

**FACTORS AFFECTING CUSTOMERS SATISFACTION FROM ATM
SERVICE: A CASE OF NEPALESAE COMMERCIAL BANKS**

A dissertation submitted to the Office of the Dean, Faculty of Management in partial
fulfilment of the requirements for the Master's Degree

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Certification of Authorship

I hereby corroborate that I have researched and submitted the final draft of dissertation entitled “**Factors Affecting Customer Satisfaction from ATM Service: A Case of Nepalese Commercial Banks**”. The work of this dissertation has not been submitted previously for the purpose of conferral of any degrees nor has it been proposed and presented as part of requirements for any other academic purposes. The assistance and cooperation that I have received during this research work has been acknowledged. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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List of Abbreviations

A	Average
AM	Anti-Meridian
ANOVA	Analysis of Variance
ATM	Automated Teller Machine
CA	Choice of ATM
CS	Customer Satisfaction
Er	Error term
Etc.	Etcetera
F	Frequency
FPF	Frequency of Problem Faced
HDFC	Housing Development Finance Corporation
i.e.	That is
MBS	Masters of Business Studies
NEPSE	Nepal Stock Exchange
No.	Number
NRB	Nepal Rastra Bank
PM	Post Meridian
PPB	Post Purchase Behavior
RFC	Reasonability of Fee Charged
SBI	State Bank of India
SEE	Standard Error of Estimate
SLC	School Leaving Certificate
SPSS	Statistical Package for Social Science
Std. Dev	Standard Deviation
US	Usage of Services
USA	United States of America

ABSTRACT

This study examines the factors affecting customer satisfaction from ATM service variables namely reasonability of fee charged, frequency of problem faced, choice of ATM, usage of services and post purchase behavior in the context of Nepalese commercial banks.

The study is based on the primary source of data. The main source of primary data is the structured questionnaire and the study was carried out in Kathmandu valley by distributing 220 questionnaires through field survey. Of them, 184 respondents' opinions have been used as major source for the study of factors affecting customer satisfaction from ATM services in Nepalese commercial banks. 5 commercial banks were selected out of 27 private sector commercial banks. Different statistical tools like mean, standard deviation, correlation analysis and regression analysis are used for the primary data analysis.

The study reveals that the factors from ATM services greatly influence customer satisfaction level in Nepalese commercial banks. The result indicates that the reasonability of fee charged as the most important factor affecting customer satisfaction level from ATM service in Nepalese commercial banks while cash withdrawal is the most useful ATM services provided by the Nepalese commercial banks. Likewise, machine out of order the most frequently faced problem in Nepalese commercial banks. The study further showed that ATM users found limit on daily withdrawal as inconveniency while using ATM and also found that it was costly to withdraw from another bank ATM outlets in Nepalese commercial banks. The study also reveals that the reasonability of fee charged, choice of ATM, usage of services and post purchase behavior factors from ATM services have positive and significant relationship with customer satisfaction in Nepalese commercial banks. It indicated that higher the reasonability of fee charged, choice of ATM, usage of services and post purchase behavior, higher would be the customer satisfaction. However, frequencies of problems faced have negative and significant relationship with customer satisfaction which indicates that higher the frequency of problem faced, lower would be the customer satisfaction. The study also concludes that most of the respondents believe ATM service as the necessity of modern banking and overall ATM services provided by commercial bank is satisfactory.

Chapter 1

Introduction

1.1 General background

Technology is revolutionizing the financial services industry through various unthinkable innovations. The volume of cross-border trading and other financial activities is increasing geometrically facilitated by technology. The influence of technology over product innovations in banks is enormous. In innovation process, banks have to decide which products banks constraints wish to sell, whether banks wish to build those products themselves, how banks should deliver, and why banks wish to deliver those products to customers (Raihan et al. 2001). Innovation is the art of overcoming toward development. It occurs when a new or changed product or service is introduced to the market, or when a new or changed process is used in a commercial situation. No organization can remain happy with the existing products to cope with the competitors. Banks are no exception to this situation (Shahid, 2004).

Customer service proves to be one of the most important factors governing business. Today business organizations are more customers-focused than ever before since customer satisfaction is a competitive advantage which is sustainable over the long term (Schnaars, 1991). The business organizations to create healthy customer relationships should always focus on listening to customers' expectations, requirements, complaints and needs. Making polite suggestions, delivering promises and taking extra effort such as building an efficient customer service team are the right practices to retain them for a long period. Satisfied customers mean a long term profitable business since they stay loyal to the business (Gumesson, 2002). The introduction of ATM seemed to have offered a temporary relief both to the bank customers and the bank themselves. However, it has created new anxieties and challenges on the part of customers which are rarely and empirically investigated by the scholars in qualitative terms (Olatokun and Igbinedoin, 2009; Adeoti, 2011).

Singh and Komal (2009) mentioned that automated teller machines (ATMs) were the first well-known machines to provide electronic access to customers. With advent of automatic teller machines (ATM), banks are able to serve customers outside the banking hall. ATM is designed to perform the most important function of bank. It is operated by plastic card with its special features. The plastic card is replacing cheque,

personal attendance of the customer, banking hour's restrictions and paper based verification. ATMs have made hard cash just seconds away all throughout the day at every corner of the globe. ATMs allows to do a number of banking functions such as withdrawing cash from one's account, making balance inquiries and transferring money from one account to another, using a plastic, magnetic-stripe card and personal identification number issued by the financial institution.

The distribution of banking services can be understood as the place and means by which the bank services are offered to customers. In general, banks try to create a diversified distribution strategy in order to market the range of their services, offering customers several ways through which they can benefit from the bank services. The two main factors that led to the use of multiple distribution channels by banks are: (1) major changes in the banking sector by growing competition, increasing pressure from competitors and (2) changing customers' preferences. As a result, the banks then resorted to compete over price, and now the emphasis is on differentiation by distribution channels used (Mobarek, 2007).

Zhu et al. (2004) postulated that distribution channels used by banks can be divided into two main groups: in the first category are included those channels which typically involve "personal contact with the consumer" territorial units, and in the second category are included those "channels which may either interact directly with the consumer, by non-personal means, or operate through various intermediaries to traditional distribution methods (network of territorial units). To meet better market requirements in terms of speed and efficiency of services, banks have adopted an interactive electronic and computerized system for clients: banking services via network of automated teller machines (ATMs).

According to Singh and Komal (2009), ATM services enhance operations and customer satisfaction in terms of flexibility of time; add value in terms of speedy handling of voluminous transactions which traditional services were unable to handle efficiently and expediently. The machine can enable customers to deposit and withdraw cash at more convenient time and places than during banking hours at branch.

However, Ayo et al. (2010) postulated that the situation today has changed drastically; it has become a source of worry to users and providers (banks), because the function it

was meant to provide has been seriously eroded. It has become a money spinner for fraudsters, who have found new heaven in compromising innocent people's personal identification numbers (pin). ATM behavior can change during what is called "stand-in" time, where the bank dispensing the cash is unable to access databases that contain account information (possibly for database maintenance), that is, when there is network problem. ATMs at times can also deduct money from the account without actually dispensing money; these, among others, are the bane of these money dispensing machines. The level of satisfaction intended to be provided by these machines is reduced by technological and processing failures, the perception that the service delivery mode is expensive and the insecurity regarding standalone ATMs. All these create customer dissatisfaction.

Stemper (1990) stressed the positive dimension of ATMs based on freedom of transactions. Effective service delivery in ATM system guarantees quality excellence and superior performance and provides autonomy to the customers (Lovelock, 2000). Moutinho (1992) examined the relationship between the dimension of usage rate and performance expectation with customers' prolonged satisfaction with ATM services. The results indicate that usage rate has a negative association with customers' perceived prolonged satisfaction whereas performance expectations are found to have positive and significant effects on customers' prolonged satisfaction.

Yavas et al. (2004) argued that customer focused ATM delivery system that fulfills their needs and maximize operational performance is an essential dimension for bank to achieve and sustain competitive advantage. Davies et al. (1996) examined the factors that influence customers' satisfaction about ATM service quality. These factors include costs involved in the use of ATM, and efficient functioning of ATM. Joseph and Stone (2003) found that easy access to location, user-friendly ATM and security, are important factors that influence majority of bank customers' perception of ATM service quality. Shamsdouha et al. (2005) found that 24 hours service, accuracy, and convenient locations are the main predictors of customer satisfaction. The study also indicates lack of privacy in executing the transaction, fear of safety and complexity of the machine as the major cause of concern for the customers.

Howcroft (1991) noted that dissatisfaction among customers is associated with frequent interruption and breakdown of ATM. Intense competition and technology-based new

services are shaping customers' loyalty. These have resulted into switching of banks by customers based on competitive services (Lewis and Bingham, 1991). Michael (2001) found that location of ATMs, increasing number of ATMs, and diversified service offering are associated with switching of banks. ATM is one type of innovation that can mechanically accept deposits, issue withdrawals, transfer funds between accounts, and collect bills.

Joseph and Stone (2003) mentioned that secure and convenient location, adequate number of ATM, user-friendly system and functionality of ATM play important role in customer satisfaction. Dilijonas et al. (2009) mentioned that adequate numbers of ATMs, convenient and secure location, and user-friendly system, speed, minimum errors, high uptime, cash backup, cost and service coverage are essential service quality aspects of ATM service.

With the country's banking sector evolving with time and making greater use of technology to maintain growth in an ever competitive market, the number of ATM cards in circulation has gone up significantly. According to the data of Nepal Rastra Bank (NRB), the number of debit card holders was 3.58 million as of mid-August 2013. Despite the fast progress in the issuance of cards, cash still remains the major mode of payment in the country. Lack of awareness among customers about the use of ATM cards has hindered the growth of use of cards of making the payment. Apart from this, use of technology with which people are yet to become familiar is another problem.

The above discussion shows that the studies devoted to customer satisfaction from ATM services are of greater significance. This study will be useful to those who wish to use ATM and understand the various factors before using it. This study will also act as a reference to other researchers who wishes to carry similar type of study. For the ATM service provider, this study can provide valuable insight regarding improving ATM service quality. This study examines the relationship between customer satisfaction and five factors from ATM services namely reasonability of fee charged, frequency of problem faced, choice of ATM, usage of services and post purchase behavior in the context of Nepal. Hence this study focuses on the factors affecting customer satisfaction from ATM services using the more recent data in the context of Nepal.

1.2 Statement of the problem

Commercial banking has never been more important to the society than it is today. Bill Gates (2008) announced that “banking is essential, banks are not”. This quotation means that the traditional banking is going to vanish in order to be surrogated by electronic banking which continues to attract new users. Banks, like other service organizations, strive to improve customer service level and tie their customers closer (Graven, 2000). In the last decades, commercial banks in developing countries have been faced with a number of fundamental changes, different forms of government intervention, tighter business competition, more demanding customers, increasing cost of developing new financial products and services, and recent mergers and acquisition of financial firms which have affected their operational capacities (Akamavi, 2005).

Commercial banks have kept up introducing a variety of new products and services (Miller, 1986), but many of the initiatives are half-hearted and seem isolated from the typical business processes of the banks. To correct these defects and offer quality services to the customers and therefore customer satisfaction, commercial banks in Uganda have embraced technological innovations and use of modern gadgets, with ATMS as the most commonly used technology by the clients. In recent years, a number of technology initiatives for delivering banking services have appeared in different developing countries. Technologies such as ATMs, mobile phones and points-of-sale (POS) have been used to reduce costs and make clientele profitable to banks (Ivatury, 2006).

There is a tremendous opportunity for banking technology to connect to clients at reduced costs and bring millions of consumers to the formal financial market place through electronic channels (Weissbourd, 2002). The application of new technologies has been proven as an effective way to reduce the costs of operation for the financial institutions. For instance, it will allow banks to reduce expenditures on physical structures. It is believed that the new technologies will help banks to cut costs, increase revenue, and become more convenient for customers (Halperin, 2001).

The changing business environment offers challenges and opportunities to the organizations. The changing customers' perception of quality poses unique challenge. Excellence in quality has become an imperative for organizational sustainability (Lewis et al. 1994). The developments of technologies have enabled organizations to provide

superior services for customers' satisfaction. The number of bank customers preferring to use self- service delivery systems is on the increase. This preference is attributed to increased autonomy in executing the transactions. Banks are increasing their technology-based service options to remain competitive. The ATM is an innovative service delivery mode that offers diversified financial services like cash withdrawal, funds transfer, cash deposits, payment of utility and credit card bills, cheque book requests, and other financial enquiries (Surjadaja et al. 2003).

Automated teller machine (ATM)) is a computerized telecommunication device that provides a client of a financial institution with access to financial transactions in a public space without the need for a cashier, human clerk or bank teller. According to Peter Rose (1999), an ATM is a combination of computer terminals, record keeping systems and a cash vault in one unit, permitting customers to enter the bank book keeping systems with the plastic card containing personal identification number (PIN) or purchasing a special code number into the computer terminal linked to the banks computerized records 24 hours a day. Huff and Munro (1985) observed that many organizations invest resources in information technology in order to achieve benefits such as improved customer services, increased efficiency or productivity and competitiveness.

The introduction of ATM cards brought up dramatic changes in withdrawing money in Nepal also. The country has witness a rapid growth in banking transaction with the introduction and diffusion of information and telecommunication technologies in its banking sector. Nepalese commercial banks are increasing their technology-based services day by day. Customers have to consider several factors before adopting ATM card. One of the views is that, it may not have really created customer satisfaction for bank clients, and other is that, it may have. Despite of all the merits of ATMs, customers still complaint of shortfalls on the use of the system such as; break downs of ATMs, long queues at ATM service points, retention of customer cards, limited knowledge on these of ATM cards, fraudulent transactions and its operation in just few languages (Khan, 2010).

Nepalese commercial banks have adopted the use of ATMs as a way of providing efficient and effective services to their customers. Despite the good intention of efficient and effective services, customers who have resistant to technology or cannot

organize their transaction or simply do not use ATMs, customer routinely kick and punch ATMs when their push button selection do not give them what they expect. Customer care desk has still register more complaints of dissatisfied customers about ATM failures to perform their basic operations such as rejection of cards by the machine, machine break down, restriction of amount to be drawn and others. This propelled to carry out the study to find the relationship of ATMs and customer satisfaction to analyze the contribution of ATMs toward customer satisfaction in Nepalese commercial banks.

Baten and Kamil (2010) mentioned that ATMs are the most popular electronic delivery channel for banking services in Nepal. Number of ATM cardholders is increasing and is expected to increase much more in Nepal (Bhatta, 2011). This study is conducted to analyze the factors affecting customer satisfaction from ATM services in Nepalese commercial banking sector.

The study deals with the following issues:

- i. Does reasonability of fee charged on ATM affect the level of customer satisfaction?
- ii. There is any relationship between choice of ATM and customer satisfaction or not?
- iii. What is the relationship between usage of ATM services and customer satisfaction in Nepalese banking sector?
- iv. Are there any impacts of ATM on customer satisfaction by appraising the frequency of problems faced while using ATM by the customers?
- v. Is there any relationship between the post purchase behavior and customers satisfaction regarding the ATM service of different banks?

1.3. Objective of the study

The major objective of the study is to examine the factors affecting on customer satisfaction from ATM services in Nepalese commercial banks. The specific objectives are as follows:

- i. To examine the impact of the reasonability of fees charged on customer satisfaction.
- ii. To examine the factors affecting the customer satisfaction level from choices of ATM.
- iii. To determine the factors affecting customer satisfaction from the usage of ATM services.

- iv. To ascertain the impact of ATM on customer satisfaction by appraising the problems faced by the customers while making ATM transactions.
- v. To identify the relationship between post purchase behavior and customer satisfaction regarding ATM services provided by different banks under the study.

1.4 Rationale of the study

The emergence of new banking technology has created competitive market and competitive market conditions, which have a critical impact upon consumer behavior. In modern competitive environments, services are gaining increasingly importance in the competitive formula of firms as well as countries. Globalized competition has stressed the importance of quality services and customer satisfaction. This study is significant for the reason that it is expected to provide some practical insight regarding ATM service as a customer service delivery tool. Moreover, this study is expected to provide some important knowledge about the factor's affecting on customer satisfaction from ATM services in Nepalese commercial banks. This study also helps to know about the current situation of ATM service quality and customer satisfaction. This study is expected to help the banking sector to assess the impact of ATM on customer satisfaction and to know how they can improve their service through the use of ATM.

ATM is well-known machine to provide electronic access to customers. With advent of Automatic Teller Machine (ATM), banks are able to serve customers outside the banking hall. ATM is designed to perform the most important function of bank. It is operated by plastic card with its special features. The plastic card is replacing cheque, personal attendance of the customer, banking hour's restriction and paper based verification. ATMs have made hard cash just seconds away all throughout the day at every corner of the globe. ATMs allow doing a number of banking transactions such as cash withdrawal from one's account, making balance inquiries and transferring money from one account to another using a plastic, magnetic-stripe card and personal identification number issued by the financial institution (Mobarek, 2007).

Banks are increasing relying on SSTs (Self Service Technologies) for providing services. ATM banking is one of the means to provide self-service banking. The changing business environment offers challenges and opportunities to the organizations. The changing customers' perception of quality poses unique challenge. Excellences in quality have become an imperative for organizational sustainability

(Khan, 2010). The development of technologies has enabled organizations to provide superior services for customer satisfaction. The number of bank customers preferring to use self-service delivery systems is on the increase. This preference is attributed to increased autonomy in executing the transactions. Banks are increasing their technology based service options to remain competitive. ATM is an innovative service delivery mode that offers diversified financial services like cash withdrawal, fund transfer, cash deposits, utility and credit card bills payment and other financial enquiries (Kumbhar, 2011).

Use of ATM has become extremely popular among customers as convenient mode of transactions. The technological innovation has transformed the banking business. Banks are aggressively adopting this mode. The advantages of using ATM have given new impetus in dimension of service quality and banks are offering new choices to customers. Cabas (2001) noted investment opportunities, reduction in costs, satisfaction of customers and competitiveness as motives to install and add new ATM to the existing network. Commercial banks operating in Nepal are consequently put into lot of pressures due to increase in competition. Various strategies are formulated to retain the customer and the key of it is to increase the service quality level. Service quality is particularly essential in the banking services context because it provides high level of customer satisfaction, and hence it becomes a key to competitive advantage (Ahmossawi, 2001). In addition, service quality has a significant impact on a bank's success and performance (Mouawad and Kleiner, 1996).

The intense competition that prevails in Nepalese banking industry is the fact of today. The inability to increase the customer's base due to various reasons is not hidden to many who have been in banking business since then. Further, this study focus on analyzing the various factors such as identifying the factors affecting on customer satisfaction from ATM services, understanding the factors that drives higher level of customer satisfaction and analyzing the relationship between of customer satisfaction with fee charged, problem faced, choice of ATM, usage of services and post purchase behavior. Hence, this study will help banking sector on how they can improve service delivery through the use of ATM. Also, customers who wish to use ATM service to carry out their banking transaction will get some valuable knowledge from this study.

1.5 Limitation of the study

The main limitations of the study in terms of its scope, methods and assumptions are as follows:

- i. This research includes only 5 commercial banks of Nepal so the larger sample have not taken. Data through questionnaire cannot determine the actual impact on performance so reliability is question mark.
- ii. Due to huge geographical variation, varies in technological development customer satisfaction level is difference. It is very difficult to find out exact tools to generalize this problem. So, the implications of this study has not hold true for long time.
- iii. Insufficient research article and literature review to this subject matter in Nepalese context is also one of the limitations for this research.

1.6 Chapter plan

This study is organized into a total of five chapters. Chapter one contains general background of the study including statement of the problem, purpose of the study, operational definitions and rationale of the study. Chapter two consists of review of literatures related to studies in global context as well as the review of studies in Nepalese context. Besides, this chapter also comprises theoretical or conceptual framework used in the study. Chapter three presents the research plan and design, nature and sources of data, selection of enterprises, models used for data analysis and conclusion along with the limitations of the study. Chapter four consists of presentation and analysis of data with different financial and statistical tools. Chapter five offers the summary overview on all works carried out in chapter one through four including major conclusions derived from the study. This chapter also includes a separate section for implications based on the major findings of the study.

Chapter 2

Literature review

This chapter deals with the review of various literatures relevant to this study. The review focuses on various factors affecting customer satisfaction from ATM services. In this chapter, the conceptual review is first presented followed by the review of various related articles, books, research paper, journals and previous thesis similar to the research topic. The succeeding section of this chapter then presents the research gap pertinent to the research to better understand the factors that may influence ATM service of banks.

2.1 Conceptual review

In this section, the brief review of existing studies has been presented. The review of major literature has been organized as under:

2.1.1 Review of global studies

2.1.2 Review of Nepalese studies

2.1.1 Review of global studies

Joseph and Stone (2003) investigated some of the various roles technology plays in the US banking sector and how technology in general impacts the delivery of banking service. The author developed a grid for bank managers when making decisions concerning the priority of implementation of service-oriented technology. Authors conducted an empirical evaluation of US bank customer perceptions of the impact of technology on service delivery in the banking sector. They examined the United States customers' perception of ATM quality and found that user-friendly, convenient locations, secure positions, and the number of ATM provided by the banks are essential dimensions of ATM service quality.

According to Mcandrews (2003), ATMs can offer significant advantages to both banks and customers. The machines can enable depositors to withdraw and deposit cash at more convenient times and places than during banking hours at branches. At the same time, by automating services that were previously completed manually, ATMs can reduce the costs of servicing some customer demands. These potential advantages are multiplied when banks share their ATMs with others, allowing depositors of other

banks to access their accounts through a bank's ATM. The decision by banks to share their ATMs is partially determined by the terms under which different banks agree on. In particular, there are several prices that can be charged to or collected by the three main parties involved in an ATM transaction, the cardholder or the customer, the cardholder's bank, and the ATM owner. How, and by whom, these prices are set affects a number of economic decisions, including the number of machines that banks choose to deploy, deposit market interest rates, distances travelled by customers that wish to withdraw cash, profits of banks, and welfare of bank customers.

Darch and Caltabiano (2004) explored the relationship between demographic, user-situational, attitudinal variables and ATM use in an Australian sample of older adults. These adults were volunteers aged 60 years and above, who conducted their own banking transactions. Technology, perceived control and perceived user comfort were found to have an independent significant effect on ATM usage. Age, education, attitudes and user situational variables were found to be related to ATM use, only technology experience, perceived user comfort and control were found to be determinants of ATM use. In another study in Bangladesh, Shamsdouha et al. (2005) found that 24 hours service, accuracy, and convenient locations were main predictors of customer satisfaction. The study also indicated lack of privacy in executing the transaction, fear of safety and complexity of the machine were the major cause of concern for the customers.

Islam et al. (2007) examined the level of satisfaction of ATM card holders of a leading bank (HBSC) in Bangladesh. 300 well-structured questionnaires were distributed to ATM card holders. The study found significant relationship of ATM service quality with customers' satisfaction. The study identified that location, personnel response, quality of currency notes, promptness of card delivery and performance of ATM were positively and significantly related to customer' satisfaction. The study also identified that the security, frequent breakdown of machine, and insufficient number of ATM were major contributors of customers' dissatisfaction.

Dilijoans et al. (2009) presented the self-service system quality management and evaluation framework. The framework described three groups of imperatives aimed to ensure sustainable service provision for self-service banking clients by increasing quality of operational, resource and marketing services. Authors examined the essential

aspects of ATM service quality in Baltic States. They identified essential resources (adequate number of ATMs, convenient and secure location and user-friendly system); important dimensions of operation of ATM (maximum speed, minimum errors, high uptime, cash backup); and value added aspects (quality service at reasonable cost, and maximum offering to cover maximum needs of customers) as vital facets.

Singh and Komal (2009) conducted a study on the impact of ATM on customer satisfaction. The main purpose of the study was to examine the scenario of ATM in three major banks (State Bank of India, ICICI bank and HDFC bank). They examined the relationship between various ATM facilities, factors affecting the choice of ATM and its interplay with customer satisfaction. A sample of 360 respondents equally representing each bank has been taken through structured questionnaire. Then various statistical tools such as average, standard deviation and normal distribution have been used as per the requirement of the data. F test has also been used to analyze the variances. Customer satisfaction in material sense denotes the aggregate position of the banks in terms of fee charged, frequency with which problems are faced and post-purchase behavior of the customers. In abstract sense, customer satisfaction level denotes the position of the banks in terms of post-purchase behavior, the efficiency of facilities provided and the example of others using the ATM of the same bank. It indicated that there is direct relation between fee charged and customer satisfaction. The overall material customer satisfaction is highest in SBI, followed by ICICI and HDFC bank. In case of abstract customer satisfaction it is in reverse order; HDFC has the highest satisfaction level followed by ICICI and SBI. The result revealed that size of respective bank, year of establishment, and performance of bank are the major factors which are responsible for the customer satisfaction towards ATM service of banks.

Khan (2010) examined automated teller machine service quality and customer satisfaction in Pakistani banks. The main purpose of the study was to identify the significant dimensions that shape customers perception of ATM service quality and the effect of ATM service quality on customers' satisfaction in Pakistani banking sector. Convenience sampling technique was used to collect data from sample of 500 customers who hold ATM cards from multinational and national banks. A questionnaire was used to collect the data. The questionnaires were administered by courier, e-mail, and personal delivery. The study presented and examined a model to explain how

convenience, efficient operation, security and privacy, reliability, and responsiveness positively and significantly affect customers' perception of ATM service quality, and how the ATM service quality influences the customers' satisfaction. Regression results indicated that convenience, efficient operation, security and privacy, reliability and responsiveness are significant dimensions of ATM service quality and that ATM service quality positively and significantly contributes toward customer satisfaction.

Parvin and Hossain (2010) conducted a study on satisfaction of debit card users of some private commercial banks in Bangladesh. The main purpose of the study was to find out customers' satisfaction level as well as motivational factors and ways to provide modern debit card services. This study reveals how much debit card users of banks in Bangladesh are satisfied. This study has collected data by interviewing the cardholders using a questionnaire (which includes both open ended and closed-ended questions). The sample size of the study is 200 selected from nine private commercial banks located in Khulna city using convenient sampling method. Data analysis is done by using different statistical tools such as pie chart, bar diagram, tables, etc. To find out the factor basis satisfaction, arithmetic mean has been calculated. On the other hand, to find out overall satisfaction, weighted average satisfaction is calculated. Findings of the study revealed that on an average debit card users are satisfied. Regarding availability of cash in the ATM booth, users are most satisfied and regarding network service users are least satisfied.

Kumbhar (2011) presented an empirical study that focuses on identifying key factors that have influences customers satisfaction in ATM service provided by public and private sector banks in Rajapur, India. Convenience sampling method was used to collect data from 210 customers of public and private banking sector. Data analysis was done by using descriptive statistics, correlation and regression analysis. Overall results showed that cost effectiveness of ATM service was core service quality dimension and it were significantly affecting on overall customer satisfaction in ATM service provided by commercial banks. The result also revealed that a cost effectiveness, easy to use and security and responsiveness in ATM service were most important factors in customer satisfaction.

Sanda and Arhin (2011) undertook study on ATM service quality in Ghanaian bank. The purpose of the study was to understand customers' behavior towards use of ATM

as banking service delivery tool in Ghana, and the impact of such usage behavior on the banks' human resource capacity building, in terms of employee workload relief and performance. Data was collected using questionnaires. The point of data collection was ATM centers and bank branches of multinational banks in a sub-Saharan African country. There were two categories of respondents. These were the branch managers of the bank, and the banks' customers using ATM cards. In all 16 branches of the bank were selected and questionnaires administered to the respective branch managers. The study showed that Ghanaian bank customers who use the ATM services perceive the ATM as convenience, reliable, accurate and suitable for their banking transactions. The study also revealed that ATM can be used to enhance customer service delivery, which could also paved the way for the reduction of the workload on tellers in banking halls. Such workload reduction could provide the tellers with opportunities for adequate interaction with customer and also help improve their functional efficiencies and effectiveness in customer service delivery. The study have therefore showed that improving the service quality of the banking with the ATM could improve the overall customer perception of the ATMs functional suitability for service provision as rendered by tellers in the banking halls.

Auka (2012) conducted a study on service quality, satisfaction, perceived value and loyalty among customers in commercial banking in Nakuru Municipality, Kenya. The main purpose of this study was to examine the extent to which service quality, perceived value and satisfaction influence customer loyalty in commercial banks. A stratified random and systematic sampling procedure was used to collect the data from 381 respondents using a questionnaire. Data analysis was done through Pearson correlation and regression. The study revealed that there was a positive and significant relationship between service quality, customer satisfaction and customer value, and customer loyalty. This study also found that service quality, customer value and satisfaction are critical success factors that influence the competitiveness of an organization. It is therefore recommended that banks should adopt the model consisting of the three constructs to create and maintain customer loyalty so as to improve performance and create competitive advantage.

Motwani and Shrimali (2012) conducted a study on consumer adoption and satisfaction towards ATM service in Udaipur City. This study highlighted the ATM services most

preferred by customers as well as the awareness level and satisfaction of customers regarding ATM services of banking sector. The purpose of the study was to examine the awareness of customer regarding ATM services of banks, to identify the preference of ATM services used by customers, to check the significant difference between the satisfaction level of public and private bank customers towards ATM services and to identify the impact of customers' demographics on their awareness level about ATM services. To serve the purpose of the study descriptive research design was used. Primary data were collected with the help of close ended questionnaire. Target population involves the users of ATM of public and private sector banks. 120 respondents of SBI (30), PNB (30), HDFC (30), and IDBI (30) were selected through convenience sampling from Udaipur. In the study, majority of customer preferred ATMs for withdrawal purpose while second preference was given to mini statement facility. The study revealed that no significant difference between the satisfaction level of public and private bank customers towards the ATM service. The study also showed that the awareness level about ATM services is affected by demographics of customers.

Sawalqa (2012) conducted a study on customers' financial needs satisfaction and self-service technology banking, the case of automatic teller machines (ATMs) in Jordan. This study was conducted to achieve two main objectives. Firstly it assesses the effect of low cost services, security and privacy and ease of use on customers' financial needs satisfaction of Automatic Teller Machines (ATMs). The study also assessed if there is a difference in customers' financial needs satisfaction due to gender, age or academic qualification. Based on survey responses from 132 users, the results indicated that only privacy and security contributes significantly to the customers' financial needs satisfaction. The results also revealed that the demographic characteristics of users make no difference in the financial needs satisfaction of ATMs users. An important implication of this study is that the results of it brought with them the need for Jordanian banks to put more emphasis on the different aspects of privacy and security, to decrease or remove the cost of ATMs usage and to introduce a good training to ATMs users.

Issahaku (2013) investigated the experiences of Ghana Commercial Bank (GCB) and Barclays bank customers with automatic teller machines (ATMs) in the Tamale Metropolis. Primary data were collected in 2011 from a randomly sampled 80 ATM users by means of a semi-structured questionnaire. The data were analyzed using

descriptive statistics and multiple regression analysis. The study revealed that, the main reasons why customers prefer ATM to other e-banking services include convenience, speed, security, reliability and cost effectiveness of ATM services. Machine running out of cash, link failure and long time in dispensing cash were found to be the most occurring ATM challenges. The findings showed that, in all cases, these challenges were perceived to occur more often with GCB ATMs than in Barclays bank ATMs. The mean customer satisfaction level was found to be 61.8 percent and 69.4 percent respectively for GCB and Barclays bank ATM users. The study established a significant difference in the mean customer satisfaction between customers of GCB and Barclays bank. Eventually, the study found the critical ATM customer satisfaction parameters to be promptness of card issue, service quality of ATM personnel, quality of notes, machine performance, safety and security, cost effectiveness, and service quality of ATM personnel. Based on the beta values, the three most important determinants of satisfaction were found to be promptness of card issue, safety and security, and cost effectiveness.

Adeniran and Junaidu (2014) conducted a study of automated teller machine (ATM) and user satisfaction in Nigeria. The purpose of this study was to measure the satisfaction of customers as regards to ATM services. The study was carried through across-sectional survey design which questioned respondents on ATM services. The population of study mainly constituted of customers of United Bank for Africa within Sokoto metropolis. The sample in this study consisted of 100 respondents who are users of the ATM services. The data collected was analyzed by use of multiple logistic regression analysis. The findings revealed that, the impact of ATM services in terms of their perceived ease of use, transaction cost and service security is positive and significant. However, the result also indicates that the impact of ATM services in terms of availability of money is positive but insignificant.

Islam (2014) investigated on factors affecting customers' satisfaction level on ATM services in Bangladesh. The main purpose of the study was to identify the factors which affects customers' satisfaction level on ATM services in Bangladesh, for instance, speed of the ATM, location and number of ATM booth, sufficient amount of cash in the ATM, quality of notes, network capacity, security, safety and privacy of ATM, power backup, manners of guards and their consent to other related issues on ATM

services. To carry out this study, a survey was conducted and 200 copies of a structured questionnaire were distributed to the banks' customers'. Out of these, 196 of first part and 178 of satisfaction measurement factors were returned. Various statistical analytical tools and tests, such as, descriptive analysis, Z-test, and ANOVA test were conducted to test the hypothesis and data collection. The study finds that security/safety/privacy of ATM is ranked number one and represents maximum satisfaction of ATM users. The customers' are satisfied with the PIN (Personal Identification Number) of ATM card and they are also happy with the cash withdrawal accuracy/swiftness, quality of notes, manners of ATM guard, speed of the delivery of ATM cards, power backup of ATM, pay-in-slips in the ATM, Charge/fee/cost of ATM cards, maximum limit of cash withdrawals, sufficient cash in ATM booth. On the other hand, customers' are not satisfied with the sufficient number of ATM booth, network capacity of ATM and complaint book in the ATM.

Jegade (2014) conducted a study on the effects of ATM on the performance of Nigerian banks. Available studies have concentrated on the significant dimensions of ATM (automated teller machine) service quality and its effect on customer satisfaction with a bias against ATM producers. The study was motivated by the astronomical challenges confronting the proliferation of ATM infrastructure and attendant financial loss to banks which are often under-reported. Also, there were serious debates on the relevance of ATM technology as most countries in the world are moving away from the virus technology to the more secured chip cards free of credit and debit frauds. Questionnaire was used to collect the data from a convenience sample of 125 employees of five selected banks in Lagos State with inter switch network. Therefore, data collected through the questionnaire were analyzed statistically by using the Software Package for Social Science (SPSS Version 20.0 for Student Version) and chi-square technique. The result indicated that less than the benefits, the deployment of ATMs terminals have averagely improved the performance of Nigerian banks because of the alarming rate of ATM fraud. Similarly, ATM service quality was less correlated to security and privacy of users and providers. The conclusion therefore is that banks should strive to increase their security layers to subvert the tricks of web scammers, limit the amount which customers may be allowed to withdraw at a time and provide electronic alerts to customers' phone for all transactions carried out on their bank accounts through ATMs

and the provisions of extra security layer that can prevent third party to make use someone else's ATM card for unauthorized withdrawals electronically.

Madawaki et al. (2014) examined the effects of customers experience on ATM refund system for failed bank transactions in Nigeria. The main purpose of the study was to examine the effect of customers experience on refund of ATM failed transaction of banks in Maiduguri Metropolis. The sample of 675 of bank customers was drawn from all the 15 commercial banks using questionnaires made up of 23 items. Data analysis was done using descriptive statistics and chi square test. The result revealed that most of the failed transaction occurred as a result of cash out or lack of cash in the ATM's or cash not loaded in the ATM. It was also discovered that ATM Network contributes immensely by debiting customer account and not dispensing the cash. It also revealed that customers lack awareness on the refund system; refunds are done on the domiciled bank. In respect of the terminal the customers perform the transaction which some customers shows their tendency of losing that amount is high there by affecting their moral whenever there is failed transaction. The study also reveal that majority of the customers that experience ATM failure feel demoralized and believe that it takes several days for ATM failed transaction to be rectified, this places the customers in an awkward situation, especially where they have pressing needs to address with cash from the attempted withdrawal. The analysis also revealed that most customers are not satisfied with the refund system as only few customers are refunded automatically while other suffer delay in reversal of the transaction all these portend negative cognitive dissonance with regards to the services and hence the universal dissatisfaction with ATM services.

Mwastika (2016) revealed that Automated teller machine banking has become a significant channel for banking products and services behind branch banking in Malawi and banks continue to invest in new and efficient technologies that can handle more functions that include cash depositing to attract more customers and achieve customer satisfaction with the banks. 353 respondents participated in this study to assess the impact of Automated teller machine banking performance on customer satisfaction with banks. The study adopted a performance only approach to measuring customer satisfaction. A self-administered questionnaire containing multi-dimension and multi-attribute Likert measurement scales was used where respondents rated the performance

only and their satisfaction with Automated teller machine banking and satisfaction with their respective banks. Using SPSS, regression analysis of satisfaction with Automated teller machine banking performance and satisfaction with the bank was conducted and the results indicate that performance of automated teller machine banking has 40 percent predictive capability of customer satisfaction with the bank. The study further found that despite influencing customer satisfaction with the bank, Automated teller machine banking has no capability to attract customers to switch banks. Therefore banks could improve their customer satisfaction ratings through improvements in Automated teller machine banking services but where the banks wish to attract customers from rivals, alternative marketing strategies should be sought.

Shemsu Muze(2017) explain recent history in Ethiopian banking industry that competing banks share common facilities to give better service for customers via interbank Switch with the view to improve customer services and maximize their profit .hence, the objective of the study was to assess the level of usage of ATM banking services and customers satisfaction in aftermath of EthSwitch. To achieve the research objective descriptive survey design was employed; both primary and secondary data were used. The primary data was collected from respondents using questioners consists of five point likert scale and some close ended. Convenience sampling technique was used to collect the data; designed questionnaires were distributed to 400 respondents having two and above years ATM usage experience. From total of 400 distributed questionnaires 385 were returned from the customer of the selected switched member banks. The collected data are analyzed using descriptive analysis like tables, percentages, mean and standard deviation. After interoperability of all banks ATMs the research finding shows that majority of the customers' are dissatisfied with the ATM services due to various challenges associated with ATM such as; customers' accounts being debited without dispensing, Shortage of money in ATM's, ATM malfunction due to connectivity problems and power, delayed response time in case of errors transaction, availability of limited services, high service charge for ATM service, Machine complexity , and ATMs late to updated balances are major problems causing dissatisfaction. Even there are problems; surprisingly the customers do prefer to get the service through the shared ATMs, because it saves time and convenience. Finally, the study recommend banks to improve patronage of the ATM services and challenges encountered by customers when using the ATM should be addressed to minimize the

dissatisfaction and give customers enough confidence in the use of the ATM and will encourage them to recommend it to non-users.

Bansal and Singh (2018) identify the various determinants of service quality of ATM and to analyze the impact of various determinants of service quality of ATM on customer satisfaction in Indian banking sector. It also analyze the impact of demographic factors on the relationship of ATM service quality and customer satisfaction. In this study factor analysis was used to measure the item and to test the reliability and validity. A structured questionnaire was used to collect the primary data through survey to ascertain the satisfaction levels and the total participants were 385. To identify the prominent determinants, regression, ANOVA and T- test were applied and to analyze the customer satisfaction, frequency analysis was used. The various determinants of service quality of ATMs have a positive impact on the customer satisfaction. The demographic factors such as educational background and age of the customers moderate the relationship of customer satisfaction and service quality of ATMs. The various determinants of service quality identified in this study may help the banking sector to shift the customers from traditional banking to self-service technologies like ATM and banking sector may improve its profitability position by reducing its operational cost through ATM as the transactional cost in ATM is less in comparison to transactions performed in bank branches by bank staff.

Biset Amene and Bonsa Buta (2019) explained that the purpose of this study is to investigate the factors affecting customers' satisfaction towards the use of Automated Teller Machines (ATMs). To address the research objectives, 200 questionnaires were distributed to respondents. A total of 176 were returned which is equivalent to 88% of the total response rate. Data were collected using semi-structured questionnaires and they were organized, coded and analyzed using Minitab18 software. The collected data were analyzed using descriptive Statistics, correlation and multiple regression model. Descriptive analysis showed half of the respondents (50%) agreed that time saving is the main reason to use ATM services. Majority of customers use ATM Banking for Cash withdrawal services and majority of the Commercial Bank of Ethiopia (CBE) customers were satisfied by the ATM services provided to them. However, customers were facing different problems associated with ATM service. Some of the problems were the unreliable network for ATM services, limited amount of money to be

withdrawn per day, reduction in balance without cash payment, bank charges for ATM services, machine out of cash, card gets blocked or locked up and waiting in line to use ATM Machines. The multiple regression findings also revealed that responsiveness, efficiency, appearance, reliability and convenience of ATM have a significant and positive influence on customers' satisfaction.

Table 2.1: Summary of review of global studies

This table summarizes the review of literature at glance observed for the purpose of study concentrating on the referred variables and its result observed from various studies.

Study	Major findings
Joseph and Stone (2003)	They found that user friendly convenient locations, secure positions, and the numbers of ATM provided by the banks are essential dimensions of ATM service quality.
Mcandrews (2003)	The study identified potential advantages are multiplied when banks share their ATMs with others, allowing depositors of other banks to access their accounts through a bank's ATM.
Darch and Caltabiano (2004)	The study explored the relationship between demographic, user-situational, attitudinal variables and use of ATM.
Shamsdouha et al. (2005)	Shamsdouha et al. (2005) They found that 24 hours service, accuracy, and convenient locations were the main predictors of customer satisfaction.
Islam et al. (2007)	Islam et al. (2007) The study found significant relationship of ATM service quality with customers' satisfaction.
Dilijonas et al. (2009)	Dilijonas et al. (2009) The study identified adequate number of ATMs, convenient and secure location, and user-friendly system as vital facets.
Singh and Komal (2009)	Singh and Komal (2009) They found that size of respective bank, year of establishment, and performance of bank are the major factors which
Khan (2010)	Khan (2010) The study explored that convenience, efficient operation, security and privacy, reliability and responsiveness are significant dimensions of ATM service quality and found that ATM service quality positively and significantly contributes toward customer satisfaction.
Parvin and Hossain (2010)	Parvin and Hossain (2010) The study found that on an average debit card users are satisfied regarding availability of cash in ATM booth.
Kumbhar (2011)	The study found that cost effectiveness, easy to use and security and responsiveness in ATM service were most important factors in customer satisfaction.
Sanda and Arhin (2011)	The study revealed that convenience, reliability, accuracy is the significant dimension of ATM service quality.
Auka (2012)	The study revealed that there was a positive and significant relationship between service quality, customer satisfaction and customer value, and customer loyalty.

Motwani and Shrimali (2012)	The study revealed no significant difference between the satisfaction level of public and private bank customers towards the ATM service.
Sawalqa (2012)	The study identified that only privacy and security contributes significantly to the customers' financial needs satisfaction.
Issahaku (2013)	The study found the critical ATM customer satisfaction parameters to be promptness of card issue, service quality of ATM personnel, quality of notes, machine performance, safety and security, and cost effectiveness.
Adeniran and Junaidu (2014)	The study identified the impact of ATM services in terms of their perceived ease of use, transaction cost and service security is positive
Islam (2014)	The study found that security/safety/privacy of ATM is ranked number one and represents maximum satisfaction of ATM users and customers' are also satisfied with the cash withdrawal accuracy, quality of notes, speed of the delivery of ATM cards, pay-in-slips in the ATM, Charge/fee of ATM cards, maximum limit of cash withdrawals, sufficient cash in ATM booth.
Jegade(2014)	The study explored that less than the benefits, the deployment of ATMs terminals have averagely improved the performance of Nigerian banks because of the alarming rate of ATM fraud. Similarly, ATM service quality is less correlated to security and privacy of users and providers.
Madawaki et al. (2014)	The study revealed that majority of the customers that experience ATM failure feel demoralized and believes that it takes several days for ATM failed transaction to be rectified.
Mwastika (2016)	The study revealed that the investment in ATM banking would only be ideal for improvement in bank customer satisfaction but strategies to lure customers from rival banks to switch banks should come from other strategic marketing alternatives.
Shemsu Muze(2017)	The study recommend banks to improve patronage of the ATM services and challenges encountered by customers when using the ATM should be addressed to minimize the dissatisfaction and give customers enough confidence in the use of the ATM and will encourage them to recommend it to nonusers.
Bansal and Singh(2018)	The study explain the various determinants of service quality of ATMs have a positive impact on the customer satisfaction. The demographic factors such as educational background and age of the customers moderate the relationship of customer satisfaction and service quality of ATMs.
Biset Amene and Bona Buta(2019)	The study findings further indicated that responsiveness were regarded as the most important factors by the customers and it has a significant impact upon customer satisfaction followed by Service efficiency, appearance and reliability.

2.1.2 Review of Nepalese studies

In the context of Nepal, very few studies are conducted related to ATM and customer satisfaction. There are no researches before 2010. Even after 2010, very few studies are carried out by Nepalese authors.

Dhungel and Acharya (2011) undertook a study on perception of bank customers towards automated teller machine service quality. The study was conducted in Jorpati VDC of Kathmandu. This study was conducted to know the level of awareness of ATM services and identify the problems and prospects regarding the use of ATM. A semi-structured questionnaire was used to collect data and the sample size was 201 out of which 150 participants filled and submitted the questionnaire. Data were analyzed and presented in tabular/graphical form for easy understanding and elaboration of the findings of the study. The study reveals that majority of the customers in Jorpati VDC preferred ATM service over branch banking. Younger and educated generations felt comfortable to use ATM service but older and uneducated generation were insecure to use it and they preferred to go for branch banking. Most of the respondents faced several problems while using ATM. The main problems faced in using ATM service are trapping of card and no back up during load shedding.

Similarly, Poudel (2011) examined electronic payment systems and tele-banking services in Nepal. The findings revealed that there has been a very modest move away from cash. Payments are now being automated and absolute volume of cash transaction have declined. The result of the study revealed that tele-banking was capable of broadening the customer relationship, retaining customer's loyalty and enable banks to gain commanding height of market share if their attendant problems such as ineffectiveness of telecommunication services, epileptic supply of power, high cost, fear of fraudulent practices and lack of facilities necessary for their were taken care of.

Banstola (2012) conducted a study on prospect and challenges of E-banking in Nepal. The purpose of the study was to identify the major prospect and challenges of e-banking in Nepal. Five banks were selected as sample for the study using a simple random sampling method. The data were collected from general customers by means of questionnaire sent through email and also via self-administration. From four major cities of Nepal (Pokhara-37, Kathmandu-20, Butwal-33, Biratnagar-10) a total of 100 questionnaires were collected and used in the analysis. The study found that the some banks are in lack of having regular back up of website information and E-banking policy. Nepalese banks are using E-banking for their own convenience and for the purpose of retaining exiting customers. The cost analysis of most of the banks in Nepal is seems to be either inadequate or not applied due to their narrow space of business

transaction or lack of sufficient tools. No significant correlation was found between use of E-banking and gender, marital status or salary of customer. However, Use of E-banking signification association was found with age and education. The study also found that the most important factor which influenced customer to use the E-banking service were reliability and ease of use.

Pradhananga (2014) undertook a study on impact of service quality on customer satisfaction in Nepalese commercial banks. The main purpose of the study was to analyze the impact of service quality on customer satisfaction in Nepalese commercial banks. The study used a descriptive and analytical research design. Using primary data from a survey the study used related dimensional service quality, tangible dimensional service quality and core service quality as dimensions of service quality. Correlation and multiple regression analyses were used to examine the impact of service quality on customer satisfaction. The findings of the study found that the related dimensional service quality and tangible dimensional service quality have no significant impact on customer satisfaction respectively. But core service quality has a significant impact on customer satisfaction. The implication of the study was providing quality service for customer satisfaction could be a good implication for the management and board of directors to enhance the performance of Nepalese banking sectors.

Thapa (2016) explain that this study examines the impact and importance of customer satisfaction from ATM services. Convenience, reliability, ease of use, security and cost effectiveness are selected as ATM service dimensions which are also the independent variables. Customer satisfaction is taken as dependent variable. The primary source of data is used to assess the opinion of respondents with respect to customer satisfaction from ATM services in Nepalese commercial banks. The survey is based on 200respondents from 20 commercial banks in Nepal. To achieve the purpose of the study, structured questionnaire is administered. The regression models are estimated to test the significance and importance of customer satisfaction from ATM services in Nepalese commercial banks. The result shows that there is a positive impact of ATM service dimensions (Convenience, reliability, ease of use and cost effectiveness) on customer satisfaction. It indicates that greater the convenience of ATM service and higher the reliability of ATM service, higher would be the customer satisfaction. Likewise, higher the cost effectiveness of services and ease of use, better would be

customer satisfaction. The study also indicates that there is a positive relationship between security and customer satisfaction which implies that higher the security, higher would be the customer satisfaction. The coefficient of beta is positive and significant for convenience, reliability, security, ease of use, cost effectiveness and customer satisfaction.

Table 2.2: Summary of review of Nepalese studies

This table summarizes the review of literature in Nepal at glance observed for the purpose of study concentrating on the referred variables and its result observed from various studies.

Study	Major Findings
Dhungel and Acharya (2011)	The study found that majority of the customers' preferred ATM service over branch banking. Younger and educated generations are feeling comfortable to use ATM service but older and uneducated generation feel insecure to use it and they preferred to go for branch banking.
Poudel (2011)	The study revealed that tele-banking is capable of broadening the customer relationship, retain customer's loyalty and enable banks to gain commanding height of market share if their attendant problems were taken care.
Banstola (2012)	The study found the most important factor which influence customer to use the E-banking services is its reliability and ease of use.
Pradhananga (2014)	The study revealed that the related dimensional service quality and tangible dimensional service quality have no significant impact on customer satisfaction respectively. But core service quality has a significant impact on customer satisfaction.
Thapa(2016)	The study concludes that the most important factor affecting customer satisfaction from ATM service has been turned out to be the reliability followed by convenience, ease of use, cost effectiveness and security.

2.2 Research gap

Numerous quantitative studies have been carried out to establish, largely in samples of multiple industries about customer satisfaction about ATM services. Such analysis, however, have produced conflicting results any attempt to given a generalized and coherent conclusion has proved inadequate. The analysis from the study has tried to see the impact of those five independent variables (reasonability of fee charged, frequency of problem faced, choice of ATM, usage of services and post purchase behavior) upon the customer satisfaction level in Nepalese commercial banks.

This study attempts to explore the impact of ATM services on customer satisfaction in the context of Nepalese commercial banks. Review of different literatures reveals the different studies conducted in different period relating to ATM services and its influences on the customer satisfaction in different way. In relation with the present study, many studies were conducted in the international area but there is lacking of such study in the Nepalese context which is identified as a major research gap. Moreover, the research of Nepal covers only few domains in the ATM services which make researchers difficult in gathering the necessary information related to this study.

Many studies indicate that there are link between customer satisfaction and ATM service factors. Based on the review of all literatures related with the study, certain research gaps were found. ATM banking that has revolutionized the banking industry worldwide has turned out to be nucleus issue of various studies all over the world. Sanda and Arhin (2011) showed that reliability has significant impact on customer satisfaction but Khan's (2010) showed that reliability variable is insignificant. ATM banking that has revolutionized the banking industry worldwide has turned out to be nucleus issue of various studies all over the world.

However, there is no such prior study done in banking industry in Nepal. ATM banking study was found almost untouched by my researchers in Nepal though it has been a subject of growing interest these days. The study related to ATM service and customer satisfaction has been conducted in developed and developing countries. Comprehensive studies are not conducted in developing countries like Nepal. Thus, academic study is most urgent to know the situation of Nepal with comparison to developed country by taking the special reference of Nepalese Commercial Bank ATM customers. So, considering the research gaps particularly in Nepalese context, this study proposes a

framework to determine the key factors from ATM services and customer satisfaction in Nepalese commercial banks. This study is just a start. This study will stimulate more literatures in this direction by filling the gap in case of examining the customer satisfaction from ATM services.

Chapter 3

Research methodology

This chapter has been divided into nine sections. Section one provides research plan and design used in the study. Section two deals with the description of the sample. Section three deals with the instrumentation of the study. Similarly, section four deals with the data collection procedures and time frame. Likewise, section five deals with the method of analysis, section six deals with the model specification, section seven deals with the reliability and validity, section eight deals with the analysis of the plan. Finally, section nine deals with conceptual framework.

3.1 Research plan and design

This study has employed descriptive research designs to deal with the fundamental issues associated with factors affecting customer satisfaction from ATM services factors in Nepalese commercial banks. The descriptive research design has been adopted for fact finding and searching adequate information about factor affecting customer satisfaction from ATM services. Descriptive research is a process of accumulating facts. It describes phenomenon as they exists.

A descriptive and correlational research design has also been adopted in this study which seeks to find relationships between independent and dependent variables after an action or event has already occurred and allow the prediction of future events from present knowledge. The researcher's goal is to determine whether the independent variable affected the outcome, or dependent variable, by comparing two or more groups of individuals. This design has been adopted to ascertain and understand the directions, magnitudes and forms of observed relationship between customer satisfaction and ATM services variables. The questionnaire has been designed to assess the perception of bank customers' satisfaction level from their ATM services.

3.2 Description of the sample

The population of the study consists of all ATM users of Nepalese commercial banks. As Kathmandu is the economic capital of Nepal where all most all of the commercial banks has its presence here, Kathmandu valley has been taken for the study. For the selection of the sample respondent, convenience sampling has been used. This study is based on primary data of commercial banks of Nepal which are listed in Nepal stock

exchange limited (NEPSE). For this study all 27 commercial banks operating in Nepal are the total population and 5 commercial banks were taken as sample (Global IME Bank LTD, Everest Bank LTD, Siddhartha Bank Ltd, NIC Asia, SBI) from the Kathmandu valley. In the study the mention bank are taken as sample for covering holistic approach of all commercial bank in Nepal. Generally, customers of commercial banks are depositors, borrowers, and others who get banking services. However, the present study could not cover all the customers of commercial banks. It covers only the depositor type of customers. Altogether 220 questionnaires distributed to the respondents and total of 184 questionnaires were collected for analyzing the relationship between the factors from ATM services and customer satisfaction.

3.3 Instrumentation

The primary source of data was used to assess the opinion of respondents with respect to factors from ATM services and customer satisfaction in Nepalese commercial banks. To achieve the purpose of the study, structured questionnaire was prepared. The questionnaire was formulated out of the concepts that were raised in the review of the literature. The questionnaire is divided into four sections. The first section titled “Section A” is about the basic demographics of the respondents. The next section “Section B” includes 15 different multiple choice question. “Section C” includes ranking type questions where most important factors were ranked as 1 and least important factors were ranked as 5 and soon. “Section D” is about factors affecting customer satisfaction from ATM services measured on a five Likert-type scale ranging from 1(Strongly agree) to 5(Strongly disagree).

3.4 Data collection procedure and time frame

On the basis of literature review and the guidance of thesis supervisor, questionnaire was prepared. The procedure for the data collection and the time used for the data collection are explained below.

3.4.1 Data collection procedure

This study has been basically designed to understand the opinions of the respondents regarding factors affecting customer satisfaction from ATM services in Nepalese commercial banks. Structured questionnaire was handed to each sampled bank’s ATM user by visiting to the respective branches and head offices. They were requested to

kindly fill up the questionnaires. The questionnaire used in the study is presented in the appendix.

3.4.2 Time frame

The research study was prepared within the time period of six months. The following table shows the activities performed and time taken to finish this Graduate Research Project (GRP).

Table 3.1: Time allocation for completion of the GRP

(This table shows the activities performed and time allocated for the completion of the GRP.)

Activities performed	Time allocated
Topic finalization	1 week
Study on research methodology	1 week
Study on literature reviews	3 weeks
<u>Data collection</u>	5 weeks
Data entry and interpretation	6 weeks
Preparation of the report	8 weeks

Source: Field survey, 2020

3.5 Method of analysis

This section gives a presentation on how the empirical data was used for research purpose to study the impact of factors from ATM services and customer satisfaction in the Nepalese commercial banks. Under the study, questionnaire was made to know the ATM users view on the factors affecting customer satisfaction from ATM services of their respective banks. The methods of data analysis consist four sections. First section includes primary data analysis which includes summary of descriptive statistics associated with general information of the respondents like age, gender, marital status, academic qualification, per year income and occupation along with the percentage frequency distribution of the general information of the respondents.

Second section analyzed the descriptive statistics such as mean and weighted average values of five influencing factors of ATM services i.e. reasonability of fee charged, frequency of problem faced, usage of services, choice of ATM and post purchase behavior which were used to describe the characteristics of the sample during the period. The study also used percentage frequency distribution, cross tabulation, mean

scores of the responses to Likert scale items and ranking items. Third section deals with the Pearson correlation coefficient analysis which investigated the association between ATM services and customer satisfaction of Nepalese commercial banks.

Similarly fourth section deals with the regression analysis of primary data. A multiple regression model were applied to estimate the relationship between dependent variable i.e. customer satisfaction and independent variable (factors from ATM services) i.e. reasonability of fee charged, frequency of problem faced, usage of services, choice of ATM and post purchase behavior The collected data were analyzed with the help of SPSS (Statistical Package of Social Science).

Total responses collected from the respondent were coded and tabulated into SPSS worksheet. The function of SPPS is to analyze the result of the questionnaire and then helps to intercept the findings. The various tools such as frequencies, descriptive statistics, and casual comparative and reliability analysis (Cronbach's alpha) have been applied to derive the result. Further, p-value was used to check the level of significance of the different statements of factors from ATM services and customer satisfaction.

3.6 The Model specifications

The following econometrics model equation is employed to test different hypothesis that there is positive relationship between ATM services and customer satisfaction in Nepalese commercial banks. The proxies of ATM services are reasonability of fee charged, frequency of problem faced, usage of services, and choice of ATM and post purchase behavior.

This study analyzes the impact of ATM services factors on customer satisfaction in Nepalese commercial banks, using the different weighted mean of five point Likert scale questionnaire of sample commercial banks. The dependent variable is customer satisfaction and independent variables are reasonability of fee charged, frequency of problem faced, usage of services, and choice of ATM and post purchase behavior.

Model:

$$CS_{it} = a_0 + a_1RFC_{it} + a_2 FPF_{it} + a_3 CA_{it} + a_4 US_{it} + a_5 PPB_{it} + e_{it}$$

Where,

CS = customer satisfaction

RFC = reasonability of fee charged

FPF= frequency of problem faced

US= usage of services

CA =choice of ATM

PPB = post purchase behavior

eit = error term

3.7 Validity and reliability

Validity refers to the truthfulness of findings. It determines whether the study truly measures what it was intended to measure or how truthful the study results are. It refers to the accuracy of a measure and a measurement is valid when it measure and perform the functions that it support to perform. It is the degree to which a measure accurately represents what is supposed it is supposed to measure. Reliability, on the other hand, refers to the credibility of the test, and it mainly tests measurements results and measurement tools (stability and consistency). The extent to which results are consistent overtime and an accurate representation of the total population under study is referred to as reliability, and if the results of a study can be reproduced under a smaller methodology, then the research instrument is considered to be reliable.

Cronbach's alpha is a statistic tool generally used to measure the internal consistency or reliability. It has been used in this study to test validity and reliability of the primary data for determining internal consistency among the various proxies of ATM services factors to measure the reliability of the different categories. It is a function of the number of test items and the average inter correlation among the items. As a general rule, a coefficient greater than or equal to 0.7 is considered acceptable and is a good indication of construct reliability. The table represents the coefficient of Cronbach's alpha for all the primary data.

Table 3.2: Coefficient of Cronbach's alpha

The table shows the coefficient of Cronbach's alpha

Cronbach's Alpha based on standardized items	No. of items
0.637	6

Source: Field survey, 2020

Reliability test for all the component of questionnaire regarding the factors affecting customer satisfaction from ATM services in Nepalese commercial banks were

computed through SPSS. The reliability and validity result in above table shows that the instrument was not reliable and valid with Cronbach's alpha of 0.637 as obtained Cronbach's alpha was lower than 0.7. It means that the data were 63.7 percent of the data taken for the study is not reliable and remaining 36.3 percent is reliable. Hence further test can be done from these data.

3.8 Analysis plan

This section gives a presentation on how the empirical data was used for research purpose to study on ATM services factors and customer satisfaction in the Nepalese commercial banks. First, all data were collected through questionnaire and then it was managed. After gathering all the completed questionnaires from the respondent it was analyzed and presented in proper tables. The data are collected and processed using the Statistical Package of Social Science (SPSS) computer software and Microsoft Excel. After the analysis and interpretation of the responses, the results were presented. Thus, its reliability and validity test is conducted as per the research study i.e. Cronbach's alpha.

Different types of questionnaires are used such as yes/no questions, multiple choice questions, ranking questions regarding factors affecting customer satisfaction from ATM services in Nepalese commercial banks. The questionnaire includes personal information about respondents such as gender, age, marital status, qualification, income and occupation. There is also five point likert scale questions in which respondents were asked to express to what extent respondents agree or disagree about the factors affecting customer satisfaction from ATM services (reasonability of fee charged, frequency of problem faced, usage of services, choice of ATM and post purchase behavior) respective to their banks. Finally, one open-end question is included to obtain suggestions of respondents.

The various tools such as frequencies, descriptive statistics for mean values and ranking were used to derive the results. This study also used descriptive statistics, correlation analysis along with statistical test of significance such as regression analysis, t-test, F-test and adjusted R^2 .

3.9 Conceptual framework

The conceptual framework for the present study deals with the relationship between the factors affecting on customer satisfaction from ATM services in context of Nepalese commercial banks. It can be shown diagrammatically as in figure 3.1:

Independent Variables

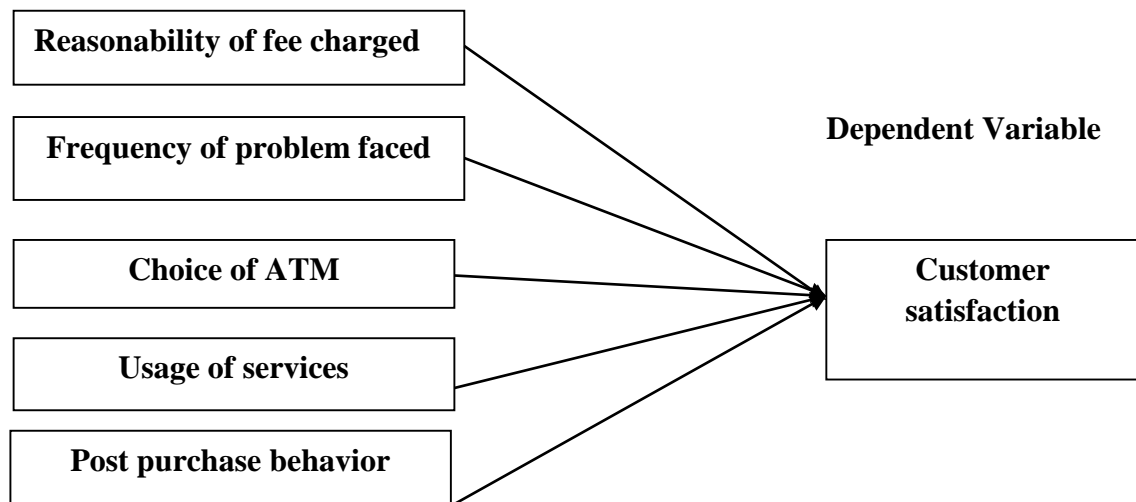


Figure 3.1: Schematic Diagram of factors affecting on customer satisfaction from ATM services

The conceptual framework was adopted from the study of Singh and Komal (2009). In this conceptual framework, customer satisfaction is a function of five ATM service factors namely reasonability of fee charged, frequency of problem faced, choice of ATM, usage of services and post purchase behavior. How these five factors from ATM services affect customer satisfaction is examined in this study. The framework shows the relationship of customer satisfaction with every ATM service factors for identifying which factors has high impact on customer satisfaction in Nepalese commercial banks.

3.9.1 Operational definitions and assumptions

The operational definitions of the selected variables are briefly explained below:

a) Automated teller machine (ATM)

ATM is an electronic device which allows a bank's customers to make cash withdrawals and check their account balances at any time without the need for a human teller. Many ATMs also allow people to deposit cash or cheques, transfer money

between their bank accounts or even pay utility bills. ATM is an electronic banking outlet which allows customers to complete basic transactions without the aid of a branch representative or teller. ATM refers to a machine that acts as a bank teller by receiving and issuing money to and from the ATM account holders. The evolution of ATM was not in isolation, rather as a result of the general globe wave in the technological revolution. This came due to the need to respond to the challenge of the multiple bank of daily complex information that arises from among others; increase in competition, increased customer demand for both service provision as well as efficiency, expansion due to the increase in demand for services etc. Thus it saw a huge improvement in the long queuing in most banking halls (Chang et al. 2010).

b) Customer satisfaction

Customer satisfaction is a measure of how products and services supplied by a company meet customer expectation. In other words, Customer satisfaction is a highly personal assessment that is greatly influenced by individual expectations. Those who buy the goods or services provided by companies are customers. In other words, a customer is stakeholder of an organization who provides payment in exchange for the offer provided to him/her by the organization with the aim of fulfilling a need and to maximize satisfaction. When a customer is contented with either the product or services it is termed satisfaction. Satisfaction can also be a person's feeling of pleasure or disappointment that results from comparing a product's perceived performance or outcome with their expectations. Customer satisfaction is the outcome felt by buyers who have expectation. Customers are satisfied when their expectations are met and delighted when their expectations are exceeded (Kotler, 2001).

c) Fee charged

It refers to certain amount of money charged by the bank for various services rendered by the bank. The bank charge fee for amendment of new ATM card and also if customers request new ATM card when their old ATM card gets expired, lost, damaged or blocked. ATM fees have been a source of controversy in many countries. These fees are many types. Firstly, interchange fees that banks charge each other when the customer of the bank uses another's ATM. Secondly, foreign fees that banks charge their own customers for using other banks' ATM's. Thirdly, surcharges that banks charge other banks' customers for using their ATM's. In some countries, a single ATM transaction potentially involves all of these fees, when a customer of bank A withdraws

money using bank B's ATM, the customer could pay a foreign fee to bank A and a surcharge to bank B, and bank A could pay an interchange fee to bank B. However, Banks' setting of ATM fees varies from one country to another due to differences in regulatory policy. In some countries, including the U.K. and France, banks generally neither charge foreign fees nor surcharges. In others, such as Australia, banks generally charge foreign fees but not surcharges. In general, it can be argued that banks should not charge users for ATMs usage. The justification of this argument is built on the idea that customers will not be satisfied if their banks charge them against the usage of ATMs while they use their cash balances in credit facilities and obtain credit interest on that money (Hubbard, 2009). Based on it, the study develops the following hypothesis:

H1: Reasonability of fee charged is positively related to customer satisfaction in Nepalese commercial banks.

d) Problem faced

It refers to difficulty or challenges that occur while using services provided by the bank to their customers. The customer can face some ATM related problems such as machine out of order, card gets blocked, machine out of cash, no printing statement, old notes, etc. ATM cards are a large part of the modern banking world. These cards provide a safer way to use money from your personal account without using a check or carrying around large amounts of cash. However, there are also potential problems associated with ATM cards. There are three main problems with ATM cards. The first is ATM fraud. This occurs when someone obtains your ATM card number and personal identification number, or PIN. Dropping your card will also increase chances of theft. Another problem that can occur with ATM cards is the card can get eaten, or the ATM might give you the wrong amount of cash. There can also be errors between ATM cards and the banking information, such as discrepancies between when a transaction was made and when money was posted to the account. Despite of the merits of ATMs, customers still complaint of shortfalls on the use of system such as breakdown of ATMs, long queues at ATM service points, retention of ATM cards, limited knowledge on the use of ATM cards, fraudulent transactions and its operation in a few languages (Khan, 2010).Rogers et al. (1997) showed that some intermediate users have some difficulties in using ATMs including for example, inserting the card in the wrong way, lacking experience and inconvenience. On the other hand, the frequent users indicated

that ATMs not providing enough feedback and they are not responding quickly enough. Based on it, the study develops the following hypothesis:

H2: Frequency of problem faced is negatively related to customer satisfaction in Nepalese commercial banks.

e) Choice of ATM

It refers to the opportunity or power to choose ATM between two or more banks. It also refers to selection of usage of ATM of particular bank among various other banks in respect to its superiority. Customer can make their choice of ATM on the basis of some factors such as security and trust, convenience in use, easy available location of ATM outlets, speed transaction facilities, example of others, etc. Thus, while choosing ATM of a particular bank customer takes care of these things and is known as factors affecting the choice of ATM (Singh and Komal, 2009). Mcandrews (2003) identified that secure and convenient location, adequate number of ATM, user-friendly system and functionality of ATM play important role in customers' satisfaction. While, Joseph and Stone (2003); Mobarek (2007) and Dilijonas et al. (2009) mentioned that adequate number of ATMs, convenient and secure location, user-friendly system, speed, minimum errors, high uptime, cash back-up, cost and service coverage are essential service quality aspects of ATM. Based on it, the study develops the following hypothesis:

H3: Choice of ATM is positively related to customer satisfaction in Nepalese commercial banks.

f) Usage of services

It refers to the purpose for which services are most often used by customers. 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/cheque deposit, fast cash withdrawal, view account balances and mini statements, balance inquiry, make fund transfer and utility payments and request a cheque book or account statement (Singh and Komal, 2009). Shamsuddoha et al. (2010) exposed that cash withdrawal, balance inquiry, cash deposit, fund transfer and cheque book requisition are the main services consumed by the customers who use ATM. They also showed that 24 hours service accuracy, convenient location, etc. are the main factors of customer satisfaction. Based on it, the study develops the following hypothesis:

H4: Usage of services is positively related to customer satisfaction in Nepalese commercial banks.

g) Post purchase behavior

Post-Purchase Behavior is the stage of the buyer decision process when a consumer will take additional action, based purely on their satisfaction or dissatisfaction. The consumer's level of satisfaction or dissatisfaction is directly related to the varying relationship between their initial expectations of the product (pre-purchase), and their perception of the actual performance of the product (post-purchase) in their hands. If after the purchase the consumer perceives the product's performance as matching their expectations, or even exceeding them, they will be "satisfied". If their perception of the product's performance is less than their expectations, then the consumer will feel "dissatisfied". The smaller the gap between their expectations and the product's performance, the more satisfaction (Kotler, 2001). Based on it, the study develops the following hypothesis:

H5: Post purchase behavior is positively related to customer satisfaction in Nepalese commercial banks.

Chapter 4

Results and discussion

This chapter provides systematic presentation and analysis of primary data. Different statistical and regression model described in chapter three have been used for the study purpose. This section is divided into three sections. The first section deals with the presentation and analysis of the primary data and presents the results of questionnaire survey. The second section covers the analysis of regression model including correlation analysis. The third section of this chapter deals with concluding remarks associated on the basis of findings from primary data analysis.

4.1 Presentation and analysis of data

This study is primarily based on primary data analysis, which mainly deals with qualitative aspects in terms of ATM services in Nepalese commercial banks. This section also reports the result of questionnaire survey conducted among different groups of customers. Questionnaire survey was designed to understand the views of the respondents in relation to their satisfaction level with the ATM service factors like reasonability of fee charged, frequency of problem faced, usage of services, choice of ATM and post purchase behavior towards their banks. A set of questionnaire including yes/no types, multiple choices, rankings, and likert scale questions are provided. The respondents profile along with their personal characteristics and result of the survey are presented in the following sections. The percentage, frequency, mean value, weighted average mean value has been calculated to do the proper analysis of the data.

4.1.1 Respondents' profile

In any study using primary data analysis, discussion on the profile of the respondents needed first. Demographic characteristics play a vital role in understanding the customer perception and their reliability in the organization. This section therefore describes the demographic characteristics of the respondents of Nepalese commercial banks. In this study, the respondent include ATM users of 5 selected commercial banks of Kathmandu valley and 106 questionnaires were collected based on gender, age, marital status, academic qualification, per year income and occupation of the respondents using ATM of the various commercial banks. In this section, demographic

characteristics of ATM users in Nepalese commercial banks are presented Table 4.1 shows the demographic characteristics of the respondents in number and percentage.

Table: 4.1 Demographic characteristics of the respondents

This table shows the number of respondents with the classification on gender, marital status, age, academic qualification, per year income and occupation from different commercial banks used in questionnaire survey of the study. ‘Number’ represents the number of respondents of each category and ‘percentage’ refers to the respondent’s number in particular category out of total.

Respondent of character	No of respondent	Percentage
Gender		
Male	79	42.9
Female	105	57.1
Total	184	100
Marital status		
Married	86	46.7
Unmarried	98	53.3
Total	184	100
Age (in year)		
Below 20	9	4.9
20 to 30	112	60.9
30 to 40	41	22.3
40 to 50	18	9.8
50 and above	4	2.2
Total	184	100
Academic qualification		
PHD	7	3.8
Master	48	26.1
Bachelor	80	43.5
Intermediate	38	20.7
SLC and below	11	6
Total	184	100
Per year income		
Less than 1 lakh	108	58.7

1-3 lakh	42	22.8
4-6 lakh	26	14.1
More than 6 lakh	8	4.3
Total	184	100
Occupation		
Government	17	9.2
Private	31	16.8
Self-employed	28	15.2
Student	84	45.7
Housewife	24	13
Total	184	100

Source: Field survey 2020

Gender

Gender is an important variable in expressing and giving the responses about the problem. The gender of the respondents is presented in the Figure 4.1.

This figure shows the gender of the respondents in terms of percentage.

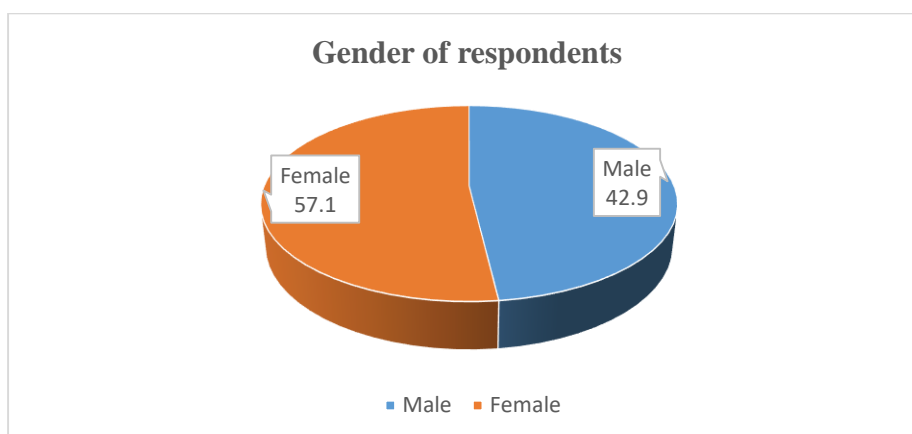


Figure 4.1: Gender of the respondents

Among the total respondents, majority of the respondents were male (42.9 percent) and remaining 57.1 percent of the respondents were female.

Marital status

Marital status of the respondents is one of the most important characteristics in understanding the views about the particular problems. The marital status of the respondents is presented in the Figure 4.2.

This figure shows the classification of respondents by marital status in terms of numbers and percentage.

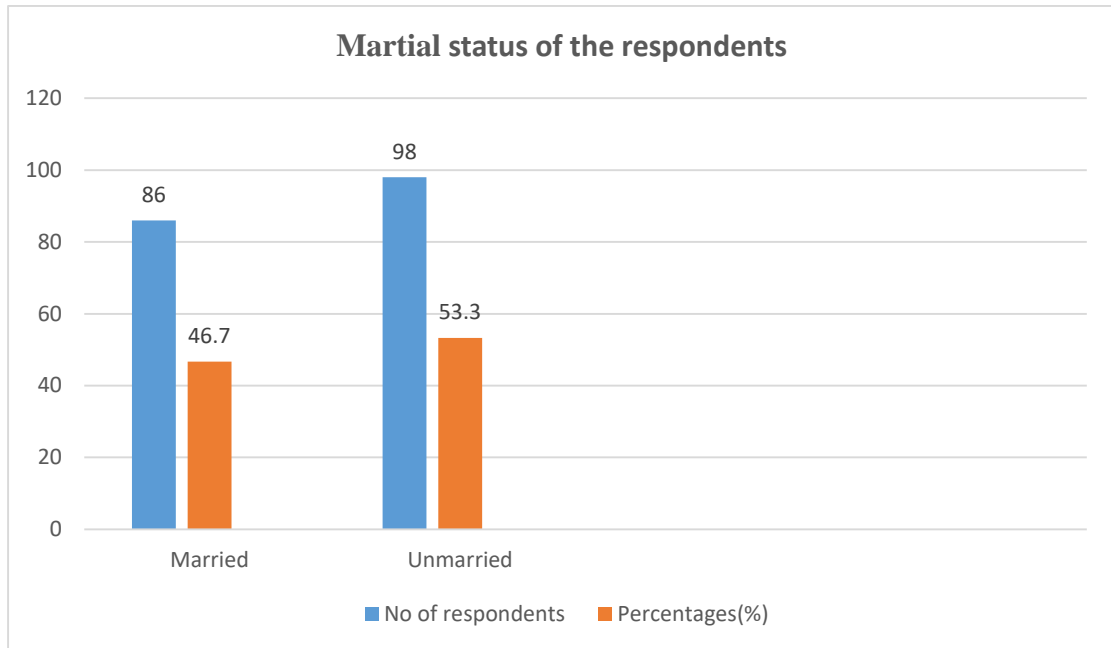


Figure 4.2: Marital status of the respondents

Of the total respondents, majority of the respondents were unmarried (53.3percent) and remaining 46.7 percent of the respondents were married.

Age

Age of the respondents is one of the most important characteristics in understanding the views about the particular problems. The age group of the respondents is categorized into five groups i.e. below 20, 20 to 30, 30 to 40, 40 to 50 and 50 and above is shown in the figure 4.3.

This figure shows the age of respondents which is classified into five categories of below 20, 20-30, 30-40, 40-50 and 50 and above ages.

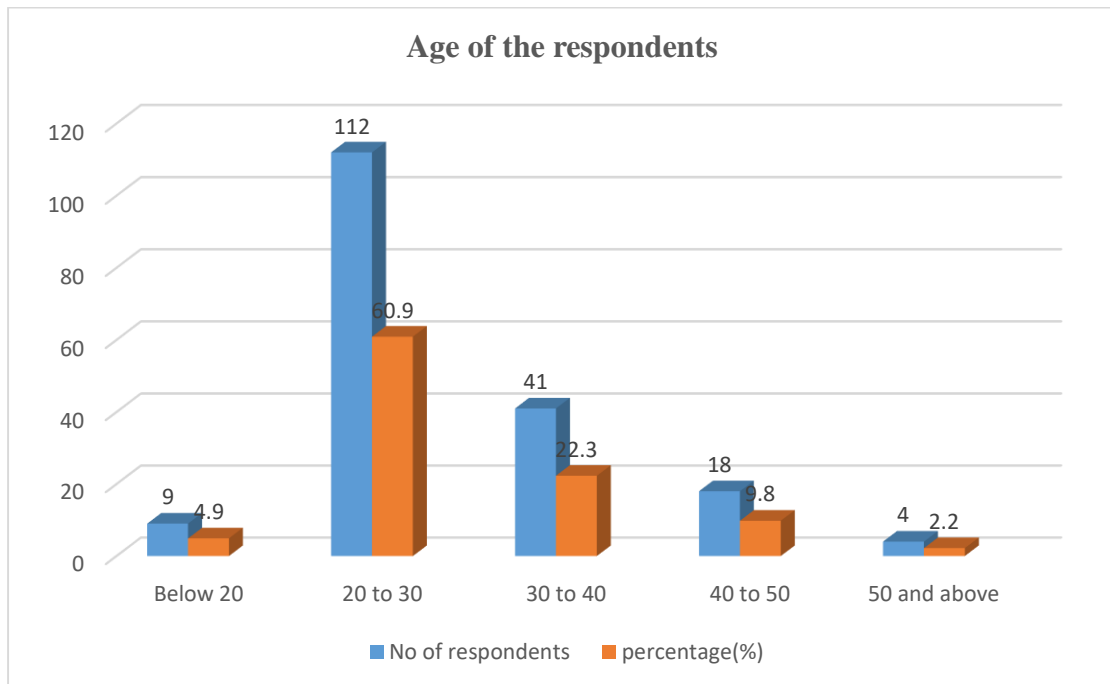


Figure 4.3: Age of the respondents

Of the total respondents, majority of the respondents (60.9 percent) were in age group between 20 to 30 years and 4.9 percent were below 20 years. Likewise, 22.3 percent were in age group between 30 to 40 years, 9.8 percent were between 40 to 50 years and the rest (2.2 percent) were 50 and above years.

Academic qualification

Education is one of the most important characteristics that might affect the person's attitudes and the way of looking and understanding any particular social phenomena therefore it becomes imperative to know the educational background of the respondents. The Academic qualification of the respondents is presented in figure 4.4.

This figure shows the description of the academic qualification of the respondents in terms of number and percentage.

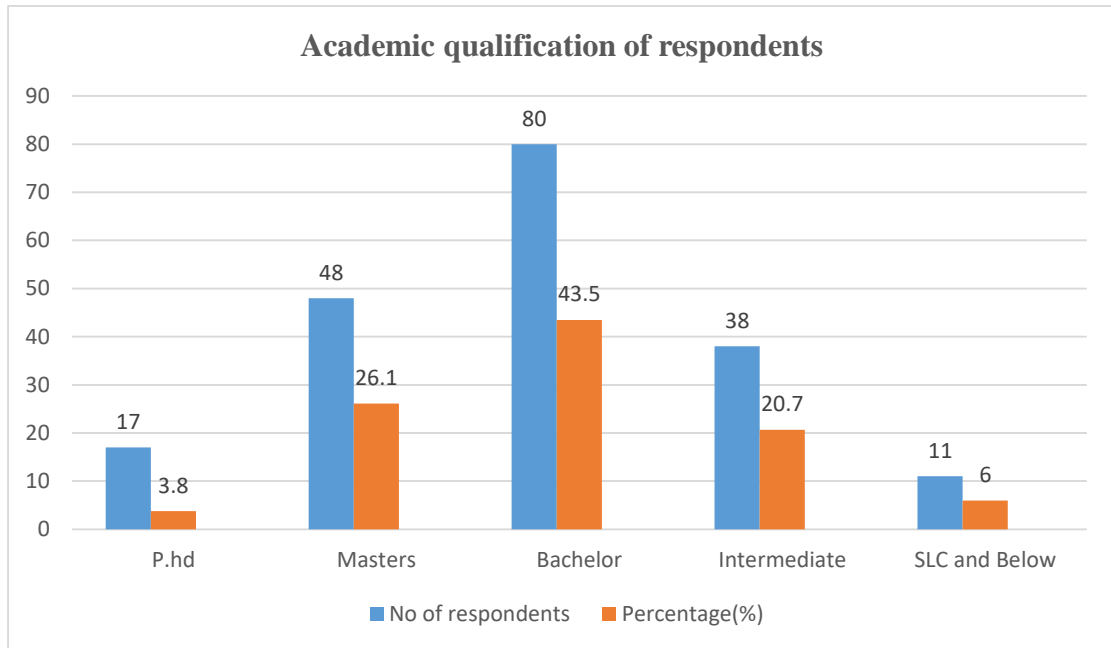


Figure 4.4: Academic qualification of respondents

Majority of the respondents (26.1 percent) has completed their Masters Level whereas 43.5 percent of the respondents have completed their Bachelors level. Likewise, 20.7 percent of the respondents have completed their intermediate level, 17 percent of the respondents were educated up to PhD and the rest 6 percent were educated up to SLC and below.

Occupation

Occupation is one of the most important characteristics in understanding the views about the particular problems. The occupation of the respondents is categorized into six types of job i.e. government, private, self-employed, student, housewife and retired is shown in the figure 4.5.

This figure shows the occupation of the respondents in terms of number and percentage.

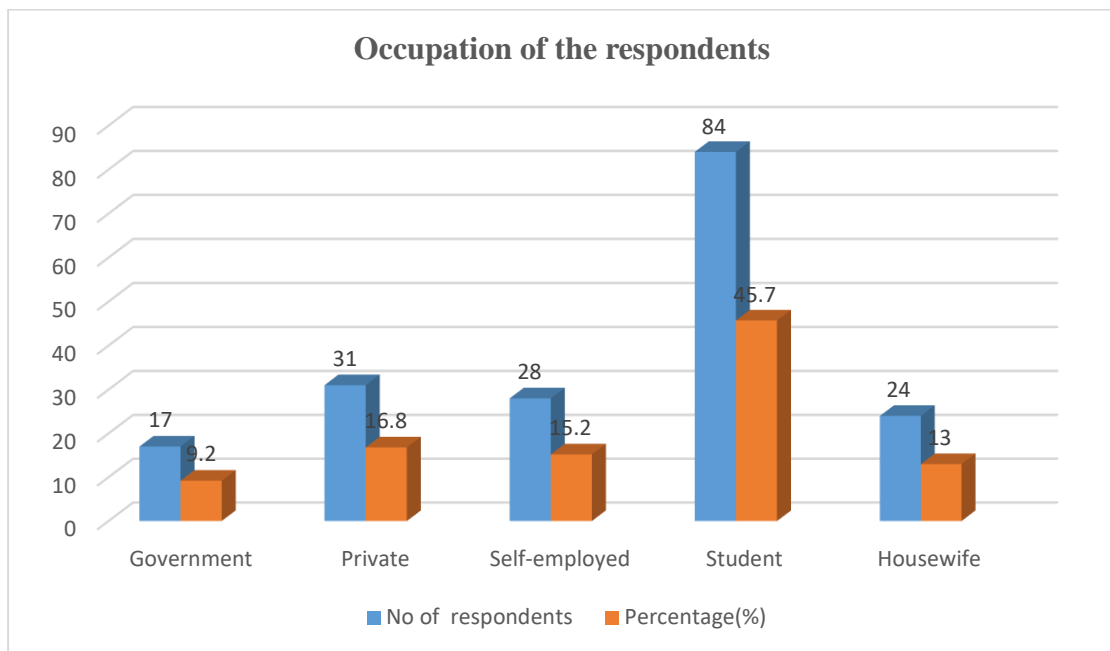


Figure 4.5: Occupation of the respondents

Of the total respondents, majority of the respondents are students (45.7 percent) followed by private job holders (16.8 percent), self-employed (15.2 percent), government job holders (9.2 percent), and housewife (13 percent).

Income

Income is an important variable in expressing and giving the responses about the problem. Per year income of the respondents is presented in the Figure 4.6.

This figure shows the per year income of the respondents in terms of number and percentage.

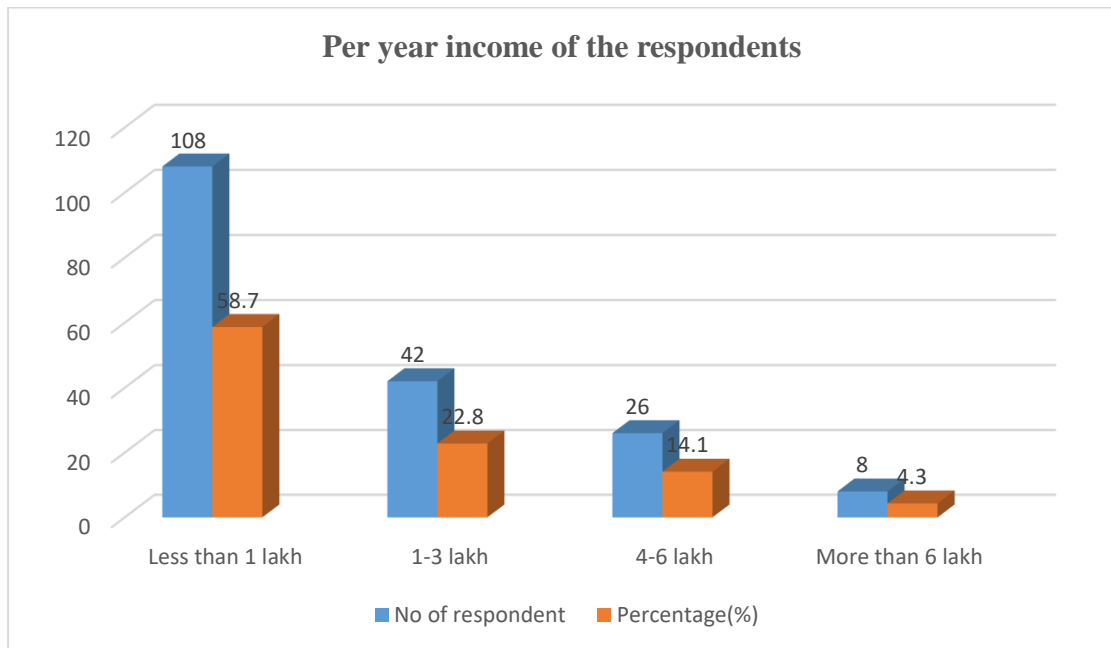


Figure 4.6: Per year income of the respondents

Of the total respondents, majority of the respondents has per year income less than 1 lakh (58.7 percent) followed by per year income between 1-3 lakh (22.8 percent), per year income between 4-6 lakh (14.1 percent), and per year income more than 6 lakh (4.3 percent).

4.1.2 Responses on ATM Services

The following table shows the responses associated with yes/no type questions. It also depicts the number of respondents and its percentage value.

Table 4.2: Responses associated with Yes/No Questions

This table shows the observed responses on yes/no types of questions related to ATM services. Also percentage values with each statement are given.

S.No.	Statement	Yes		No	
		Frequency	%	Frequency	%
1.	Do you have automated teller machine (ATM) card?	184	100	0	0
2.	Is operating on ATM comfortable?	182	98.9	2	1.1
3.	Have you ever complained about ATM machine to your bank?	114	62	70	38
4.	Has your bank done anything to correct the problems you have encountered while using ATM services?	133	72.3	51	27.7

Source: Field survey 2020

Table 4.2 reveals that 100 percent of the respondents have ATM card. As per the survey, 98.9 percent of the respondents find ATM operation as comfortable medium while rests of the 1.1 percent of the respondents do not think so. In this present era, ATM service is being able to comfort the customers or ATM users. Similarly, 62 percent of the respondents lodged a complaint against their bank ATM machine and the remaining 38 percent have not complained yet about their ATM machine. However, 72.3 percent of the respondents feel that their bank take corrective actions to resolve their ATM related problems whereas the rest 27.7 percent do not feel so.

4.1.3 Responses related to multiple choice questions

The following table shows the responses associated with multiple choice questions. It also depicts the number of respondents and its percentage value.

Table 4.3: Responses on how many banks' accounts respondents have ATM

The table presents the observed responses on how many banks' account respondents have ATM. Also shown in the table are observed frequencies and its percentage value.

Statement: For how many banks' accounts do you have ATM?							
One		Two		Three		More	
Frequency	%	Frequency	%	Frequency	%	Frequency	%
68	37	76	41.3	20	10.9	20	10.9

Source: Field survey 2020

Table 4.3 reveals that 37 percent of the respondents have ATM for one bank account. 41.3 percent of the respondents have ATM for two banks' accounts and 20 percent of the respondents have ATM for three banks' accounts and more than three banks' accounts.

Table 4.4: Responses on how often the respondents use an ATM services

The table presents the observed responses on how often the respondent uses an ATM services. Also shown in the table are observed frequencies and its percentage value.

Statement: How often do you use an ATM?							
Several times in a week		One week		Once a month		Less often	
Frequency	%	Frequency	%	Frequency	%	Frequency	%
89	48.4	36	19.6	30	16.3	29	15.8

Source: Field survey, 2020

Table 4.4 shows the responses of ATM users regarding how often they use an ATM services. From the above table, it reveals that 48.4 percent of the respondents use ATM service once in a week. 19.6 percent of the respondents uses it on several times in a week. Similarly, 16.3 percent of the respondents use it once in a month and 15.8 percent of the respondents use it less often.

Table 4.5: Responses on number of times ATM users experience ATM problems

The table presents the observed responses on number of times ATM users experience ATM problems. Also shown in the table are observed frequencies and its percentage value.

Statement: How often do you experience ATM problems?							
1-5 times		5-10 times		10-15 times		15-20 times	
Frequency	%	Frequency	%	Frequency	%	Frequency	%
110	59.8	47	25.5	23	12.5	4	2.2

Source: Field survey, 2020

Table 4.5 indicates the responses of ATM users regarding the number of time they experience ATM problems and also shows that most of the respondents (59.8 percent) have experienced ATM problems 1 to 5 times. 25.5 percent of the respondents have experienced ATM problems 5 to 10 times. 12.5 percent of the respondents have experienced ATM problems 10 to 15 times. 4.72 percent of the respondents has experienced ATM problems 15 to 20 times.

Table 4.6: Responses on convenient time to use ATM service

The table presents the observed responses on convenient time to use ATM services. Also shown in the table are observed frequencies and its percentage value.

Statement: Which time do you find most convenient to use ATM?							
6am-10am		10am-2pm		2pm-6pm		After 6pm	
Frequency	%	Frequency	%	Frequency	%	Frequency	%
27	14.7	76	41.3	74	40.2	7	3.8

Source: Field survey, 2020

Table 4.6 shows the responses of ATM users regarding the most convenient time they find to use ATM services. From the above table, it indicates that most of the respondents (41.3 percent) use ATM service between 10 am to 2 pm. Similarly, 40.2 percent of the respondents use ATM service between 2 pm to 6 pm. Likewise, 27 percent of the respondents feels convenient to use ATM service between 6 am to 10 am. Remaining 3.8 percent of the respondents find convenient to use ATM after 6 pm.

Table 4.7: Responses on factors influencing use of ATM card

The table presents the observed responses on convenient time to use ATM services. Also shown in the table are observed frequencies and its percentage value.

Statement: What/who influenced you to use ATM card?							
Personal need		Family, friends and relatives		Bank employee		Audio/visual media(radio, TV, internet)	
Frequency	%	Frequency	%	Frequency	%	Frequency	%
121	65.8	57	31	3	1.6	3	1.6

Source: Field survey, 2020

Table 4.7 reveals that most of the respondents (65.8 percent) use ATM card because of their personal need. 31 percent of the respondents said that family, friends and relatives is the second most influencing factor for them to use ATM card. Bank employee and Audio/visual media have same percentage (1.6 percent) which are the least influencing factor for the respondents to use ATM card.

Table 4.8: Responses on location of ATM service point

The table presents the observed responses on location of ATM service point. Also shown in the table are observed frequencies and its percentage value.

Statement: Do ATM points located in your convenient place?							
Very Convenient		Neutral		Inconvenient		Very inconvenient	
Frequency	%	Frequency	%	Frequency	%	Frequency	%
61	33.2	112	60.9	7	3.8	4	2.2

Source: Field survey, 2020

Table 4.8 indicates the responses of ATM users regarding whether they find the location of ATM service point very convenient or convenient or inconvenient or very inconvenient. The table also shows that 60.9 percent of the respondents agreed that ATM point is situated at Neutral location. 33.2 percent of the respondents said that ATM point is very conveniently located. Similarly, 3.8 percent of the respondents said that it is inconveniently located and remaining 2.2 percent of the respondents said that ATM point is very inconveniently located.

Table 4.9: Responses on the inconveniences you have encountered while using ATM

This table shows the number and percentage of ATM users expressing their views towards the inconveniencies they have encountered while using ATM. The reported figures are the percentage of respondents indicating particular response.

	Frequency	Percentage (%)
Long queues	64	34.8
Limit on daily withdrawl	43	23.4
Difficulty in inserting card	30	16.3
Difficulty to read from the screen	2	1.1
The slip provided is unreadable	17	9.2
None	28	15.2
Total	184	100

Field survey, 2020

Table 4.9 reveals the views of different levels of respondents towards the level of inconveniencies encountered while using ATM of their respective banks. The aggregate result shows that 34.8 percent ATM users encountered long queues while using ATM, 23.4 percent ATM users find limit on daily withdrawal as inconveniency while using ATM, 16.3 percent inconveniency for difficulty in inserting card, 1.1 percent inconveniencies for difficulty to read from the screen, 9.2 percent find the slip provided is unreadable and remaining 15.2 percent of ATM users do not find any inconveniencies like above.

Table 4.10: Responses on how satisfied are you with ATM services provided by this bank?

This table shows the number and percentage of ATM users expressing their views towards the level of satisfaction with ATM services provided by the bank. The reported figures are the percentage of respondents indicating particular response.

	Frequency	Percentage (%)
Extremely satisfied	31	16.8
Neutral	144	78.3
Dissatisfied	9	4.9
Total	184	100

Field survey, 2020

Table 4.10 shows the views of different levels of respondents towards the level of satisfaction with ATM services provided by the bank. The aggregate result shows that 16.8 percent ATM users are extremely satisfied with ATM services provided by the bank whereas 78.3 percent are neutral and remaining 4.9 percent are dissatisfied with ATM services provided by the bank.

4.2 Descriptive analysis

Descriptive analysis has been made to understand the facts regarding the factors affecting customer satisfaction from ATM services during the study period. The descriptive statistics used in this study consists of mean and standard deviation values associated with variables under considerations. The independent variables are reasonability of fee charged, frequency of problem faced, usage of services, choice of ATM and post purchase behavior and the dependent variable customer satisfaction. The descriptive statistics are summarized in table 4.11.

Table 4.11: Analysis of reasonability of fee charged on ATM

The target respondents were provided with five questions to measure their views on the empathy dimensions in the service provided by the banks for analyzing the customer satisfaction. The respondents were asked the detail analysis is shown in the table:

Test scale = 3			
Reasonability of fee charged	N	Mean	Std. Deviation
The bank charge very reasonable fee on ATM card issuance.	184	2.50	0.981
The bank annual fee on ATM service is reasonable.	184	2.74	1.104
Fee charged by the bank while using other bank ATM outlets is satisfactory.	184	3.48	1.147
Fee charged on amendment of new ATM card incase card gets expired, lost and damaged is reasonable.	184	2.29	0.822
Bank charges no fee while making transactions within the ATM outlet of same bank which is very satisfactory.	184	2.03	0.764

Field survey, 2020

The table shows the average score for all the statements regarding perceived reasonability of fee charged on ATM service by customers. The respondent's opinions regarding reasonability of fee charged is presented in table which explains that majority of respondent agreed with fifth statement Bank charges no fee while making

transactions within the ATM outlet of same bank which is very satisfactory with mean 2.03 and standard deviation 0.764 while majority of respondent disagree with second statement Fee charged by the bank while using other bank ATM outlets is satisfactory with mean 3.48 and standard deviation 1.147.

Table 4.12: Analysis of frequency of problem faced on ATM

The target respondents were provided with a question to measure their views on the frequency of problem faced on ATM service provided by the commercial banks for analyzing the customer satisfaction which is shown in table:

Test scale = 3			
Frequency of problem faced	N	Mean	Std. Deviation
ATM machine out of order condition is very frequent.	184	1.95	0.784
ATM cards usually gets captured and blocked.	184	2.45	1.023
ATM machine most often debit account without giving actual physical cash.	184	2.25	0.103
ATM machine out of cash condition is very often.	184	2.20	0.793
Mostly there is no slip for printing statements.	184	2.16	0.930
ATM machine usually provides old notes.	184	3.33	1.113

Field survey, 2020

The table shows the analysis of customer satisfaction level associated with the frequency of problem faced on ATM. The respondent's opinion regarding the frequency of problem faced on ATM is presented in the table which explains that majority of the respondents agree with the first statement that ATM machine out of order condition is very frequent with mean 1.95 and standard deviation 0.784 while majority of the respondents disagree with the sixth statement that ATM machine usually provides old notes with mean 3.33 and standard deviation 1.113.

Table 4.13: Analysis of Choice of ATM

This section provides the information regarding the choice that respondents make for selecting ATM of the bank based on the respondents view regarding secure and trustworthy transactions, speed transactions, convenient location, error free transactions, and 24 hours service shown in table:

Test scale = 3			
Choice of ATM	N	Mean	Std. Deviation
ATM transactions are very secure and trustworthy.	184	2.02	0.874
Transactions through ATM are very fast and save time.	184	1.88	0.579
ATM is located in convenient location.	184	2.01	0.685
ATM provides error free records.	184	2.90	1.056
ATM service is available 24 hours in all 7 days of a week.	184	2	0.823
You choose ATM of this bank by taking example of others.	184	2.31	0.956

Field survey, 2020

The table shows the analysis of customer satisfaction level associated with the choice of ATM. The respondent's opinion regarding the choice of ATM is presented in the table which explains that majority of the respondents agree with the second statement that transactions through ATM is very fast and saves time with mean 1.88 and standard deviation 0.579. While majority of the respondents disagree with the fourth statement that ATM provides error free records with mean 2.90 and standard deviation 1.056.

Table 4.14: Analysis of Usage of service

This section provides the information regarding the usage of ATM services made by the respondents. The usage of services that respondents most frequently uses are cash withdrawal, balance enquiry, viewing mini statement, fund transfer and utility payments.

Test scale = 3			
Usage of service	N	Mean	Std. Deviation
Cash can be withdrawn at any time from any ATM outlet.	184	1.95	0.696
By using ATM, current balance in your account can be inquired.	184	1.94	0.565
It is safe means to make fund transfer.	184	2.71	0.986
By using ATM, you can make utility payments.	184	3.12	1.006

Field survey, 2020

The table shows the analysis of customer satisfaction level associated with the usage of ATM services. The respondent's opinion regarding the usage of ATM services is presented in the table which explains that majority of the respondents agree with the second statement that by using ATM, current balance in your account can be inquired with mean 1.94 and standard deviation 0.565. While majority of the respondents

disagree with the fourth statement that by using ATM, you can make utility payments with mean 3.12 and standard deviation 1.006.

Table 4.15: Analysis of Post purchase behavior

This section provides the information regarding the post purchase behavior of the ATM users. The respondents were asked questions regarding post purchase behavior. The respondent's opinion regarding the post purchase behavior is presented in table 4.15

Test scale = 3			
Post purchase behavior	N	Mean	Std. Deviation
I would like to enjoy the particular privileges from ATM facilities provided by this bank that I would not get elsewhere.	184	2.10	0.765
I would be a loyal customer of this bank.	184	2.21	0.678
I would like to continue to use this ATM in future.	184	1.89	0.600
I would recommend others to use my bank's ATM service.	184	3.20	1.053

Field survey, 2020

The table shows the analysis of customer satisfaction level associated with the post purchase behavior. The respondent's opinion regarding the post purchase behavior is presented in the table which explains that majority of the respondents agree with the third statement that I would like to continue to use this ATM in future with mean 1.89 and standard deviation 0.600 while majority of the respondents disagree with the fourth statement that I would recommend others to use my bank's ATM service with 3.20 mean and standard deviation 1.053.

Table 4.16: Analysis of Customer satisfaction

Six questions were provided to the target respondents to measure the customer satisfaction of Nepalese commercial banks. The respondents were asked "whether customer level of the satisfaction of bank towards ATM service is excellent or not." The detail analysis of the respondents is shown in the table:

Test scale = 3			
Customer satisfaction	N	Mean	Std. Deviation
I am satisfied with ATM service provided by the bank.	184	2.04	0.696
I am satisfied with the physical location of ATM provided by the bank.	184	2.16	0.698
I am satisfied with the operating hours of ATM of the bank.	184	1.97	0.652
I am satisfied with the fee charged on ATM by the bank.	184	3.38	1.011
I am satisfied with the card delivery of the bank	184	2.41	0.977
I am satisfied to the service quality of ATM personnel for query response and timely action on request of the bank	184	2.14	0.708

Field survey, 2020

The table shows the analysis of customer satisfaction level. The respondent's opinion regarding the customer satisfaction level is presented in the table which explains that the majority of the respondents agree with the third statement that I would like to continue to use this ATM in future I am satisfied with operating hour of ATM bank with mean 1.97 and standard deviation 0.652 while majority of the respondents disagree with the fourth statement that I am satisfied with the fee charged on ATM by the bank with mean 3.38 and standard deviation 1.011.

4.3 Correlation Analysis

Table 4.17 Analysis of correlation

This table presents bivariate Pearson correlation coefficient between customer satisfaction and factors from ATM services of Nepalese commercial banks. Factors from ATM services consists reasonability of fee charged, frequency of problem faced, choice of ATM, usage of services and post purchase behavior.

Correlation							
		Customer satisfaction	Reasonability of fee charged	Frequency of problem faced	Choice of ATM	Usage of service	Post purchase behavior
Customer satisfaction	Pearson correlation	1	.391**	-.129	.343**	.378**	.182*
	Sig. (2-tailed)		.000	.081	.000	.000	.013
	N		184	184	184	184	184
Reasonability of fee charged	Pearson correlation		1	.293**	.433**	.271**	.078
	Sig. (2-tailed)			.000	.000	.000	.295
	N			184	184	184	184
Frequency of problem faced	Pearson correlation			1	.243**	.024	.086
	Sig. (2-tailed)				.001	.742	.246
	N				184	184	184
Choice of ATM	Pearson correlation				1	.321**	.083
	Sig. (2-tailed)					.000	.265
	N					184	184
Usage of service	Pearson correlation					1	.120
	Sig. (2-tailed)						.104
	N						184
Post purchase behavior	Pearson correlation						1
	Sig. (2-tailed)						
	N						
**. Correlation is significant at the 0.01 level (2-tailed).							
*. Correlation is significant at the 0.05 level (2-tailed).							

Field survey, 2020

Where,

Table 4.17 shows the computation of Pearson's correlation coefficients. The correlation coefficients for the relationship between the independent variables (i.e. reasonability of fee charged, frequency of problem faced, choice of ATM, usage of services and post purchase behavior) and the dependent variable (i.e. customer satisfaction). The results

imply that most of the variables have positive relationship with customer satisfactions except frequency of problem faced as it has negative relationship with customer satisfaction.

The Pearson Correlation coefficient between the independent variable Reasonability of fee charged and dependent variable customer satisfaction is .391, which implies that the two variables are positively correlated and there is correlation between Reasonability of fee charged and perception in customer satisfaction. The positive coefficient of correlation is .391 at 1% significant level.

The Pearson Correlation coefficient between the independent variable frequency of problem faced and dependent variable customer satisfaction is -.129, which implies that the two variables are negatively correlated and there is no correlation between frequency of problem faced and perception in customer satisfaction.

The Pearson Correlation coefficient between the independent variable choice of ATM and dependent variable customer satisfaction is .343, which implies that the two variables are positively correlated and there is correlation between choice of ATM and perception in customer satisfaction. The positive coefficient of correlation is .343 at 1% significant level.

The Pearson Correlation coefficient between the independent variable usage of service and dependent variable customer satisfaction is .378, which implies that the two variables are positively correlated and there is correlation between usage of service and perception in customer satisfaction. The positive coefficient of correlation is .378 at 1% significant level.

The Pearson Correlation coefficient between the independent variable post purchase behavior and dependent variable customer satisfaction is .182, which implies that the two variables are positively correlated and there is correlation between Communication and perception in customer satisfaction. The positive coefficient of correlation is .182 at 5% significant level.

4.4 Regression analysis

Regression analysis is a statistical process for estimating the relationships among variables. It includes many techniques for modeling and analyzing several variables,

when the focus is on the relationship between a dependent variable and one or more independent variable.

Table 4.18: Analysis of regression

Model of summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.514 ^a	.263	.243	.406	.264	12.780	5	178	.000

- a. Predictors: (Constant), Post purchase behavior, Reasonability of fee charged, Usage of services, Frequency of problem faced, Choice of ATM

ANOVA^a

Model	Sum of Square	df	Mean Square	F	Sig.
Regression	10.538	5	2.108	12.780	.000 ^b
1 Residual	29.354	178	.165		
Total	39.892	183			

- a. Dependent Variable: Customer satisfaction

- b. Predictors: (Constant), Post purchase behavior, Reasonability of fee charged, Usage of services, Frequency of problem faced, Choice of ATM

Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.705	.242		2.918	.004
Reasonability of fee charged	.191	.056	.251	3.390	.001
Frequency of problem faced	.004	.060	.004	.061	.951
Choice of ATM	.137	.072	.143	1.921	.056
Usage of service	.235	.065	.250	3.598	.000
Post purchase behavior	.119	.065	.120	1.852	.066

- a. Dependent Variable: Customer satisfaction

Regression model

$$\hat{Y} = \alpha + \beta_1 \text{RFC} + \beta_2 \text{FPF} + \beta_3 \text{CA} + \beta_4 \text{US} + \beta_5 \text{PPB} + e_i$$

$$\hat{Y} = 0.705 + \beta_1 0.191 + \beta_2 0.044 + \beta_3 0.137 + \beta_4 0.235 + \beta_5 0.119$$

Where,

\hat{Y}	=	Customer Satisfaction (dependent variable)
RFC	=	Reasonability of fee charged
FPF	=	Frequency of problem faced
CA	=	Choice of ATM
US	=	Usage of service
PPB	=	Post purchase behavior
α	=	Constant
$\beta_1, \beta_2 \dots \beta_5$	=	Regression coefficients of Factor 1 to Factor 5 respectively
e_i	=	Error term.

In the regression analysis, the beta coefficients are used to explain the relative importance of the independent variables in contribution to the variance in dependent variable. According to the table, the beta coefficient for usage of service ($\beta_4=0.235$, $p=0.000$) is positive with customer satisfaction in the equation. It reveals that higher the usage of service, higher would be the customer satisfaction level where beta coefficient is significant at 1 percent level of significance in most of the equations. Likewise, the beta coefficient for reasonability of fee charged ($\beta_1=0.191$, $p=0.066$) is positive with customer satisfaction in the equation. It reveals that higher the reasonability of fee charged, higher would be the customer satisfaction level where beta coefficient is significant at 1 percent level of significance in equations. The beta coefficient for choice of ATM ($\beta_3=0.137$, $p=0.056$) is positive with customer satisfaction in the equation. It reveals that higher the choice of ATM, higher would be the customer satisfaction level where beta coefficient is significant at 5% level of significance in equations. Also, the beta coefficient for post purchase behavior ($\beta_5=0.119$, $p=0.000$) is positive with customer satisfaction in the equation. It reveals that higher the post purchase behavior, higher would be the customer satisfaction level where beta coefficient is significant at 5% level of significance in equations. Similarly

the beta coefficient for frequency of problem faced ($\beta_2=0.004$, $p=0.951$) is positive with the customer satisfaction.

4.5 Findings

This study has mainly focused on impact of factors from ATM services on customer satisfaction in Nepalese banking sector. This study has used ATM services factors as independent variables, the major components of ATM services are reasonability of fee charged, frequency of problem faced and choice of ATM, usage of services and post purchase behavior and dependent variable is customer satisfaction.

- i. Survey result shows that the most important factor affecting customer satisfaction from ATM service is reasonability of fee charged which is ranked at first position as per the survey. Frequency of problem faced is the second most important factor affecting customer satisfaction from ATM services. Usage of services is ranked third and choice of ATM is ranked fourth factor affecting customer satisfaction from ATM services. However, most of the respondents ranked post purchase behavior as least important factor affecting customer satisfaction from ATM services.
- ii. As per the survey, the most useful service provided by ATM is cash withdrawal which is ranked at first position. Balance inquiry is the second most useful service provided by ATM. Fund transfer is ranked third and mini statement is ranked fourth useful service provided by ATM. However, most of the respondents ranked utility payment as least useful service provided by ATM.
- iii. Survey result shows that the type of problems respondents face most often is machine out of order which is ranked at first position as per the survey. Machine out of cash is the second type of problem respondents' face most often. Card gets blocked is ranked third and no printing statement is ranked fourth type of problem respondents' face most often. However, most of the respondents ranked old notes as least important type of problem respondents' faced.
- iv. As per the survey, the most important reason for choosing ATM of the bank is security and trust which is ranked at first position. Speed transactions are the second most important reason for choosing ATM of the bank. Convenience in use is ranked third and near location of ATM outlets and branches is ranked fourth reason for choosing ATM of the bank. However, most of the respondents

ranked example of others as least important reason for choosing ATM of the bank.

- v. The descriptive statistics for the independent variables, reasonability of fee charged ranges from 1 to 5, leading to the average reasonability of fee charged of 2.64. The frequency of problem faced varies from minimum of 1.33 to maximum of 5 leading to the average of 2.39. Likewise, choice of ATM ranges from minimum of 1 to maximum of 4 having an average of 2.19. The mean of usage of services is noticed to be 2.33, where the minimum and maximum values are observed to be 1 and 4 respectively. Finally, the post purchase behavior ranges from minimum of 1 to maximum of 4, leading to the average of 2.35.
- vi. The findings revealed that customer satisfaction is positively correlated with the four independent variables (i.e. reasonability of fee charged, choice of ATM, usage of services and post purchase behavior) and negatively correlated with frequency of problem solved. The highest correlation has been observed to be 0.391 between reasonability of fee charged and customer satisfaction.
- vii. From the study, it can be concluded that there is positive and significant relationship between reasonability of fee charged (RFC) and customer satisfaction (CS). Therefore, first hypothesis which states that there is a positive and significant relationship between reasonability of fee charged and customer satisfaction is accepted.
- viii. From the study, it can be concluded that there is negative and significant relationship between frequency of problem faced (FPF) and customer satisfaction (CS). Therefore, second hypothesis which states that there is a negative and significant relationship between frequency of problem faced and customer satisfaction is accepted.
- ix. From the study, it can be concluded that there is positive and significant relationship between choice of ATM (CA) and customer satisfaction (CS). Therefore, third hypothesis which states that there is a positive and significant relationship between choice of ATM and customer satisfaction is accepted.
- x. From the analysis, it is found that there is positive and significant relationship between usage of services (US) and customer satisfaction (CS). Therefore, fourth hypothesis which states that there is a positive and significant relationship between usage of services and customer satisfaction is accepted.

- xi. From the analysis, it is found that there is positive and significant relationship between post purchase behavior (PPB) and customer satisfaction (CS). Therefore, fifth hypothesis which states that there is a positive and significant relationship between post purchase behavior and customer satisfaction is accepted.

4.6 Discussion

This study has mainly focused on impact of factors from ATM services on customer satisfaction in Nepalese banking sector. This study has used ATM services factors as independent variables, the major components of ATM services are reasonability of fee charged, frequency of problem faced and choices of ATM, usage of services and post purchase behavior and dependent variable is customer satisfaction. The present study reveals that respondent agrees with each statement of reasonability of fee charged and customer satisfaction and bank should implement proper and reasonable fee on ATM services provided. This shows that the customer satisfaction from reasonability of fee charged is higher in commercial banks of Nepal. This study is consistent with Biset Amene and Bansa Buta (2019) to examine the impact of reasonability of fee charged on customer satisfaction. The study finding further indicates that responsiveness were regarded as the most important factors by customers and it has significant impact upon customer satisfaction followed by service efficiency, appearance and reliability. While analyzing the components of frequency of problem faced, study concludes that respondents showed their strong agreement with each statement of frequency of problem faced and bank should carefully handle such problems. The present study also concludes that respondents are in favor with each statement of choice of ATM and commercial banks should provide varieties of choices in ATM services as possible. The study is consistent with Joseph and Stone (2003) to examine the factors affecting the customer satisfaction level from choices of ATM. The study found that user friendly convenient locations, secure positions, and the numbers of ATM provided by the banks are essential dimensions of ATM service quality.

Cash withdrawal is ranked highest as the most useful ATM services provided by the Nepalese commercial banks. This study is consistent with Islam (2014) to determine the factors affecting customer satisfaction from the usage of ATM services. The study found that security/safety/privacy of ATM is ranked number one and represents maximum satisfaction of ATM users and customers' are also satisfied with the cash

withdrawal accuracy, quality of notes, speed of the delivery of ATM cards, pay-in-slips in the ATM, Charge/fee of ATM cards, maximum limit of cash withdrawals, sufficient cash in ATM booth. Likewise, machine out of order is ranked highest as the most frequently faced problem in Nepalese commercial banks. The study further showed that ATM users found limit on daily withdrawal as inconveniency while using ATM and also found that it was costly to withdraw from another bank ATM outlets in Nepalese commercial banks. This study is consistent with Madawaki (2014) to ascertain the impact of ATM on customer satisfaction by appraising the problems faced by the customers while making ATM transactions. The study revealed that majority of the customers that experience ATM failure feel demoralized and believes that it takes several days for ATM failed transaction to be rectified. On the basis of the analysis, the study concludes that the post purchase behavior factors from ATM services have positive and significant relationship with customer satisfaction in Nepalese commercial banks. The study also concludes that most of the respondents believe ATM service as the necessity of modern banking and overall ATM services provided by commercial bank is satisfactory.

Chapter 5

Summary and conclusion

5.1 Summary

In Nepal, there are limited studies examining the factors affecting customer satisfaction from ATM. This study is significant for the reason that it has provided some practical insight about ATM service as a customer service delivery tool. This study also helps to know the current situation of ATM services factors and customer satisfaction. Moreover, this study is expected to help the banking sector to assess the impact of ATM on customer satisfaction and to know how they can improve on their performance.

The major objective of the study is to examine the factors affecting on customer satisfaction from ATM services in Nepalese commercial banks. The specific objectives are as to examine the factors affecting the customer satisfaction level from choices of ATM, to ascertain the impact of ATM on customer satisfaction by appraising the problems faced by the customers while making ATM transactions, to identify the relationship between post purchase behavior and customer satisfaction regarding ATM services provided by different banks under the study, to determine the factors affecting customer satisfaction from the usage of ATM services and to examine the impact of the reasonability of fees charged on customer satisfaction.

This study has been based on primary source of data. Private sector commercial banks i.e. Global Bank Limited, Everest Bank Limited, Siddhartha Bank Limited, NIC Asia Bank Limited and SBI Bank Limited were selected for the study. Altogether 5 commercial banks were selected for the study and total of 184 questionnaires were collected out of 220 questionnaires. To achieve the purpose of the study structured questionnaire was prepared.

The questionnaire survey has been conducted to know the opinions of ATM users regarding factors affecting customer satisfaction from ATM services in Nepalese banking industry. A set of questionnaire was prepared and distributed to the ATM users of Nepalese commercial banks. The questions were designed to get the views, related information from the respondents. Data were collected using well formulated questionnaires. The questionnaires were self-adjusted, validated and pre-tested. The respondents represent ATM users of 5 commercial banks of Nepal and Descriptive

statistics, correlation coefficient and a step wise regression method has been applied to estimate the relationship between dependent variable such as customer satisfaction with independent variables i.e. reasonability of fee charged, frequency of problem faced, choice of ATM, usage of services and post purchase behavior. The collected data has been processed with the use of SPSS Statistical package. Therefore, different statistical tests of significance for validation of model such as t-test, F-test and R-square test were also used. From the study, it was found that there is a positive and significant relationship between independent variables (reasonability of fee charged, choice of ATM, usage of services and post purchase behavior) and dependent variables (customer satisfaction) and found that they have significant effect on customer satisfaction whereas frequency of problem faced has an negative relationship with customer satisfaction.

5.2 Conclusion

The major conclusion of the study is that a factor from ATM services greatly influences customer satisfaction level in Nepalese commercial banks. ATM users ranked highest for the reasonability of fee charged as the most important factor affecting customer satisfaction level from ATM service in Nepalese commercial banks while cash withdrawal is ranked highest as the most useful ATM services provided by the Nepalese commercial banks. Likewise, machine out of order is ranked highest as the most frequently faced problem in Nepalese commercial banks. The study further showed that ATM users found limit on daily withdrawal as inconveniency while using ATM and also found that it was costly to withdraw from another bank ATM outlets in Nepalese commercial banks.

On the basis of the analysis, the study concludes that the reasonability of fee charged, choice of ATM, usage of services and post purchase behavior factors from ATM services have positive and significant relationship with customer satisfaction in Nepalese commercial banks. However, frequencies of problems faced have negative and significant relationship with customer satisfaction. The study also concludes that most of the respondents believe ATM service as the necessity of modern banking and overall ATM services provided by commercial bank is satisfactory.

5.3 Implications

The major implications to improve customer satisfaction from ATM services in Nepalese commercial banks are explained below:

5.3.1 Managerial implication

- i. The study observed a positive relationship between reasonability of fee charged, choice of ATM, usage of services and post purchase behavior and customer satisfaction. Hence, the banks willing to increase customer satisfaction level should focus more on reasonability of fee charged, choice of ATM, usage of services and post purchase behavior.
- ii. Based on the study, the banks willing to increase customer satisfaction level should properly solve the frequency of problem faced. Since, the study observed a negative relationship between frequency of problem faced and customer satisfaction.
- iii. The study observed that the majority of the respondents found limit on daily withdrawal as inconveniency while using ATM. Hence, the banks willing to increase customer satisfaction level should focus on improving the proper mechanism to increase limit on daily withdrawal as it leads to customer comfort and satisfaction.
- iv. The study indicates that most of the respondents felt withdrawing cash from other banks' ATM outlet is costly and hence the banks willing to increase their customer satisfaction level should focus on keeping such cost low in order to attract price sensitive customers.
- v. The study observed that machine out of order and machine out of cash are the most frequent problems faced by ATM users. Hence, the banks willing to increase their customer satisfaction level should focus more on constant and consistent checkups on the ATM machines in order to avoid such problems that may cause inconvenience to the ATM users.

5.3.2 Future research implication

This study can be regarded as the preliminary steps in investigating the relation between factors affecting customer satisfaction from ATM services in context of Nepalese commercial banks. The study remains enough ground for future researchers which are listed below:

- i. This study has taken only primary data as sample. Academicians are suggested to take secondary data as a sample for more convenient result.
- ii. The future studies can be carried out by selecting other financial institutions like development banks and finance companies to grab wider view of factors affecting customer satisfaction from ATM services.
- iii. This study is based on the survey of commercial bank's branches inside the Kathmandu valley. Therefore, to incorporate wide geographical character of the respondents, further studies can be carried out by extending the survey outside the Kathmandu valley.
- iv. This study has focused on factors from ATM services and its effect on customer satisfaction. However, the study has not focus on the association between customer satisfaction and retention of customers. Additional study will explore the relationship between these two constructs.

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Appendix
Survey Questionnaire

Dear respondent,

I am Siwani itani final year student of Central Department of Management conducting a purely academic study on “**Factors affecting on customer satisfaction from ATM services: A case of Nepalese commercial banks**” to meet the partial fulfillment of the requirements for the Master’s Degree in Business Studies (MBS), Tribhuvan University. The major objective of this study is to examine the customers’ satisfaction from ATM services of Nepalese commercial banks. It is humbly requested to all the respondents to fill up the questionnaire and feel free to answer the given questions according to your understanding. Please be confident because all your responses will be maintained absolutely confidential and used for only academic purposes. Your participation in the study is anonymous, voluntary and will be very much appreciated.

Section A: Respondent’s Information

Name of the Bank:

Gender: Male [] Female []

Marital status: Married [] Unmarried []

Age: Below 20 [] 20 to 30 [] 30 to 40 [] 40 to 50 [] 50 and above []

Academic qualification: PhD [] Masters [] Bachelor [] Intermediate [] SLC and below []

Occupation: Government [] Private [] Self-employed [] Student []
Housewife [] retired []

Per year income: less than 1 lakh [] 1-3 lakh [] 4-6 lakh [] More than 6 lakh []

Section B: Multiple type answer questions

Please make a tick mark (✓) in an appropriate option for each of the following questions

1. Do you have automated teller machine (ATM) card?
a) Yes b) No
2. Is operating on ATM comfortable?
a) Yes b) No
3. For how many banks’ accounts do you have ATM?
a) One b) Two c) Three d) More
4. How often do you use an ATM?
a) Several times in a week b) Once a week c) Once a month d) Less often

5. What are the inconveniences you have encountered while using ATM?
 - a) Long queues
 - b) Limit on daily withdrawal
 - c) Difficulty in inserting card
 - d) Difficulty to read from the screen
 - e) The slip provided is unreadable
 - f) None
6. How often do you experience ATM problems?
 - a) 1-5 times
 - b) 5-10 times
 - c) 10-15 times
 - d) 15-20 times
 - e) 20+ times
7. Have you ever complained about ATM machine to your bank?
 - a) Yes
 - b) No
8. Has your bank done anything to correct the problems you have encountered while using ATM services?
 - a) Yes
 - b) No
9. Which time do you find most convenient to use ATM?
 - a) 6am-10am
 - b) 10am-2pm
 - c) 2pm-6pm
 - d) After 6pm
10. What/who influenced you to use ATM card?
 - a) Personal need
 - b) Family, friends and relatives
 - c) Bank employee
 - d) Audio/visual media (radio, TV, internet)
 - e) Print media (newspaper, magazine, brochure, etc.)
11. How do you rate ATM services in terms of fee charged on withdrawal? (Withdrawing cash from other banks' ATM outlet)
 - a) Costly
 - b) Very costly
 - c) Cheap
 - d) Very cheap
12. Do ATM points located in your convenient place?
 - a) Very convenient
 - b) Convenient
 - c) Inconvenient
 - d) Very inconvenient
13. In a situation of urgency of cash, how do you rate ATM service as something you can depend on?
 - a) Very good
 - b) Good
 - c) Fair
 - d) poor
14. How long have you been using ATM of this bank?
 - a) Less than 1 year
 - b) 1-5 years
 - c) 5-10 years
 - d) More than 10 years
15. How satisfied are you with ATM services provided by this bank?
 - a) Extremely satisfied
 - b) Satisfied
 - c) dissatisfied
 - d) Extremely dissatisfied

Section C: Please make a rank for the following questions

1. In your experience, which are the important factors that mostly influence the customer satisfaction level from ATM services? (Please rank 1 for the most influencing factor and 5 for the least influencing factor and so on)

- | | | |
|----|------------------------------|---------|
| a. | Reasonability of fee charged | [] |
| b. | Frequency of problem faced | [] |
| c. | Post purchase behavior | [] |
| d. | Choice of ATM | [] |
| e. | Usage of services | [] |

2. Which of the following are the most useful services provided by ATM? (Please rank 1 for the most important service and 5 for the least important service and so on)

- a. Cash withdrawal []
- b. Balance inquiry []
- c. Fund transfer []
- d. Mini statement []
- e. Utility payment []

3. What type of problems do you face most often? (Please rank 1 for the most problem faced and 5 for the least problem faced and so on)

- a. Machine out of order []
- b. Card gets blocked []
- c. Machine out of cash []
- d. No printing statement []
- e. Old notes []

4. Prioritized the reasons for choosing ATM of this bank? (Please rank 1 for the most important reason and 5 for the least important reason and so on)

- a. Security and trust []
- b. Speed transactions []
- c. Convenience in use []
- d. Near location of ATM outlets and branches []
- e. Example of others []

Section D: Likert type question

1. Tick to indicate the level of customer satisfaction associated with fee charged on ATM at this bank.

[1=Strongly Agree, 2=Agree, 3= Neither agree nor disagree, 4=Disagree, 5=Strongly Disagree]

S.N	Reasonability of fee charged	1	2	3	4	5
a.	The bank charge very reasonable fee on ATM card issuance.					
b.	The bank annual fee on ATM service is reasonable.					
c.	The bank annual fee on ATM service is reasonable.					
d.	Fee charged by the bank while using other bank ATM outlets is satisfactory.					
e.	Fee charged on amendment of new ATM card incase card gets expired, lost and damaged is reasonable.					
f.	Bank charges no fee while making transactions within the ATM outlet of same bank which is very satisfactory.					

2. Tick to indicate the level of customer satisfaction associated with problem faced while using ATM of this bank.

[1=Strongly Agree, 2=Agree, 3= Neither agree nor disagree, 4=Disagree, 5=Strongly Disagree]

S.N	Frequency of problem faced	1	2	3	4	5
a.	ATM machine out of order condition is very frequent.					
b.	ATM cards usually gets captured and blocked.					
c.	ATM machine most often debit account without giving actual physical cash.					
d.	ATM machine out of cash condition is very often.					
e.	Mostly there is no slip for printing statements.					
f.	ATM machine usually provides old notes.					

3. Tick to indicate the level of customer satisfaction associated with the choice of ATM of this bank.

[1=Strongly Agree, 2=Agree, 3= Neither agree nor disagree, 4=Disagree, 5=Strongly Disagree]

S.N	Choice of ATM	1	2	3	4	5
a.	ATM transactions are very secure and trustworthy.					
b.	Transactions through ATM are very fast and save time.					
c.	ATM is located in convenient location.					
d.	ATM provides error free records.					
e.	ATM service is available 24 hours in all 7 days of a week.					
f.	You choose ATM of this bank by taking example of others.					

4. Tick to indicate the level of customer satisfaction associated with the usage of ATM services of this bank.

1=Strongly Agree, 2=Agree, 3= Neither agree nor disagree, 4=Disagree, 5=Strongly Disagree]

S.N	Usage of services	1	2	3	4	5
a.	Cash can be withdrawn at any time from any ATM outlet.					
b.	By using ATM, current balance in your account can be inquired.					
c.	By using ATM, current balance in your account can be inquired.					
e.	It is safe means to make fund transfer.					
f.	By using ATM, you can make utility payments.					

5. Tick to indicate the level of customer satisfaction associated with the post purchase behavior.

[1 =Strongly Agree, 2=Agree, 3=Neither agree nor disagree, 4=Disagree, 5=Strongly Disagree]

S.N	Post purchase behavior	1	2	3	4	5
a.	I would like to enjoy the particular privileges from ATM facilities provided by this bank that I would not get elsewhere.					
b.	I would be a loyal customer of this bank.					
c.	I would like to continue to use this ATM in future.					
d.	I would recommend others to use my bank's ATM service.					

6. Tick to indicate the level of customer satisfaction associated with the post purchase behavior.

[1=Strongly Agree, 2=Agree, 3= Neither agree nor disagree, 4=Disagree, 5=Strongly Disagree]

S.N	Customer satisfaction	1	2	3	4	5
a.	I am satisfied with ATM service provided by the bank.					
b.	I am satisfied with the physical location of ATM provided by the bank.					
c.	I am satisfied with the operating hours of ATM of the bank.					
d.	I am satisfied with the fee charged on ATM by the bank					
e.	I am satisfied with the card delivery of the bank					
f.	I am satisfied to the service quality of ATM personnel for query response and timely action on request of the bank					

Thank you for your kind information and cooperation

**FACTOR AFFECTING CUSTOMERS SATISFACTION FROM
ATM SERVICE: A CASE OF NEPALESE COMMERCIAL BANKS**

A Thesis Proposal

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INTRODUCTION

1. Background of the study

Technology is revolutionizing the financial services industry through various unthinkable innovations. The volume of cross-border trading and other financial activities is increasing geometrically facilitated by technology. The influence of technology over product innovations in banks is enormous. In innovation process, banks have to decide which products banks constraints wish to sell, whether banks wish to build those products themselves, how banks should deliver, and why banks wish to deliver those products to customers (Raihan et al. 2001). Innovation is the art of overcoming toward development. It occurs when a new or changed product or service is introduced to the market, or when a new or changed process is used in a commercial situation. No organization can remain happy with the existing products to cope with the competitors. Banks are no exception to this situation (Shahid, 2004).

Customer satisfaction is a measure of how products and services supplied by a company meet customer expectation. In order words, Customer satisfaction is a highly personal assessment that is greatly influenced by individual expectations. Those who buy the goods or services provided by companies are customers. In other words, a customer is stakeholder of an organization who provides payment in exchange for the offer provided to him/her by the organization with the aim of fulfilling a need and to maximize satisfaction. When a customer is contented with either the product or services it is termed satisfaction. Satisfaction can also be a person's feeling of pleasure or disappointment that results from comparing a product's perceived performance or outcome with their expectations. Customer satisfaction is the outcome felt by buyers who have expectation. Customers are satisfied when their expectations are met and delighted when their expectations are exceeded (Kotler, 2001).

ATM is an electronic device which allows a bank's customers to make cash withdrawals and check their account balances at any time without the need for a human teller. Many ATMs also allow people to deposit cash or cheque, transfer money between their bank accounts or even pay utility bills. ATM is an electronic banking outlet which allows customers to complete basic transactions without the aid of a branch representative or teller. ATM refers to a machine that acts as a bank teller by receiving

and issuing money to and from the ATM account holders. The evolution of ATM was not in isolation, rather as a result of the general globe wave in the technological revolution. This came due to the need to respond to the challenge of the multiple bank of daily complex information that arises from among others; increase in competition, increased customer demand for both service provision as well as efficiency, expansion due to the increase in demand for services etc. Thus it saw a huge improvement in the long queuing in most banking halls (Chang et al. 2010).

The present empirical study focuses on identifying key factors that have influences customers satisfaction in ATM service provided by public and private sector banks. For the purpose of the study primary data were collected using schedule and collected data from March to November 2010. Results of factor analysis, correlation and regression analysis show that a cost effectiveness, easy to use and security and responsiveness in ATM service were most important factors in customer satisfaction.

2. Problem statement and research questions

Commercial banking has never been more important to the society than it is today. Bill Gates (2008) announced that “banking is essential, banks are not”. This quotation means that the traditional banking is going to vanish in order to be surrogated by electronic banking which continues to attract new users. Banks, like other service organizations, strive to improve customer service level and tie their customers closer (Graven, 2000). In the last decades, commercial banks in developing countries have been faced with a number of fundamental changes, different forms of government intervention, tighter business competition, more demanding customers, increasing cost of developing new financial products and services, and recent mergers and acquisition of financial firms which have affected their operational capacities (Akamavi, 2005).

The introduction of ATM cards brought up dramatic changes in withdrawing money in Nepal also. The country has witness a rapid growth in banking transaction with the introduction and diffusion of information and telecommunication technologies in its banking sector. Nepalese commercial banks are increasing their technology-based services day by day. Customers have to consider several factors before adopting ATM card. One of the views is that, it may not have really created customer satisfaction for bank clients, and other is that, it may have. Despite of all the merits of ATMs, customers still complaint of shortfalls on the use of the system such as; break downs of ATMs,

long queues at ATM service points, retention of customer cards, limited knowledge on these of ATM cards, fraudulent transactions and its operation in just few languages (Khan, 2010).

Nepalese commercial banks have adopted the use of ATMs as a way of providing efficient and effective services to their customers. Baten and Kamil (2010) mentioned that ATMs are the most popular electronic delivery channel for banking services in Nepal. Number of ATM cardholders is increasing and is expected to increase much more in Nepal (Bhatta, 2011). This study is conducted to analyze the factors affecting customer satisfaction from ATM services in Nepalese commercial banking sector.

The study deals with the following issues:

- i. Does reasonability of fee charged on ATM affect the level of customer satisfaction?
- ii. There is any relationship between choice of ATM and customer satisfaction or not?
- iii. What is the relationship between usage of ATM services and customer satisfaction in Nepalese banking sector?
- iv. Are there any impacts of ATM on customer satisfaction by appraising the frequency of problems faced while using ATM by the customers?
- v. Is there any relationship between the post purchase behavior and customers satisfaction regarding the ATM service of different banks?

3. Objectives of the study

The major objective of the study is to examine the factors affecting on customer satisfaction from ATM services in Nepalese commercial banks. The specific objectives are as follows:

- i. To examine the impact of the reasonability of fees charged on customer satisfaction.
- ii. To examine the factors affecting the customer satisfaction level from choices of ATM.
- iii. To determine the factors affecting customer satisfaction from the usage of ATM services.

- iv. To ascertain the impact of ATM on customer satisfaction by appraising the problems faced by the customers while making ATM transactions.
- v. To identify the relationship between post purchase behavior and customer satisfaction regarding ATM services provided by different banks under the study.

4. Conceptual framework

The conceptual framework is designed to understand the factor that may affect the customer satisfaction. In view of theory and major empirical evidences, it is expected that the customer satisfaction of commercial banks may be influenced by reasonability of fee charged, frequency of problem faced, and choices of ATM, usage service, and post- purchase behavior. The conceptual framework developed to test the effect of these variables on the customer satisfaction of listed commercial banks of Nepal in this study is portrayed in Figure 1.

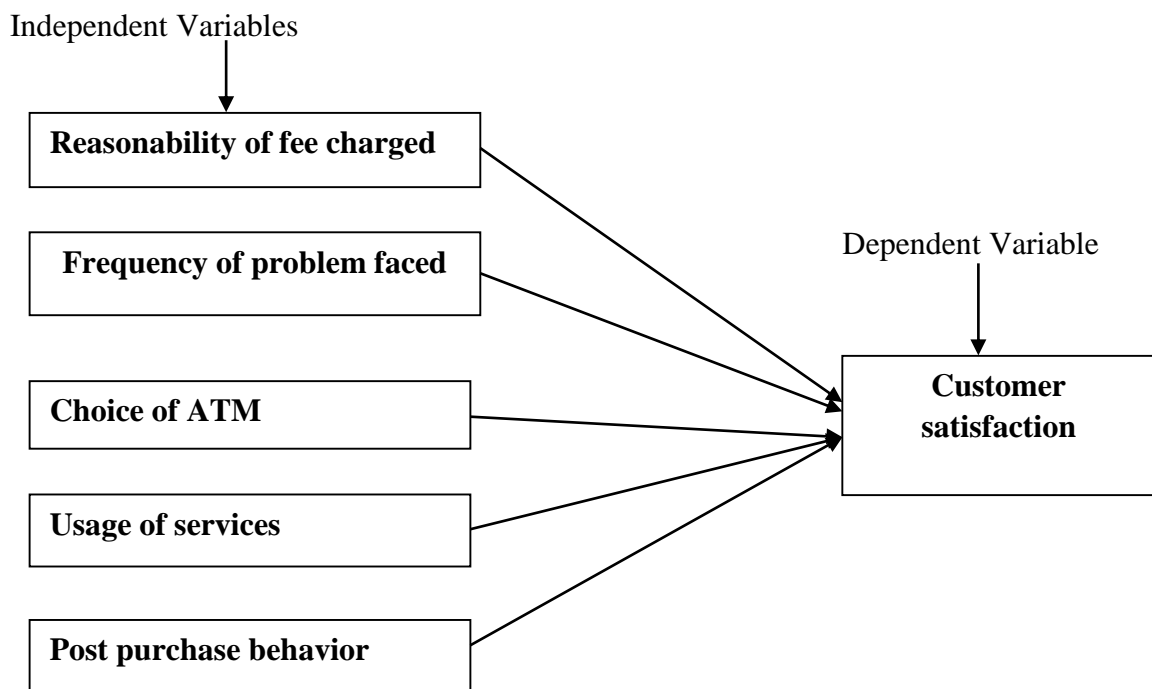


Figure: - 1 Conceptual Framework

5. Rationale of the study

This study is significant for the reason that it is expected to provide some practical insight regarding ATM service as a customer service delivery tool. Moreover, this study is expected to provide some important knowledge about the factor's affecting on customer satisfaction from ATM services in Nepalese commercial banks. This study

also helps to know about the current situation of ATM service quality and customer satisfaction. This study is expected to help the banking sector to assess the impact of ATM on customer satisfaction and to know how they can improve their service through the use of ATM.

Further, this study focus on analyzing the various factors such as identifying the factors affecting on customer satisfaction from ATM services, understanding the factors that drives higher level of customer satisfaction and analyzing the relationship between of customer satisfaction with fee charged, problem faced, choice of ATM, usage of services and post purchase behavior. Hence, this study will help banking sector on how they can improve service delivery through the use of ATM. Also, customers who wish to use ATM service to carry out their banking transaction will get some valuable knowledge from this study.

6. Limitations of the study

We tried to make a research perfect, solution oriented ,meaningful and result oriented, although some factor plays the vital role, due this phenomenon our research is not validate all areas .In this research also there is some limitation.

- i. This study is based on some selected branches of commercial bank and specific geographical region
- ii. The study is based on Primary Data. So the validity of the data depends upon their sources.
- iii. Finding solution may not applicable for all areas.
- iv. Research based on data that collected different Questionnaire technique not application for diversify customers.
- v. Calculated methods used for this research may not globally accepted methods.

7. Literature review

A literature review is a concise overview of what has been studied, argued and established about a topic. It also entails about the major findings as well as reviewing the tools and techniques used by the previous studies.

A literature review creates a "landscape" for the reader. After review of some research topic some scholar's research which is relevant to factor affecting customer satisfaction from ATM service of Nepalese commercial bank which are as follows

- i. Factors Affecting On Customers Satisfaction: An Empirical Investigation on ATM Services by Vijay. M. Kumbhar
- ii. Impact of ATM Banking Performance on Customer Satisfaction with Bank in Malwai by Charles Mwastika
- iii. Perception of Bank Customer about Automated Teller Machine(ATM) service quality by Amar Dhungel, Bandodita Acharya, Kshitiz Upadhyay Dhungel

In Research article name as **“Impact of ATM Banking Performance on Customer Satisfaction with the Bank in Malawi Charles Mwatsika”** In this study 352 responses were involved in the assessment of the impact of ATM banking performance on customer satisfaction with banks. The study was a regression analysis where participants rated their perceptions on the performance and satisfaction with ATM banking on a multidimensional and multi-attribute measurement scale. The attributes were specific to ATM banking and were adopted from empirical researches. A regression analysis was then conducted between satisfaction with ATM banking and satisfaction with the bank. The results of the analysis have found that satisfaction with ATM banking explains 40 percent of customer satisfaction with the bank in other words ATM banking has 40 percent predictive capability of customer satisfaction with the bank. This result condenses the importance of ATM banking behind branch banking. However follow up questions on the respondents' likelihood to switch banks due to poor ATM banking and the prospect of recommending their bank on the basis of ATM banking performance show the weakness of ATM banking in attracting customers to switch banks. The study found that the majority of the respondents would not switch banks despite poor ATM banking and would still recommend their bank despite poor ATM banking. The results first supported the research hypothesis that ATM banking has a positive relationship with satisfaction with bank by finding that the relationship is indeed positive and statistically significant. However, the results reveal that investment in ATM banking would only be ideal for improvement in bank customer satisfaction but strategies to lure customers from rival banks to switch banks should come from other strategic marketing alternatives.

In Research article name as “**Perception of bank customers about the Automated Teller machine service quality**” by Amar Dhungel, Banodita Acharya and Kshitiz Upadhyay Dhungel was reveal the truth that the people living in urban areas are more engage in ATM services so young and educated people more comfortable for ATM services, they need more ATM layout in more areas. Beside that people living rural areas, uneducated, old, retired not more engage for ATM services so they need some strategy to motivate non users through awareness, education, demonstrating the function of ATM. Researcher also reveal the truth that cost factor, comparison to ATM other related service is more expansive.

In Research article name as “**Factors affecting on customers’ satisfaction: empirical investigation of ATM service vijay m. Kumbhar**” customer satisfaction in service industry evident that service quality is a more specific judgments which can lead to a broad evaluation of customer satisfaction. The empirical study focuses on identifying key factors that have influences customers satisfaction in ATM service provided by public and private sector banks, Results of factor analysis, correlation and regression analysis show that a cost effectiveness, easy to use and security and responsiveness in ATM service were most important factors in customer satisfaction. Overall results shows that cost effectiveness of ATM service were Core service quality dimension and it were significantly affecting on overall customer satisfaction in ATM service provided by commercial banks. However, result of factor analysis indicates that cost effectiveness, easy to use and security & responsiveness were influence customer satisfaction at 36% variance. Therefore, banks should concentrate their efforts on these dimensions for cater better ATM service to satisfy their customers.

8. Research methodology

8.1 Research design

Research design refers to the definite procedure and techniques which guides to study and provide ways for research viability. It is arrangements for collection and analysis of data. A plan of study or blue print for study that presents a series of guide posts to enable the researcher to progress in the right direction in order to achieve the goal is called a research design or strategy. The descriptive research design has been adopted for fact finding and searching adequate information about factor affecting customer satisfaction from ATM services. Correlational research design has also been adopted in

this study which seeks to find cause and effect relationships between independent and dependent variables after an action or event has already occurred.

8.2 Population and sample

Population refers to the entire group of people, events or things of interest that investigator wishes to investigate. The population of the study consists of all ATM users of Nepalese commercial banks. As Kathmandu is the economic capital of Nepal where all most all of the commercial banks has its presence here, Kathmandu valley has been taken for the study. In the study the development bank, finance companies and micro credit institution are excluded and only commercial banks are taken as a sample.

S.N	Name of Banks
1	Global IME
2	Everest Bank
3	Siddhartha Bank Ltd.
4	NIC Asia
5	SBI

The above table shows the sample of 5 commercial banks which were taken out of 27 commercial banks of Nepal .220 questionnaires will be distributed to the respondents for analyzing the relationship between the factors from ATM services and customer satisfaction.

8.3 Sources of data

The primary source of data is used to assess the opinion of respondents with respect to factors from ATM services and customer satisfaction in Nepalese commercial banks. To achieve the purpose of the study, structured questionnaire is prepared. The questionnaire is formulated out of the concepts that were raised in the review of the literature.

8.4 Data collection & processing procedure

As the study is based on primary data, primary data will be collected through questionnaire, direct interview, social polls, and using different banks site, Article of

different bankers and financial stakeholders. Some statistical tools and formula, pie chart, bar-graph will be used for processing data.

8.5 Data analysis tools and techniques

Several tools will use to analyze the data that was collected for research .For easy visualization graphical presentation and figure will more meaningful. Statistical formula and tools have been used for this research.

- i. Average/ Mean
- ii. Standard Deviation
- iii. Coefficient of Variance
- iv. Correlation Coefficient etc.

Beside that using different graphical methods like bar graph, pie chart, flow chart also will use for data analysis.

9. Chapter plan

Research paper will follow this standard format before compiling the result.

Chapter 1: Introduction

The first chapter is the introductory part. This chapter describes the general background, statement of the problem and research questions, objectives, Significance and limitations of the study.

Chapter 2: Review of the Literature

This chapter includes a discussion on the conceptual framework and review of the related and pertinent literature available. The conceptual considerations and review of related literature conducted in this chapter provides a framework with the help of which the study has been accomplished.

Chapter 3: Research methodology.

This third chapter describes the research methodology employed in the study. In this chapter, research design, nature and sources of data, methods of data collection and tools and techniques of data analysis are discussed.

Chapter 4: Data presentation and analysis.

This fourth chapter consists of presentation and analysis of data, which deals with the empirical analysis of the study and the major findings of the study.

Chapter 5: Summary, conclusion & implications.

This chapter concludes the research with necessary summary, conclusion and implication of the study.

References:

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