believe that there exist most benefits from technological products in general and think that technological experience has an effect on service quality and customer satisfaction. Therefore, technological experience has an effect on attitude of customers and service quality of technological products like ATM. The assumption here is that the more customer experiences technological products, the more positive attitude they have towards TBSS(ATM) and positive effect on service quality and vice versa. This is because experienced users learn new system easily.

- When we come to the need for independence of customers in using ATM service, the majority of the respondents likes to manage service by themselves and wants to get personal assistance by request. Therefore, need for independence while using TBSS

has a positive effect on customer attitude and satisfaction. The assumption here is that customer feels pleasure managing by themselves.

- Finally, the finding also shows that the majority of the respondents feels a degree of value and pride when they use TBSS like ATM.

Generally, the finding shows that the majority of ATM card holders is familiar with technological products and likes to adopt new technological innovations. They also want to manage self service options (like ATM) by themselves.

- Perceived attributes of ATMs play a critical role to determine the customers' level of satisfaction and attitude. In order to measure customers satisfaction and attitude of ATM card holders towards ATMs attributes, different ATM attribute factors such as efficiency, convenience, speed, risk, reliability, ease of use and physical appearance was raised and the findings are summarized as follows. With regards to efficiency of the ATMs of the Dashen bank, the calculated weighted mean for the statement (2.70) is less than that of the table mean, leading to the conclusion that the majority of the respondents disagree with the statement. This means that they agree that ATM service of Dashen bank has a wait time (line). So, the majority of the customer has a negative attitude with ATMs of Dashen bank (in terms of waiting time). This may be due to the fact that the number of ATM card holders is becoming high and high, and the numbers of ATMs are limited. It is also may be all of the ATMs are not ready for service due to different factor such as broken down, out of order, etc…

- When we come to the convenience/accessibility attributes of ATMs, the majority of the respondents disagree with the availability of the ATMs service 7 days a week and 24 hours a day. Therefore in terms of convenience, the majority of the customers again have a negative attitude towards ATM service of Dashen bank. While interviewing the respondents the main reasons they have raised for this problem is that most of the time the ATMs machines broken down and it became out of order, even remain for long period of time without maintenance. However the majority of the respondents agree that the ATM machine will provide additional option (non English program, e.g. Amharic language).

- With regard to the speed of the machine, the majority of the respondents agree that they get prompt service while withdrawing money from the ATM. Thus, in terms of speed, ATM card holders of Dashen bank have positive attitudes with its ATM service.

- In addition, above half of the respondents also agree that the ATM service of Dashen bank have no risk, leading to the conclusion that, in terms of risk, they have positive attitudes with the service. But, the sign is not good. This is because 31% of the respondents did not agree with the statement and 16% of them were neutral.

- With regard to the reliability of the ATMs of Dashen bank, the majority of the respondents agree that it is not reliable and consistence. This means that it often broken and out of order. Therefore, in terms of reliability the respondents have a negative attitude with ATMs service of Dashen bank.

- Furthermore, the majority of the respondents agree that the ATM machine is not complicated and easy to understand in how to use. This may be due to the fact that the majority of the respondents are more educated and technologically experienced, so that they learn new things easily. They also agree that the ATM machine educate customer in how to use. Thus, in terms of easiness, ATM card holders of Dashen bank have a positive attitude with its ATM service.

- Finally, the finding also suggests that the majority of the respondents agree that the ATMs of Dashen bank was properly serviced and well maintained. Thus, from this we can understand that users have positive attitudes with the physical appearance of Dashen bank's ATM.

Generally, the majority of the respondents have positive attitudes with ATM service of Dashen bank with regard to speed, risk, ease of use and physical appearance. But, with regard to efficiency (waiting time), convenience (accessibility), and reliability (consistency) attributes; the majority of ATM card holders has a negative or unfavorable attitudes with the ATM service of Dashen bank.

- Attitude or feeling of customers regarding service rendered by ATMs is important factor to study to make them as regular customers'. It is depicted that the majority of the respondents agree that they have favorable attitudes or feelings with ATM service quality of Dashen bank. So, even if the respondents have negative attitudes with some aspect of ATM service, the majority of the respondents have positive attitudes with the service quality rendered by the bank. This may be due to the speed and convenience provided by the ATMs.

- With regard to customers' commitment, the majority of them trusts the bank and will remain loyal with the bank and use ATM service of Dashen bank in the future. However, the technical faults and breakdowns in ATMs have creates some doubts in the mind of the customers regarding its reliability of use.

- Customers level of satisfaction with different aspects of ATM service of Dashen bank were measured and the finding shows that the majority of them were satisfied with the promptness of the card delivery and the quality of notes they get from the ATM machines. However, ATM card holders are neutral (neither satisfied nor dissatisfied) with the performance of the ATM and the service quality of ATM personnel. From this we can understand that, with regard to promptness of card delivery and the quality of notes, customers were satisfied. But, with regard the overall performance of the ATM and the service quality of ATM personnel, the customers were neither satisfied nor dissatisfied.

- The finding also shows that only 5% of the customers use other ATM card and among them the majority rates the service of the Dashen bank's ATM as good. From this we can understand that for those respondents, the ATMs of Dashen is very good in relation to other.

- The finding also shows that, though Dashen bank ATM has many positive features such as promptness of card delivery, convenience of ATMs (24 hours in 365 days) and ease of use; the majority of the ATM card holders consider the following as the main problem areas of Dashen bank ATMs.

- **Machine breakdown:** Machine breakdown generally occurs for the following reasons:

  Poor quality notes: If the notes supplied in the ATMs are of poor quality, the chance of machine breakdown increases. Because the sensor that picks the notes from the cassette cannot operate smoothly.

  High frequency of use: As the number of ATMs of the Dashen bank is less, the frequency of use of ATM is very high. As ATM is a machine, the probability of going out of order rises with the high frequency of use of machine.

  Network failure: if net work is not successful, the machine became out of order and will stop its functions. This is the most common problem that the Dashen bank rises as main factor for machine breakdowns and blames the Ethiopian telecom for this problem.

- **Insufficient number of ATMs:** Dashen bank has more than 55 ATM machines all over the country and 35 in Addis Ababa. However, the majority customers consider this as an insufficient. It means that the numbers of ATMs are so limited that the users have to face difficulty of use of machine.

- **Unsecured:** The majority of the customers also believe that the security system of Dashen bank ATM is not sufficient. This means that there exists security problem for them while they are withdrawing money. This is due to the fact that any person can see the customers what they are doing. This because most of the ATMs of Dashen bank have no booth (closet).

- **Withdrawal limit:** customers also believe that the withdrawal limit is not enough. As stated earlier the maximum amount of Birr that is allowed for withdrawing is only 3,000ETB. In addition, they are only allowed to make transaction not more than 5,000ETB.

- Customers also consider support problem, card locking, and old fashioned and unity as negative features of ATM's of Dashen bank.

- Finally, the customers of Dashen bank ATM have made different recommendations for the improvement of service quality of Dashen bank ATM. The most important recommendations made by users are the followings:

  - ✓ **Avoiding machine breakdown:** machine breakdown is one of the most problems that most of the respondents raise. Therefore, the majority of the respondent advice the bank should improve and avoid these problems.

  - ✓ **New ATM location:** the second suggestion made by the majority of ATM users is the need for new ATM locations. At present, numbers of ATM location are not sufficient to meet the needs of growing of ATM users. So, new ATM location is an essential need.

  - ✓ **Increase in number of ATMs**: the present ATMs are located in various busy places. Customers are to wait in line to get facilities of these ATMs. It consumes their valuable time. So, the majority of the customers urged (advice) for increase in number of ATMs in an existing booth.

  - ✓ **More withdrawal limit**: finally, ATM card holders suggest the Dashen bank to increase the maximum amount of the withdrawal limit.

CHAPTER FIVE

5CONCLUSION AND RECOMMENDATION

5.1 CONCLUSION

Technology has become an integral part of doing business for many companies, but the benefits sought by the champions of technology are not always fully realized. This is particularly true with technology that the customer uses as a replacement for a firm's employee in the delivery of services like that of ATM. This technology can benefit the service provider by standardizing service delivery, reducing labor costs and expanding the options for delivery. But, it can drain resources if not widely accepted by customers. This research examined customers' attitudes and satisfaction levels with Technology Based Self Service, especially on ATM users of Dashen bank in Addis Ababa.

The research, conducted among ATM user of Dashen bank in Addis Ababa region, shows that the majority of ATM card holders are male, younger people, more educated, and employees and business men/women who belongs to highly income groups. In addition, most of them hold a saving type of account and they were influenced by different factors such as institutional agreements, the banks employees, and friends in having the ATM card. Furthermore, above half of ATM card holders did not know all the features of Dashen bank's ATM other than cash withdraw. Because of this most of them are using the ATM card for cash withdrawal purpose. Therefore, the most frequently used service in Dashen bank ATM is cash withdrawal.

It is also concluded that majority of the ATM card holders prefer ATM than regular banking system and they believe that it is quick and has a relative advantage over regular banking system.

When we come to personality characteristics of the respondents, the researcher uses different factors (such as technological experience, need for independence and self-esteem) to measure their attitudes and the finding shows that the majority of the respondents are familiar with technological products like computer, cellular and ATMs and like to adopt new technological innovations and wants to manage self service option by themselves. They also feel a degree of value and pride while they use TBSS like ATMs.

Previous researches shows that technology based self service attributes such as efficiency, convenience/accessibility, speed, ease of use, their physical appearance and risk of using it has an effect on customers' attitudes and service quality. The finding of this research shows that the majority of the customers have positive attitudes with ATM service of Dashen bank with regard to speed, risk, ease of use and physical appearance. However, with regard to efficiency (waiting time), convenience (accessibility), and reliability (consistency) attributes; the majority of ATM card holders have negative or unfavorable attitudes with the ATM service of Dashen bank. But, even if the respondents have negative attitudes with some aspects of ATM service, the majority of the respondents trusts the bank and will remain loyal towards the bank and use its ATM service in the future. They also have positive attitudes towards the service quality rendered by the ATMs of the bank.

When we see the respondents' level of satisfaction with some aspects of ATM service, the majority of them were satisfied with the promptness of card delivery and the quality of notes. But, they were neutral (neither satisfied nor dissatisfied) with the performance of the ATM and the service quality of ATM personnel.

The final finding of the study shows customers comments on the positive and negative features of ATMs of Dashen bank and their recommendations. Accordingly, the majority of the respondents consider promptness of card delivery, convenience of ATMs and ease of use as positive features of ATM service of Dashen bank. But, ATM card holders consider that the Dashen bank ATM suffer from a number uncomfortable features such as non working of machines (machine break down), unsuitable location (insufficient number of ATMs), unsecured, transaction limit, support problem, card locking, and old fashioned and untidy.

Finally, respondents recommends the Bank to improve the service quality of ATM by increasing the number of ATM locations, avoiding machine breakdowns, increasing the number of ATMs, providing more withdrawal limit, installing updated machines and increasing safety security.

5.2 RECOMMENDATIONS

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. This study has examined customers' attitudes and satisfaction levels with ATM service of Dashen bank. The study provides necessary inputs to the bank management to increase customers' satisfaction through improving ATM service quality. Thus, the researcher recommends the bank as follows.

- The findings show that above half of the respondents did not know all the features of the Dashen bank. The only type of service they were known and use is cash withdrawal. This shows that there exists a problem of awareness creation by the bank. Thus, the management of the bank should inform its users about all of the bank's ATM features. This is important because if customers are not well aware of all the ATM features, they normally depend on the branch service and this creates additional cost on the bank. Furthermore, Banks should develop strategies to motivate non- users through awareness, education, extending personalized services, and demonstrating the functions of ATMs.

- The majority of the respondents believe that the ATMs of Dashen is not efficient. This may be, as stated earlier, due to different factors such as an increasing number of ATM card users, limited numbers of ATM machines, and breakdown of ATM machines. So, the management of the bank should improve their ATM systems so as to minimize waiting time in the queue. This can be done by increasing the number of ATMs, installing new ATM machines in new locations, avoiding machines breakdowns, educating user in how to use the ATM (this makes customer to use the ATM efficiently and effectively) and the like. This will improve the efficiency in the service delivery hence increase customers confidence.

- The findings also show that the respondents believe that the ATMs are not convenience/accessible and reliable/consistent. This means that even if the service is available 7 days a week and 24 hours a day under normal circumstance, they

are not ready for use in such times. This is may be due to the fact that most of the times the ATM machines broken down and it became out of order and even remain for long period of time without maintenance. A good evidence for this is that ATM machine installed in Addis Ababa university main campus. It was become breakdown before two years and still remain idle. Thus, the bank should provide a special issues to this and other related problems. This is because if service promise was not being kept, customer will become dissatisfied and their trust on the bank will be diminished.

- The finding also reveal that the customer advice the bank to install ATMs in new location and to increase the number of ATMs. Thus the top management should consider the growing demand of new ATM locations. But here they should also consider the liquidity issue. New ATMs will mean that more liquid money be needed and if the demand is not enough, the organization will face the problems arising out of excess liquidity. So management should consider these issues while making the decision.

- The researcher also advice the bank to improve the safety and security of its ATM service more so that the users feel free while they use it. This can be done by use of nontransparent glass so that the people outside the booth cannot see what is happening inside the ATM and by providing licensed arms to the security persons of ATM.

- Quick response to customers' needs and queries about the ATM related services are important to improve the service standards of ATM. This would facilitate customers to participate in improvement of service quality, learn and perform, and have a pleasant experience through two-way communication. Bank should make a commitment to redress the service failures of ATMs. In other words they should provide compatibility between expectation and perception during service encounter.

- In addition, it is evident that convenience, efficient operation, security and privacy, reliability and responsiveness are not the only characteristics that

influence customers' satisfaction. The other factors that contribute to customer satisfaction include trust, value, and image of the bank. So, the bank management should monitor the environment and identify the trends through marketing intelligence. They need to constantly up-date and differentiate their ATM service quality dimensions to ensure continuous satisfaction and retention of customers, and optimize their limited resources.

- Generally, the bank management of Dashen bank should consider the findings and take all necessary steps for further research and to follow the recommendations made by the customers such as avoidance of machine break downs, increase in number of ATM locations, new ATMs, increase of safety-security to gain more customer base and achieve more customer satisfaction.

REFERENCES

AMA (1960): Marketing Definitions. Chicago, American Marketing Association.

Balasubrahmanyam A. and Narasimha R. (2006): "*Understanding Customer Attitudes towards* Technology-Based Self-Service". Master's Thesis, Karlstads University, Department of Economics

Bitner, L.M.,brown, S.W.and meuter, M.L.(2000), "technology infusion in service encounters", international journal of the academic of marketing science, 28(1):138-149.

Bitner, M. J., Booms, B., et al. (1994): "Critical Service Encounter: The Employee's Viewpoint." Journal of Marketing 58(October): 95-106.

Bitner, M. J. (1990): "Evaluating Service Encounters: The Effects of Physical Surroundings and Employee Responses." Journal of Marketing 54(2): 69-82.

Bitner, M. J., Booms, B. H., et al. (1990): "The Service Encounter: Diagnosing Favorable and Unfavorable Incidents." Journal of Marketing 54(January): 71-84.

Dabholkar, P. A., Bobbitt, L. M., et al. (2003): "Understanding consumer motivation and behavior related to self-scanning in retailing." International Journal of Service Industry Management 14(1): 59-96.

Dabholkar, P.A. (1996), "Consumer evaluations of new technology-based self-service Options: an investigation of alternative models of service quality", International Journal of Research in Marketing, 13(1): 29-51.

Dabholkar, Pratibha A. (1994), "Technology-Based Service Delivery: A Classification Scheme for Developing Marketing Strategies", Advances in Service Marketing and Management 4: 241 271

Dabholkar, Pratibha A. (1992), "The Role of Prior Behavior and Category-Based Affect in On-Site Service Encounters," in Diversity in Consumer Behavior, Vol. XIX, John F. Sherry and Brian Sternthal, eds. Provo, UT: Association for Consumer Research, 563-569

Dabholkar, Pratibha A. (1991), ''Using Technology-Based Self-Service options to Improve Perceived Quality."

Dabholkar, Pratibha A. (1990), "How to Improve Perceived Service Quality by Increasing Customer Participation", Developments in Marketing Science, vol. 13, Academy of Marketing Science

Gardachew Worku (2010), "Electronic-Banking in Ethiopia- Practices, Opportunities and Challenges", Journal of Internet Banking and Commerce

and Competencies." Journal of Marketing Management 13: 407-419.

Gronroos, C. (1990), Service Management and Marketing, Lexington books, Lexington

Gronroos, C. (1984): "A Service Quality Model and its Marketing Implications." European Journal of Marketing 18(4): 36-44.

Gronroos (1978): "A Service-Orientated Approach to Marketing of Services." European Journal of Marketing 12(8): 588-601.

Lovelock, C. H. and Wright, L. (1998): "Principles of Service Marketing and Management." Upper-Saddle River, NJ, Prentice Hall.

Parasuraman, A., Zeithmal, V. A & Berry, L.L. (1985), "A conceptual model of service quality and its implications for further research." Journal of Marketing, Fall 49: 41-50

Salar Habib (2008): "Intention to adopt technology based self service a case of air port s self- check-in service for Iran aviation industry." Master's thesis, Lulea University of Technology.

Thomas F. Schroder (2007): "Profitability of SST Options: Efficiency gains through the implementation of self-service technologies." Doctoral Dissertation, University of St.Gallen, Graduate School of Business Administration.

Wang, J and Namen, J. (2004), "Customer Adoption of Technology-Based Self-Service: A Case Study on Airport Self Check-in Service". Master of Science thesis, Lulea University of Technology

Zeithaml, V. A. and Bitner, M. J. (2000): "Services Marketing - Integrating Customer Focus across the Firm."

Links

http://www.bing.com/search?q=sources of customer satisfaction
http://www.dashenbanksc.com

http://www.banknetindia.com/atm/functionality.htm.

http://www.ritim.cba.uri.edu/bit/bits15.htm

http://www. iceman.strana.de/atmwp.doc

http://www.edis.ifas.ufl.edu/pd006

APPENDIX

S.N	**Section One: General Background Information:** put a '√' mark inside the boxes.	
1	What is your gender?	
	• Male ☐	• Female ☐
2	In which age range you locate?	
	• Below 20 years ☐ • 20-29 years ☐ • 30-39 years ☐	• 40-49 years ☐ • Above 50 years ☐
3	What is your education level?	
	• Under diploma ☐ • Diploma ☐ • Bachelor degree ☐	• Master degree ☐ • PHD and above ☐
4	What is your 0ccupation?	
	• Student • Business men/women • Government employee	• Private employee • Housewives • Other categories
5	How much is your monthly income? (in Birr)	
	• Below 2,500 ☐ • 2,500-5,000 ☐ • 5,000-7,500 ☐	• 7,500-10,000 ☐ • Above 10,00 ☐
6	Which type of Dashen bank account do you have?	
	• Saving account ☐ • Current account ☐	• Other ☐
7	Who influence you to have the ATM card of Dashen bank?	
	• The bank employee ☐ • Fiends ☐ • Advertisement ☐	• Word of mouth ☐ • Magazine and websites ☐ • Other, please specify.....
8	By using the ATM service of Dashen bank, which service do you mostly use?	
	• Cash withdrawal ☐ • Balance Inquiry ☐ • Mini-statement ☐	• Fund transfer between accounts attached to a single card ☐
9	Do you know all the features of Dashen bank's ATM?	
	• Yes ☐	• NO ☐
10	If yes, have you tried ever to use the facilities other than cash withdrawal?	

	• Yes ☐	• NO ☐
11	How many times have you used the ATM service of Dashen bank?	
	• Once a month ☐ • Twice a month ☐	• Thrice in month ☐ • Four or more times in month ☐
12	How much time it will take you to use the ATM service?	
	• Less than 1 minutes ☐ • 1-2 minutes ☐ • 2-3 minutes ☐	• 3-4 minutes ☐ • More than 5 minutes ☐

NB. The following questions show the extent to which you agree with the given statements, where 5= Strongly Agree, 4=Agree, 3=Neutral (neither agree nor disagree), 2=Disagree and 1=Strongly Disagree. Therefore, please indicate your response by way of ticking in the right columns in its respective place.

S.N.	**Section two-Comparison of ATM with regular teller system**	**1**	**2**	**3**	**4**	**5**
13	In general, I prefer to use the ATM rather than regular bank teller system in withdrawing cash.					
14	ATM has relative advantage(s) compared with regular teller system					
15	To withdraw money using Dashen bank's ATM is fast when compared to personal or regular banking system.					
	Section three-Personality characteristics					
S.N.	**Technological experience**	**1**	**2**	**3**	**4**	**5**
16	I am very familiar with technological products (e.g. computers, internet, cellular).					
17	I am the first to adopt technological innovations (e.g. computers, internet, cellular).					
18	I see mostly benefits from using technological products in general. (E.g. computer, the internet, ATM, etc)					
19	I think technological experience have an effect on service quality and satisfaction of ATM service					
S.N.	**Need for independence**	**1**	**2**	**3**	**4**	**5**
20	I choose self service to avoid interaction with service employees					
21	It is important to get personnel assistance by request when I use ATM service					

22	I look positively on technological development towards the customer managing by him/ her.					
S.N.	**Self-esteem**	1	2	3	4	5
23	I consider there to be a degree of value/respect associated with self-service options like the ATM.					
Section four-ATM attributes						
S.N.	**Efficiency**	1	2	3	4	5
24	ATMs of Dashen bank is Efficient/no wait time					
S.N.	**Convenience/Accessibility**	1	2	3	4	5
25	ATM service of Dashen bank is available with convenient hours of operation (7 days. 24 hours)					
26	ATM service of Dashen bank will provide additional options, e.g. non-English program					
S.N.	**Speed**	1	2	3	4	5
27	I always get prompt service while withdrawing money from ATM of Dashen bank					
S.N.	**Risk**	1	2	3	4	5
28	There is no risk to use the ATM service of Dashen bank					
No	**Reliability**	1	2	3	4	5
29	ATM of Dashen bank is often broken or out of order (not reliable or consistent).					
S.N.	**Ease of use**	1	2	3	4	5
30	Using ATM is not complicated and easy to understand how to use.					
21	ATM will educate customers in how to use					
S.N.	**Physical appearance**	1	2	3	4	5
32	ATM service of Dashen bank seems to be properly serviced and well maintained.					
S.N.	**Section five -Attitude towards using ATM**	1	2	3	4	5
33	I have favorable attitudes or feeling towards service quality rendered by the ATMs of Dashen bank					
S.N.	**Section six-Behavioral intention to use ATM/ Commitment**	1	2	3	4	5
34	I trust the ATM service of Dashen bank and I am loyal towards the bank.					

	• Cash withdrawal	172	100
9	Do you know all the features of Dashen bank's ATM?	**Respondents**	
		N0.	**%age**
	• Yes	77	45
	• No	95	55
10	If yes, have you tried ever to use the facilities other than cash withdrawal?	**Respondents**	
		No.	**%age**
	• Yes	58	75
	• No	19	25
11	How many times have you used the ATM service of Dashen bank?	**Respondents**	
		N0.	**%age**
	• Once a month	34	20
	• Twice a month	17	10
	• Thrice in month	52	30
	• Four or more times in month	69	40
12	How much time it will take you to use the ATM service to withdraw cash?	**Respondents**	
		N0.	**%age**
	• Less than 1 minutes	29	17
	• 1-2 minutes	57	33
	• 2-3 minutes	43	25
	• 3-4 minutes	29	17
	• More than 5 minutes	14	8
	Total	**172**	**100**

Q.No	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Tot. Response	TWF	CWM	TM	Decisio
Weig.	5	4	3	2	1					
13	43	86	16	27	0	172	661	**3.84**	3.00	Agree
14	43	75	33	21	0	**172**	656	**3.81**	3.00	Agree
15	115	19	38	0	0	**172**	765	**4.45**	3.00	Agree
16	56	73	24	19	0	172	682	**3.97**	3.00	Agree
17	29	49	43	34	17	172	555	**3.30**	3.00	Agree
18	96	76	0	0	0	172	784	**4.56**	3.00	Agree
19	34	57	46	23	12	172	594	**3.45**	3.00	Agree
20	14	17	34	69	38	172	416	**2.42**	3.00	Disagr
21	39	63	23	31	16	172	594	**3.45**	3.00	Agree
22	32	70	37	22	11	172	606	**3.53**	3.00	Agree

Section Seven- Respondents Level of Satisfaction

NB. The following questions show the extent to which you are satisfied with the given statements, where 1=Very Unsatisfied, 2=Unsatisfied, 3=Neutral (neither Satisfied nor Unsatisfied), 4=Satisfied and 5= Very satisfied. Therefore, please indicate your response by way of ticking in the right columns in its respective place.

S.N.	Your Level of satisfaction with;	*1*	2	3	4	5
35	➢ The promptness of card delivery:					
36	➢ The performance of Dashen bank ATM:					
37	➢ The service quality of ATM personnel (Query response, timely action on request etc)					
38	➢ The quality of notes (currency					

39. Do you use the ATM service of any other bank?

YES ☐	NO ☐

40. If yes, how can you compare the ATM service of Dashen bank with the same of any other bank in Addis Ababa?

Very poor	Poor	Average	Good	Very good

41. What are the positive features of ATM service of Dashen bank? (You can choose more 1 than)

- ➢ Prompt card delivery ☐
- ➢ Easy to use ☐
- ➢ Satisfied with the service quality of ATM personnel ☐
- ➢ 24 hours in 365 days ☐
- ➢ Good decoration & tidiness ☐
- ➢ Any other-please specify

42. What are the uncomfortable features/issues of Dashen bank ATM? (You can choose more than one)

- Poor money quality ☐
- Transaction limits ☐
- Support problem ☐
- Card locking ☐
- Delay in card delivery ☐
- Machine complexity ☐
- Machine breakdown ☐
- Unsuitable location ☐
- Unsecured ☐
- Old fashioned & untidy ☐
- Any other please specify.....
  .....
  .....
  .....
  .....

43. What are your recommendations to improve Dashen bank ATM services? (You can choose more than one)

- More user friendly machine ☐
- Better customer service ☐
- Prompt card delivery ☐
- Increase in number of ATMs ☐
- More withdrawal limit ☐
- Increase of safety security ☐
- Better currency quality ☐
- Making more attractive decorations

44. Other comments about ATM of Dashen bank.

_____

_____

_____

Thank you very much for your time, cooperation & patience

ADDIS ABABA UNIVERSITY
LIBRARIES
P.O.BOX 1176
ADDIS ABABA ETHIOPIA

APPENDIX 2-DATA ANALYSIS RESULTS

S.N.	Demographic Profile of Respondents	Respondents	
		No.	%age
1	**Gander :** Male	141	82
	Female	31	18
2	**Age :** Below 20 years	6	4
	20-29 years	94	55
	30-39 years	47	26
	40-49 years	16	10
	Above 50 years	9	5
3	**Education:** under diploma	23	13
	Diploma	30	18
	Bachelor	82	48
	Master degree	35	20
	PHD and above	2	1
4	**Occupation:** Student	7	4
	Business men/women	76	44
	Employee(private and gov't)	84	49
	Housewives	5	3
	Other categories	-	
5	**Monthly income(ETB) :** Below 2,500	25	15
	2,500-5,000	79	46
	5,000-7,500	40	23
	7,500-10,000	22	13
	Above 10,000	6	3
6	Which types of Dashen bank account do you have?	**Respondents**	
		N0.	**%age**
	• Saving account	138	80
	• Current account	34	20
7	Who influence you to have the ATM card of Dashen bank?	**Respondents**	
		N0.	**%age**
	• The bank employee	45	26
	• Friends	33	19
	• Advertisement	12	7
	• Magazine and websites	9	5
	• Other factor(e.g. institutional agreement)	73	43
8	By using the ATM service of Dashen bank, which service do you mostly use?	**Respondents**	
		N0.	**%age**

23	33	68	41	18	12	172	608	**3.54**	3.00	Agree
24	14	46	18	63	31	172	465	**2.70**	3.00	Disagree
25	16	28	20	65	43	172	425	**2.47**	3.00	Disagree
26	52	74	26	14	6	172	668	**3.88**	3.00	Agree
27	45	60	30	22	15	172	614	**3.57**	3.00	Agree
28	36	54	28	38	16	172	572	**3.32**	3.00	Agree
29	46	60	33	20	13	172	365	**3.69**	3.00	Agree
30	46	55	31	23	17	172	615	**3.58**	3.00	Agree
31	42	65	32	22	11	172	621	**3.61**	3.00	Agree
32	41	53	36	24	18	172	591	**3.44**	3.00	Agree
33	43	61	30	25	13	172	612	**3.56**	3.00	Agree
34	39	55	41	25	12	172	600	**3.49**	3.00	Agree
Q.No	**Very Satisfied**	**Satisfied**	**Neutral**	**Unsatisfied**	**V.Unsatisfied**	**Tot. Response**	TWF	**CWM**	**TM**	
35	45	59	30	22	16	172	611	**3.55**	3.00	Agree
36	19	31	64	33	25	172	502	**2.92**	3.00	Neutral
37	17	34	76	33	12	172	527	**3.06**	3.00	Neutral
38	53	89	11	19	0	172	692	**4.02**	3.00	Agree

TM =Table Mean
TWM=Total Weighted Mean
CWM=Calculated Weighted Mean

TM = $\frac{\text{the sum of all the weights}}{\text{Numbers of weights}} = \frac{£(wi)}{5} = \frac{5+4+3+2+1}{5} = \frac{15}{5} = \mathbf{3}$

TWM = £ {(r1*w1) + (r2*w2) + (r3*w4).... (ri * wi)}

For example for question No.13, the TWM is,

TWM= (43*5) + (86*4) + (16*3) + (27*2) + (0*1) =**661**

CWM= $\frac{\text{TWM}}{\text{Total Response}} = \frac{661}{172} = \mathbf{3.84}$

Decision: If the CWM is > the TM, the majority of the respondents Agree

If the CWM is = the TM, the majority of the respondents Neutral

If the CWM is < the TM, the majority of the respondents Disagree

So, since the CWM for the above example is greater than the TM, the majority of the respondents' agree with the statement.

Q.No.39. Do you use the ATM service of any other bank?	**Number**	**Percentage**
Yes	9	5
No	163	95
Q.No.40. If yes, how can you compare the ATM service of Dashen bank with the same of any other bank in Addis Ababa?	**Number**	**Percentage**
Very poor	0	0
Poor	1	11
Average	1	11
Good	5	56
Very good	2	22
Total	**9**	**100**