

**ELECTRONIC BANKING AND CUSTOMER SATISFACTION IN
DHANGADHI**

A Dissertation submitted to the Office of the Dean, Faculty of Management in
partial fulfillment 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 “**Electronic Banking and Customer Satisfaction in Dhangadhi**”. 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 acknowledge. In addition, I declare that all information sources and literature used are cited in the reference section of the dissertation.

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Report of Research Committee

Mr. Ramesh Padal has defended research proposal entitled “**Electronic Banking and Customer Satisfaction in Dhangadhi.**” successfully. The research committee has registered the dissertation for further progress. It is recommended to carry out the work as per suggestions and guidance of supervisor Lecturer Phul Prasad Subedi and submit the thesis for evaluation and viva voce examination.

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ABBREVIATIONS

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
CCS	Credit Card Services
CS	Customer Satisfaction
DB	Electronic banking
DBS	Electronic banking Services
DCS	Debit Card Services
E-banking	Electronic Banking
EBS	Electronic Banking Service
EFTPOS	Electronic Fund Transfer at Point of Sale (EFTPOS)
EFTS	Electronic Fund Transfer Services
Er	Error term
IBS	Internet Banking Services
ICT	Information and Communication Technology
IT	Information Technology
MBS	Mobile Banking Services
POS	Point Of Sale
SD	Standard Deviation
SEM	Structured Equation Modeling
Sig	Significance
SPSS	Statistical Package for Social Science
WOM	Word Of Mouth

ABSTRACT

Customer satisfaction is one of the most important factors in business. When it comes to banking industry, customer satisfaction level differentiate one electronic banking service from another, thus measuring customer satisfaction is exceedingly important. In today's e-commerce economy, where innovation likely to offer merely a fleeting advantage, satisfaction will be the sole way for a business to survive.

The main objective of the study is to examine the impact of electronic banking on customer satisfaction in Dhangadhi. The study collected primary data by using structured questionnaire techniques from 384 respondents who are enjoying Electronic banking services. The study is based on descriptive, casual comparative research design. This study used quantitative method for data collection for the purpose of analysis. Mainly structured questionnaire survey was used to generate responses based on which statistical analysis is done to test hypothesis. The questionnaire was self-administered. The sampling technique for the study followed non probabilistic sampling technique, i.e. convenience sampling. Customer satisfaction is considered as dependent variables whereas electronic banking instruments are considered as independent variables and their correlation and regression was generated from SPSS and analyzed.

The results highlighted some important aspects regarding electronic banking in Dhangadhi. The majority of the government employees of Dhangadhi sub-Metropolitan are using electronic banking services, have some level of knowledge about electronic banking provided by their bank. Most of the government employees are satisfied with the Electronic banking services that provided by the bank. Further, the major prospect and challenge related to the electronic banking are quickness and service error respectively. Study concluded that there was a statistically significant relationship between the electronic banking and the customers' satisfaction so the Electronic banking services can increase or decrease the satisfaction level of customers'.

Keyword: *Electronic Banking, Customers Satisfaction, ATM, Mobile Banking Services, Internet Banking Services, Electronic Fund Transfer Services, Debit Card Services, Credit Card Services.*

CHAPTER I

INTRODUCTION

1.1 Background of the study

The banking industry has been continuously upgrading its operation by making use of technology. With the advancement of this technology, banks have implemented various systems to carry banking transactions easily and quickly (Singh, 2020). Banking sectors in most developed countries have pioneered the area of e-services and have been actively involved in its continuous improvement. The objective was to try to meet the ever-changing needs and lifestyles of modern clients. The Nepalese banking sector, core of the Nepalese economy, has been witnessing unprecedented growth, especially with regard to electronic services. Indeed, Nepalese banks are strategically using advancements in E-Banking services for retaining and attracting clients, and are therefore making large investments in implementing the latest E-Banking strategies to maintain and augment their competitive advantage.

Technology has succeeded in making various aspects of life easier for the societies of today. More importantly; it has become a fundamental element in improving the quality of services in general and E-Banking services in particular. E-Banking service is said to rely on the exchange of information between customers and providers using technological methods devoid of face-to-face interaction. Service quality aims to serve the customers in a better way such that customer need is satisfied besides customer to attain complete satisfaction while using a particular service (Parajuli, 2018).

In marketing term, customer satisfaction is described as a measure on how services or products supplied by the organizations meet customers' expectation. The awareness of customers in service industries about quality has been increased. The excellent service quality increases the productivity, market share, return on investment, and customer satisfaction. Nowadays the quality has gained more importance through the customer satisfaction (Alabsy, 2018).

The customer has a certain set of attributes in his mind with respect to a product or service. As the customers use the service he compares it with the attributes which already exists in his mind. This comparison is basically the measurement of service quality. A customer tries to match his expectation from the services with already

existing attributes in his mind. If the service quality is better than expected the customer is fully satisfied (Sharma, 2020).

The contemporary world is faced by a rapid development in technology; such advancement has introduced a number of new systems in all the aspect of life and the economy in general. Science has lately joined the world through the use of internet systems which were in the early 20th century used for mail communication and advertisement plans by several companies in the world. The 21st Century, shaped by the Technological Revolution, is the age of globalization. The Internet massively impacts all aspects of business. In the 21st century, electronic business is no longer an option for businesses; it is a need (Wisdom, 2012).

Customers are the key contributors for the success and survival of any business and this is the same for banking sector also. So, need arises not only to satisfy the customers but also to retain them because it may lead to increased profitability and better performance of banks. Technology is affecting the life of every individual in the present age and internet banking is one of the technologies which is fastest growing in banking practice now days. Moreover, customers are shifting from traditional banking to online banking very rapidly because of various benefits such as cost and time effectiveness. Technology is affecting the life of every individual both qualitatively and quantitatively in the present age. The quick expansion of information technology has imbibed into the lives of millions of people and introduced major changes in the worldwide economic and business atmosphere. Technological developments in the banking sector have speeded up communication and transactions for clients. It is defined as the provision of information or service by a bank to its customers over the internet. It is viewed as a supplemental channel used in conjunction with other channels to provide the convenience of banking anytime from one's home or work, without having to incur some of the costs associated with a branch visit like going to the branch or waiting on lines. Online banking eliminates physical and geographic boundaries and time limitations of banking services (Ayo, C.k., Oni, A.A., Adewoye, O.J. and Eweoya, I.O., 2016).

E-banking services first emerged in the early 1990's, when credit card, ATM, and telephone banking services were three major applications. During the last decade, database, information system and other technologies were applied into banking services

at different levels. After the availability of internet facility, e-banking services are now conducted through a secure website operated by local banks and includes online 2 enquiries, e-payments, e-transfer etc. There are two general business models to provide online banking facilities to its customers- First one is, incumbent bank also known as “bricks and clicks” model, applying online banking as an enhancement to its traditional banking sector and integrating branches, ATM, call centers and online service into a whole system and using e-banking as a new channel of delivering services. Whereas the another one is known as direct bank or virtual bank or internet primary bank with no branch offices but using internet, telecommunication network and wireless networking to provide banking services (Khatri, 2005).

Banks plays a vital and dynamic part in a country’s financial and economic development. The development of a country is exceptionally affected by successful banking in the different areas of the economy. With the advancement in the technology one of the latest technology adopted by the bank is the e-banking (electronic banking) (Mukherjee, 2004). The presentation of electronic banking has revolutionized and redefined the way bank operate now. E- Banking is a quick spreading service that permits clients to utilize the computer to access account specific information and potentially direct exchanges from a remote area. E- Banking channels helps bank customers to perform their financial transactions electronically over the internet through their personal computer or laptop or mobile at the time convenient to them, without having to be restricted to regular bank operating hours. E- Banking is an innovative distribution channel that offers less waiting time and higher spatial convenience than traditional branch banking with significantly lower cost structure than traditional delivery channels. E- Banking reduces not only operational cost to the bank but also leads to higher level of customer satisfaction and retention. As a result, e-banking is very attractive to banks and customers who are adopting new technologies.

Electronic banking is the use of electronic means to transfer funds directly from one account to another, rather than by cheque or cash. Through reducing banks costs, electronic banking can increase bank incomes. E- banking generally means that a home user direct dials the bank via a modern or network card logging on to the internet via an internet service provider and then going to the bank’s website before accessing the secure site via a password. At the Basel committee, E-banking is defined as the

provision of retail and small value banking products and services through electronic channels. Such products and services can include deposit taking, lending, account management, the provision of financial advice, electric bill payment and the provision of other electronic payment. E-banking offers the convenience of conducting most of the banking transactions at a time that suits the customer. The customers can access funds and transfer funds between accounts, pay bills and make purchases 24 hours a day, 7 days a week (Investopedia May, 2020).

Today's banks seem ready to provide any kind of financial services at anytime and anywhere in the world through internet technology. Now as one important step ahead towards the e-commerce, online banking or E- banking is becoming very popular in all the countries. Modern techno savvy banks are already using plastic money or emoney like credit, debit cards and ATM's since more than decade. Using computer networks and SWIFT transfer to exchange financial information across branches and banks for internet banking processing is not a new practice for most of the modern banks. Those banks are now gradually going to use this internet/ global networks as channel of providing g banking services. In addition, this new channel of electronic of online banking is known as e- banking (Amaoko, 2012).

Globalization of economies and financial liberalization within the economies has opened new opportunities of growth for technology-based institutions, while for the others these have resulted in shrinkage of revenues. The use of IT in the banking industry in our country has been somewhat limited and as a result has restricted our presence in international operations. The development of multiple channels representing electronic banking services such as SWIFT system, ATM, POS, PIN Pads, Internet banking, Mobile banking (SMS banking) and Telephone banking are 4 made for more facility in paying money, so today the development of this channels is one of the most competitive areas between banks for attracting resources (Khatri, 2013).

With the establishment of Nepal Bank Limited in 1937, banking sector and its customers had to wait for 65 years to use the E-banking service in Nepal (around 2002 A.D.). Still e-banking is not yet popular among the customers who live in rural areas in Nepal. Hence, this research focuses on the Impact of Electronic Banking on Customer Satisfaction and Service Delivery of Nepalese Commercial Banks. In addition, it focuses future prospective of e-banking in the context of Nepalese Commercial Banks.

But in the current scenario, almost every bank in Nepal has the electronic banking facility. Moreover, these banks are extending their presence in rural areas also to lure more customers by educating them with new advancement in information technology (Mishra, 2008).

Till mid July 2020, A,B, and C class BFIs have opened in total of 4106 ATMs which commercial banks occupy 3759 ATMs .The number of mobile banking users have surged rapidly in recent times. Altogether 1.13 crores customers are currently taking banking services through the use of mobile banking. Likewise, 10.31 lakh users are involved in the internet banking service. Whereas the 73.29 lakh customers are the users of the debit cards while 1.60 lakh bank customers use the credit card. Similarly,63775 customers are involved in the usage of prepaid cards (Investopaper, 2021).

1.2 Problem statement

Financial institutions are rapidly advancing their e-banking for the make easier transactions. Look just few years back in Nepal only few banks were using it because some bank had not the strong security or some had not believed in electronic banking. Those who had taken the good decision about e-banking they are now became popular banks in Nepal and who hadn't taken right decision at right time they are not in trends. Electronic banking is spreading day by day in Nepal as well as in the world. At past, people had bad rumors about internet banking like, the system might be hacked any time because it is operated by the system. In the established period banks are suffered from some problems like fund transfer delay, loading page, system error, hard to generalize in market etc. Though people were ignoring it banks are not gave up, so the result came as positive. Now, almost all customers are willing to make transactions via e-banking (Khatri, 2013).

Market of goods and services and other utility has been accepting the electronic billing system and also accepting the e-banking transactions i.e. Nepal Electricity Authority, Nepal water supply, Public Service Commission, Insurance companies and so on. Many of supermarket, business complex (Bhat Bhateni Supermarket, Big Mart and so on) even a small retailers also using e-banking. Establishing the e-wallet (Digital Wallet) also helping to generalize the e-banking in the market in these days like Esewa, Khalti, IME pay (kathmandupost, 2020).

Banks and financial institutions are offering such e-banking and customers are convinced by their own way and using it. Though people are using it, there is may occurs some issues & obstacles. Either customers are not getting the direct support from the financial institutions or they are not satisfied with the provided services (Ahmad, 2011).

In this twenty first century all the people are engaging in different sector. They may not be able to do manual banking transaction from branch visit due to their busy schedule of work so they are compelled to use e-banking for quick, secure and low cost transactions. However, Nepal is developing country and there may not be sufficiently access of internet to use it. Though they have an access of internet, they may have a fear about security and confidential documents (Awan, 2020).

This study helps to find out the satisfaction level of the e-banking users in dhangadhi by using the likert scale method. In these days the people are massively using the internet banking and mobile banking but no one have keen to know about the costumers satisfactions. People may have the issue about annual charge, providing service options; renew process, direct support and so on (Singh,2020). This survey helps to know about it deeply.

This study has addressed the following research questions.

- (i) What is the present pattern of using e-banking?
- (ii) Is there any significant relationship between e-banking services and customer satisfaction?

1.3 Objectives of the study

The main objectives of the study rest upon the examination and analysis of e-banking services and its impact on customers satisfaction. More over the study has specified the following objectives:

- (i) To analyze the present pattern of using e-banking.
- (ii) To examine the impact of e-banking services on customer satisfaction.

1.4 Research hypothesis

Research hypothesis In addition to answering the research questions the study tested the following hypothesis.

- H₁: There is significant relationship between Automated Teller Machine (ATM) and customers' satisfaction.
- H₂: There is significant relationship between Internet Banking and customers' satisfaction.
- H₃: There is significant relationship between Mobile Banking and customers' satisfaction.
- H₄: There is significant relationship between Debit card services and Customers' satisfaction.
- H₅: There is significant relationship between Credit Card services and customers satisfaction.
- H₆: There is significant relationship between Electronic Fund Transfer and customers' satisfaction.

1.5 Significance of the study

This study contributes to knowledge and serves as source of reference in the academia. For this future researcher can read the methodology as well as the findings of this study. The utilization of Information and Communication Technology (ICT) in the banking industry has affected service delivery as well as the bank's profits. Many banks are moving gradually from the traditional way of banking and are gradually introducing ICT into their service delivery. At present, the commercial banks are gaining a wide popularity within and outside the country through their efficient management and professional services and playing an eminent role in the economy. E-banking is one of the main services provided by the commercial banks and other financial institutions where the whole bank is rested upon. Study on E-banking of commercial bank carries a great significance and importance to various groups.

Most of the Nepalese people are still not aware about the E-banking or online banking transactions; this study will help them to get the concept of internet services available to them. Today most of the parts of the world's economy depend upon financial institutions, which cannot survive without the support of IT. Therefore, this study will provide a useful feedback to the IT policy maker for the bank and becomes a useful

reference for other commercial banks for the formulation of appropriate strategies. The study will be very significant to those students and scholars who wish to make further research on the subject. The outcome of this study will provide evidence for other banks to improve upon their electronic banking services so that prospective customers will have better experiences with the service and hence the bank's profit will be affected through the revenue generated.

As a conclusion, The study will be significant for the all stakeholders; Businessman, Debtors, Creditors , Students, law and Policy makers , government , Job holders & etc. Especially this study elaborates the significance of e-banking to the government employees who are spending their day time in the office and make transactions from the e-banking instruments. Adopting the new technology is not mean that they are satisfied because they may have an obligation.

1.6 Limitations of the study

This study is required for the partial fulfillment of MBS Degree. Hence, it is subject to some limitations, which affect the studies, and those limitations are given below:

- (i) The basic limitation of this study is that it only considers customers perspective of e-banking and it does not take in to consideration what perspective do all bankers employees have on the technology.
- (ii) It does not include bank customers who do not use the current e-banking which would help to compare the attitude of e-banking users and nonusers towards e-banking.
- (iii)It is also limited to banks customers only that started e-banking service it doesn't fully cover those which do not start it.
- (iv)The study only covers e-banking and its customer's satisfaction in Dhangadhi sub metro politian
- (v) The study only collects the data of government employees who have been using e-banking services and whose working area is Dhangadhi.
- (vi)In Nepal, there are limited numbers of literature about this type of study.

1.7 Chapter plan

A chapter plan is an outline that helps us to organize material in a way that is easy to comprehend. It can be a very useful tool in helping to find the main points of the chapter. This report has been divided into five chapters.

Chapter I: Introduction

Chapter one gives detail about the study area and the concept note about the research problem under study. It includes background of the study, problem statement, objectives, operational definitions, significance of the study, limitations and the conceptual frame work.

Chapter II: Literature Review

Review of literature gives the investigator a thorough and profound knowledge of the research topic. It provides guidelines to use statistical methods for analysis of collected data.

Chapter III: Research Methodology

This chapter discusses in detail the research methodology applied in the context of this study. It includes research design, data sources, variables, population, sample and sampling techniques, research tools and techniques and plan for data analysis.

Chapter IV: Results

Data analysis includes tabulation, coding and classification of the data gathered in accordance with the research design, to perform quantitative and qualitative analysis. The details about the analysis and interpretation of the findings are described here.

Chapter V: Conclusion

This chapter presents the brief background of the study, objectives, literature review and methodologies. Major findings are summarized. Conclusion includes theorization based on findings and, finally, the recommendations based on those findings are stated. Reference & Appendix have also been incorporated at the end of the study.

CHAPTER II

REVIEW OF LITERATURE

In this chapter, the related article, books, research paper and previous researches similar to the research topic of this study have been reviewed and presented. The related e-banking service delivery and its impact on customer satisfaction are reviewed and presented.

2.1 Theoretical review

2.1.1 Theory of reasoned action

Theory of Reasoned Action, (TRA) was developed to better understand relationships between attitudes, intentions and behaviors. This is one of the most important theories that are used to explain human behaviors. Behavioral intention to use technology is explained by people's attitudes toward that behavior and subjective norms. Intensified competition and deregulation has led many services and retail businesses to seek profitable ways to differentiate them; one strategy that has been related to success in these businesses is the delivery of high service quality (Caruana, 2011). So service quality has become a significant research topic in past decade due to high revenues, increased cross sell ratios, higher customer retention, purchasing behaviors (Kaynak, 2015) and expanded market share. The significance of customer service in the banking sector came to force to compete in a market driven environment. The service sector as a whole is very heterogeneous and what is heterogeneous may hold true for one service and may not hold for another service sector. Due to this differentiation, services in this industry could not be standardized, moreover these services are intangible in nature which could not be compared or seen. The concept of customer satisfaction and service quality is interrelated with each other.

As electronic banking is becoming more prevalent, so is the level of customer service delivery thus the level of customer satisfaction is also changing the scenario of technological environment (Hamisah, 2013). Informational technology in form of e-banking plays a significant role in providing better services at lower cost. Increase satisfaction in turn increases the mutual understanding, customer retention and a bond of trust between customer and bank. The banks which are providing these services at large extent to customers are more reputed in the eyes of customers. As the customer

satisfaction is the function of customer expectation level and service quality level provided by the organization, e-banking plays a pivotal role in giving satisfaction to the customers because e-banking fills the gap between the expected and perceived service quality.

2.1.2 Planned behavior theory

As the other important foundation of this study, the theory of planned behavior (TPB, Ajzen 1988, 1991) is a parsimonious model to explain human behavior, which is widely applied in a variety of fields including health, marketing, education, etc. The central idea behind the TPB is that a person's actual behavior is immediately determined by the behavioral intention, which is a function of three constructs, i.e., attitude, subjective norm and perceived behavioral control.

Specifically speaking, behavioral intention is a measure of the strength of individual's willingness to perform certain behavior (Ajzen 1991). By definition, attitude is a reflection of a person's evaluative reaction towards performing a particular behavior, e.g., happy or sad, favorable or unfavorable, useless or useful. The more positive attitude individuals have, the stronger their intention to conduct a certain behavior (Beck and Ajzen 1991). Subjective norm (SN) refers to "the perceived social pressure to perform or not to perform the behavior" (Ajzen 1991), which is related to the perception of the expectations from important others. It has been proved that subjective norm positively affects behavioral intention (see, e.g., Castanier et al. 2013; Wang et al. 2016). Regarding the perceived behavioral control (PBC), it was added to the initial theory of reasoned action (Ajzen and Fishbein 1980; Fishbein and Ajzen 1975), and reflects the extent to which a person perceives the constraints and his/her capacities over the target behavior. Simply speaking, it is defined as the degree of ease or difficulty to perform the behavior as being perceived by an individual (Ajzen 1991). Taking the transport mode choice as an example, individuals are more intentional to travel by a particular mode if they have some positive evaluations towards it, perceive higher degree of social pressure to use it, and are certain that they have the necessary skill. Besides, when perceived behavioral control matches the actual behavioral control, it also exerts a direct influence on behavior (Ajzen 1991).

2.1.3 Technology acceptance model

The Technology Acceptance Model proposed by (Bagozzi, Davis and Warshaw, 1992) appears to be the most widely used innovation adoption model. This model has been used in a variety of studies to explore the factors affecting individual's use of new technology. The sequential relationship of belief–attitude–intention– behavior in TAM enables us to predict the use of new technologies by users. In fact, TAM is an adaptation of Theory of Reasoned Action (TRA) in regard to information systems which notes that perceived usefulness and perceived ease of use determine an individual's attitudes towards their intention to use an innovation with the intention serving as a mediator to the actual use of the system. Perceived usefulness is also considered to be affected directly by perceived ease of use.

2.1.4 Disconfirmation theory

Disconfirmation theory argues that, satisfaction is related to the size and direction of the disconfirmation experience that occurs as a result of comparing service performance against expectations. Szymanski and Henard (2001) found in the meta analysis that the disconfirmation paradigm is the best predictor of customer satisfaction (Gardachew, 2010). Fang, Tian, and Tice (2010) cite Oliver's updated definition on the disconfirmation theory, which stated Satisfaction is the guest's fulfillment response. It is a judgment that a product or service feature, or the product or service itself, provided (or is providing) a pleasurable level of consumption-related fulfillment, including levels of under- or over-fulfillment.

2.1.5 Contrast theory

Contrast theory was first introduced by Hovland, Harvey and Sherif (1987). Dawes (1972) define contrast theory as the tendency to magnify the discrepancy between one's own attitudes and the attitudes represented by opinion statements. Contrast theory presents an alternative view of the consumer post-usage evaluation process than was presented in assimilation theory in that post-usage evaluations lead to results in opposite predictions for the effects of expectations on satisfaction. Through the introduction of automated teller machines, customers are able to access funds in their accounts ore conveniently and at any one time as compared to the old system where money could only be withdrawn on the counter. A bank seeking to increase customer satisfaction

must invest heavily in the ATM networks or join the existing local or international networks such as visa card or master card.

While assimilation theory posits that consumers will seek to minimize the discrepancy between expectation and performance, contrast theory holds that a surprise effect occurs leading to the discrepancy being magnified or exaggerated. According to the contrast theory, any discrepancy of experience from expectations was exaggerated in the direction of discrepancy. If the firm raises expectations in his advertising, and then a customer's experience is only slightly less than that promised, the product/service would be rejected as totally un-satisfactory. Conversely, under promising in advertising and over-delivering will cause positive disconfirmation also to be exaggerated. In line with this theory, commercial banks must continue to bring in new products that increase customer satisfaction and at the same time keep up with market standards.

2.1.6 Innovation diffusion theory

Introduced in 1962, the Innovation Diffusion Theory was fine-tuned by Rogers (1995). Innovation diffusion theory focuses on understanding how, why and at what rate innovative ideas and technologies spread in a social system (Rogers, 1962). In terms of the theories of change, Innovation Diffusion theory takes a contrary approach to study changes. Instead of focusing on persuading individuals to change, it sees change as being primarily about the evolution or "reinvention" of products and behaviors so they become better fits for the needs of individuals and groups.

In diffusion of innovations, it is not people who change, but the innovations themselves (Les Robinson, 2009). On the other hand, diffusion is the process by which an innovation is communicated through certain channels over time among the members of a social system (Rogers, 2003). Fichman (2000) defines diffusion as the process by which a technology spreads across a population of organizations. The concept of diffusion of innovations usually refers to the spread of ideas from one society to another or from a focus or institution within a society to other parts of that society (Rogers, 1962). The whole theory of Innovation Diffusion can be divided into four main elements (Ismail Sahin, 2006).

2.1.7 Customer satisfaction theory

The customer satisfaction theory Travelers usually demand higher service quality when choosing their transport modes. The perceived service quality—customer satisfaction—behavioral intention structure has been extensively applied in the case of various kinds of public transit services, e.g., the city bus service of the Taipei metropolitan area (Jen and Hu 2003), the para-transit service in Bandung, Indonesia (Joewono and Kubota 2007), and a light rail transit service in the Metro of Seville, Spain (de On~a et al. 2015).

Service quality and customer satisfaction seem to be very similar concepts in customers' minds, but they are significantly different (Cronin and Taylor 1992). Service quality is a specific measure of the extent to which the service provided meets customers' expectations (Joewono and Kubota 2007), and satisfaction is an overall affective response to the perceived discrepancy between prior expectation and perceived performance (Oliver 1980, 1999). As confirmed by existing studies, the perception of service quality has positive effects on both customer satisfaction and behavioral intention (de On~a et al. 2015; Oliver 1997), while as an ex post cognition, satisfaction is positively associated with the behavioral criteria of intention and actual behavior (Wen et al. 2005; Fornell et al. 1996). The intimate relations between satisfaction and intention could also be reflected by the fact that some scholars used items related to "behavioral tendency", which assess respondent's inclination to repeat specific behavior, as measures of satisfaction (e.g., Robinson 1971; Westbrook and Oliver 1981). Though these measures did not involve an estimation of satisfaction per se, they provide certain support to the relations between satisfaction and intention. Thus, customers who perceive a higher level of service quality are more likely to be positively satisfied and/or delighted, as well as to continue the use of the service (Wong and Zhou 2006; Chou et al. 2014), while those who are satisfied with the provided service will exhibit greater intentions to continue.

2.2 Definition of electronic banking

Daniel (1999) defines electronic banking as the delivery of banks' information and services by banks to customers through different delivery channels that can be used with different electronic devices such as computer and a mobile phone with browser software, telephone or digital television.

Pikkarainen (2004) defines electronic banking as an "internet portal, by which customers can use different kinds of banking services ranging from bill payment to making investments". Apart from withdrawals of cash, electronic banking gives customers access to distinctive sorts of banking transaction just by the snap of a mouse (De. Yong, 2001). In fact the use of electronic banking as an option for the dissemination of financial institutions has turned into a competitive tool rather than only an approach to accomplish competitive advantage of preference with the appearance of globalization and fiercer rivalry. In simple words, e-banking implies provision of banking products and services through electronic delivery channels. Electronic banking has been around for quite some time in the form of automatic teller machines (ATMs) and telephone transactions. In more recent times, it has been transformed by the internet –a new delivery channel that has facilitated banking transactions for both customers and banks.

Robinson (2000) studied and believes that the supply of Electronic banking services enables banks to establish and extend their relationship with the customers. There are other numerous advantages to banks offered by electronic banking services such as customer's loyalty, market segmentations, innovation of new products and services, more effective marketing and communication at lower costs/fees.

Wise and Ali (2009) examined the many banks want to invest in EBS to reduce branch cost and fees since customers prefer to use EBS instead of a branch to transact business. The financial impact of EBS is a marginal increase in cost and fee income substantially offset by the cost of significant increases in the number of customer transactions. Thus, EBS has a significant increase in the intangible item of "Customer Service Delivery". Hence, this translates into improved customer service delivery that in result in higher customer loyalty, customer retention and growing organization value. EBS has become one of the most important factors in the business economy today, where it's lower cost/fees delivery channel and a way to increase sales in the future.

Electronic banking is a driving force that is changing the landscape of the banking industry fundamentally, in particular, towards a more competitive industry. Electronic banking has blurred the boundaries between different financial institutions, enabled new financial products and services, and made existing financial services available in different packages (Agbada, 2008).

E-banking is an umbrella term for the process by which customer may perform banking transactions electronically without visiting financial institution (John and Rotimi, 2014). Compared with traditional channels of offering banking services through physical branches, ebanking uses the Internet to deliver traditional banking services to their customers, such as of opening accounts, transferring funds, and electronic bill payment. (Woldie, 2008) defines e-banking is defined as using electronic devices like internet, wireless connection networks, ATM, phone and cell phone in banking services. E-banking is one of manifestation of information and communication revolution which makes changes in paradigm and pattern of banking and makes banking services faster, and also decreases wasting issues in the best way. E-banking is having 24-hour access to banking operations such as through an Automated Teller Machine (ATM) with Personal Identification Number (PIN) or making a direct deposit into checking or saving accounts (Akrani, 2011). Technologies has transformed the world of banking from traditional branch banking to a modern way of banking through the use of e-banking tools such as ATMs, e-utilities payments, e-loan applications among others.

“Electronic banking is the use of electronic means to transfer funds directly from one account to another, rather than by cheque or cash through reducing bank costs, electronic banking can increase bank incomes.” (Bahram Meihami, 2013) Additionally, E-banking is a general term for a process by which a customer may conveniently perform banking transactions electronically without visiting a brick and mortar institution. (Bhattacharjee, 2001) expands this definition by stating that “ebanking is as an integrated system that can provide customers flexible, convenient and inexpensive platform with integrated services of online personal banking products including online checking and saving accounts, money market accounts, certificate of deposit, credit cards, home equity loan, home mortgage, insurance, investment services, portfolio management and other related financial services”.

Nepalese banking industry has suddenly witnessed a major boom. Being a globalized market, the customers seek and demand world class products. In today’s global market, the competitive market, the competitive advantage lies in delivering high quality service to the customers. The need to achieve customer satisfaction lies in its ability to deliver better quality product to the customers, therefore customer’s satisfaction is

considered as a pre-requisite for customer retention, loyalty and convenience which ultimately helps in realizing the goals of profitability, market share, growth, return on investment productivity etc. (Business times, September 2013).

Customers in developing countries seems to keep the “technological factors” of services as the yardstick in differentiating good and bad service and the human factor the employee seems to play a lesser role in discriminating the quality of service in banks. Banking is no longer regarded as a business dealing with money transaction alone, but it also seems as a business related to information on financial transaction (Powell, 1995).

In Nepal the use of modern technology in banking system is no so old just like that in developed countries though it's becoming mushrooming so faster and emerging successful. Several innovative IT based service such as Automated Teller Machine (ATM), Internet banking, Mobile banking, Credit cards, Debit cards anywhere anytime banking have provided number of convenient services to customers so as the service quality improves (Parajuli, 2018).

Singhal (2008) defined electronic banking as the use of the internet deliver banking activities such as fund transfer, paying bills, viewing current and saving account balance, paying mortgages and purchasing financial instruments and certificate of deposits. Internet banking started with simple functions such as real time access to information about interest rate, checking account balances and computing loan eligibility. However, these services have graduated to online bill payment, transfer of funds between accounts and cash management services for corporate organizations and individuals (Khan M.S. & Mahapatra, 2009). The only way to stay connected to customers at any place and any time is through internet applications, it results in high performance in the banking industry through faster delivery of information from the customer and service provider (Williamson, 2006). In addition, e-banking is largely driven by the factors of minimizing the operating costs and maximizing operating profit, suggests (Simpson, 2002). According to (Centeno, 2004) the e-banking adoption factors are divided into two categories. 1) Factors relating to accessing technology. 2) Factors that are related to retail banking factors. The prior factors include skills on the part of consumers in using internet and other related technologies, attitudes towards technologies, internet penetration rate, Privacy and security concerns.

Timothy (2012) found that the electronic banking refers to the use of the Internet as a remote delivery channel for providing services, such as opening a deposit account, transferring funds among different accounts and electronic bill presentment and payment. This can be offered in two main ways. First, an existing bank with physical offices can establish a Website and offer these services to its customers in addition to its traditional delivery channels. Second, is to establish a virtual bank, where the computer server is housed in an office that serves as the legal address of such a bank. Virtual banks offer their customers the ability to make deposits and withdraw funds via ATMs (Automated Teller Machines) or other remote delivery channels owned by other institutions, for which a service fee is incurred. Based on this study, electronic banking can be defined as the means of transferring cash from an electronic terminal device or medium to another

2.3 Forms of electronic banking

Information Technologies (ITs) have changed the approaches to directing business exchanges and meeting the developing demands of customer for most associations. The presentation of ICT into the banking business has led to a potential increase in the customer base, reduction in exchange costs, improvement in the quality and timeliness of response, enhanced opportunities for developing and branding, facilitate self-service and service customization and improvement in customer correspondence and relationship (Garau, 2002). The normal types of electronic banking services basically include Automated Teller Machine (ATM), Electronic Fund Transfer at Point of sale (EFTPOS), Internet banking, Mobile Banking, Telephone Banking, Wide Area Network, Debit Card Service and Credit Card Services.

2.3.1 Automated teller machine (ATM)

Automated tellers imply more productivity for the bank during banking hours. ATM is a terminal conveyed by a bank or any money related establishment which empowers the clients to withdraw money, make enquiries, request bank statements etc. It saves customers time in service delivery as alternative to queuing in the bank halls, customers can invest such time saved in other productive alternatives. ATMs are cost effective way of yielding higher productivity as they achieve higher productivity per period than human tellers do. According to statistic by installing ATM devices since 1998-2004 all around the world they have an improvement rate of 45%, so it can be said that the big

achievement was in ATM installing for currency distribution around the globe. (Rose, 1999) describes ATMs as follows: “an ATM combines a computer terminal, record keeping system and cash vault in one unit, permitting customers to enter the bank’s book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank’s computerized records 24 hours a day”.

According to Loverock (2011), Automated Teller Machines (ATM) reduces the workload of bank’s staff – ATMs reduce the work pressure on bank’s staff and avoid queues in bank premises. The customer can obtain exact amount. There is no human error as far as ATMs are concerned (Pandian et al, 2011). Using ATM, a customer can withdraw cash up to a certain limit during any time of the day or night (Akrani, 2011). Based on this study, ATM is an electronic service that provides a 24 hours service to customers.

2.3.2 Electronic fund transfer

The POS system allows customers to make retail purchases with a check card. The card looks like a credit card but does not function like it. The amount purchased is transferred immediately from the account of the debit card holder to that of the store. A POS uses a debit card to activate an Electronic Fund Transfer Process. Increased banking productivity results from the uses of EFTPOS to service customers shopping 18 payment requirements instead of clerical duties in handling cheques and cash withdrawals for shopping. Furthermore, the system continues after banking hours and hence continual productivity for the bank even after banking hours. A POS is a device that installed in sale centers to remove the need to transfer the physical money and to deduct money from the buyer account and to add it to seller account. Sale center and department stores are where POS is used (Amoako, 2012).

2.3.3 Internet Banking

“Internet banking refers to the use of the internet as a delivery channel for banking services, which includes every single customary service for example, balance enquiry, statement of records, trust transfer to other records, charges payments, electronic bill presentment and payment” without going to bank (Nath, 2003). It eliminates the barriers of distance / time and provides continual productivity for the bank to unimaginable distant customers. The bank may have website to let their clients check

their account remaining, accounts flow, loan applying and ordering their exchanging through internet. It helps in transferring currency to private account or other accounts, helps to see bills in according with account, helps in ordering the bill in chronological order, it also has got bill payment availability, and also has got the availability of seeing last 30 transactions.

Arunachalam and Sivasubramanian (2007) described that Internet banking is where customer can access his or her bank account via the internet using PC or mobile phone and web-browser. Ongkasuwan and Tantichattanon (2002) defined Internet banking service as banking service that allows customers to access and perform financial transactions on their bank accounts from their computers with Internet connection. Based on this study, internet banking is defined as an electronic payment system that enables customers of a financial institution to conduct financial transactions on a website operated by the institution, such as a retail bank, virtual bank, credit union or building society. According to this study, it is an online banking that gives a 24/7 access to customers.

2.3.4 Mobile banking

Mobile banking refers to provision and accessibility of banking and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities of performing balance checks, account transactions, payments etc. via mobile device such as a mobile phone. Mobile banking today is most often performed via, SMS or the Mobile Internet but can also use special program downloaded to mobile device. Therefore, it plays a vital role to improve the productivity of bank.

Literally this is banking conducted through the use of a mobile phone. This system uses short text messaging system to inform customers of their account (Chovanova, 2006).

A mobile banking transaction can be an account inquiry that does not involve a payment such as checking account balance, checking credit limit, looking up transaction history or that involve payment transaction such as a mobile payment, a mobile purchase, a mobile money transfer (Karthikeyan et al., 2017).

2.3.5 Debit card

A Debit Card (also known as a bank card, plastic card or check card) is a plastic payment card that can be used instead of cash when making purchases. It is similar to credit card, but unlike a credit card, the money comes directly from the user's bank account when performing a transaction. Debit Card usually also allows for instant withdrawal of cash, acting as an ATM card for withdrawing cash. Merchants may also offer cashbacks facilities to customers, where a customer can withdraw cash along with their purchase. In many countries the use of debit card has become so widespread that their volumes have overtaken or entirely replaced cheques and, in some instances, cash transactions. A debit card is a more convenient way to spend money than by using cash (Ahmad, 2011).

2.3.6 Credit Ccard

A Credit Card is a payment card issued to users (cardholders) to enable the cardholder to pay a merchant for goods and services based on the cardholder's promise to the card issuer to pay them for the amounts so paid plus the other agreed charges. The credit company provider may also grant a line of credit (LOC) to the cardholder which allows the holder to borrow the money in the form of cash advance. A credit card allows you to borrow money from a bank to make purchases, whether you're buying a burger or a round-trip ticket. As long as you pay back the money you borrow within the "grace period" of 25-30 days, you don't have to pay extra. If you don't pay it back in that time period, you'll have to pay interest, a percentage of the money you owe the bank on top of what you borrowed (Solanki,2018).

2.3.7 Wide area network (WAN)

Networking of branches can be depicted as the computerization and between associating of geographically diverse stand-alone bank branches, into a framework of Wide Area Network (WAN) for making and sharing of solidified client data (Abor, 2005). It provides quick inter- branch transactions and hence the effect of time and distance are eliminated. Regardless of where a customer opened his or her accounts, he or she can access it anywhere. Based on this study, branch networking is a money transaction service whereby a customer can have access to his or her bank account any in the country or even outside countries provided that these banks are connected together in a WAN. The good example of this form in Nepal is the VISA CARDS.

2.3.8 Telephone banking

Telephone Banking (Telebanking) can be considered as a form of remote or virtual banking, which is essentially the delivery of branch financial services via telecommunication devices where the bank customers can perform retail banking transactions by dialing a touch-tone telephone or mobile communication unit, which is connected to an automated system of the bank by utilizing Automated Voice Response (AVR) technology (Balachandher et al., 2001). Based on this study, telephone banking can be defined as an e-banking transaction that can be performed by any person, day and night using his or her mobile phone.

2.4 Definition of customer

A customer is a person who maintains an account with the bank. One view of this question is that a person does not become a bank customer unless and until he opens an account with a bank (Adebayo, 2013). Based on this study, customer is defined as any person who seeks for banking services or products from the commercial banks.

2.5 E-banking service delivery and customer satisfaction

Customer satisfaction is one of the most important factors in business. When it comes to commercial banks, customer satisfaction level differentiates one bank from another, thus measuring customer satisfaction is exceedingly important (Zopounidis, 2012).

This is the reason why banks listen to customer requirements and complains. Profitable business cannot exist without satisfied customers, especially in service oriented industries.

In this competitive arena, in order to sustain the growth and increase the market share, an organization should aim at satisfying the customer. In today's e-commerce economy, where innovation likely to offer merely a fleeting advantage, satisfaction will be the sole way for a business to survive (Duane, 2003).

Avashthi (2001-01) analyzed in their study that advancement in technology are set to change the face of the banking business. Technology has transformed the delivery channels by banks in retail banking. It has additionally impacted the markets of banks. The study additionally explored the challenges that the banking business and its regulator face. The revolution of information technology has brought about fundamental transformation in the banking industry. Perhaps no other sector has been

affected by advances in technology as much as the banking sector. It has the most important factor for dealing with the intensifying competition and the rapid proliferation of financial innovations. Thus the service delivery of banking industry has changed from traditional branch banking to electronic banking services.

Parasuraman A.Z. (1985) highlighted the main requirements for delivering high services in order of their importance as follows: According to them, the service delivery must be reliable to the customer. They defined reliability as the ability to perform the promised service dependably and accurately. The second key requirement for service delivery is the concept of responsiveness which is the willingness to help customers and to provide prompt services. The third variable according to them is assurance. The authors defined assurance as the knowledge and courtesy of employees and their ability to convey trust and confidence. The fourth attribute of a quality service delivery is the element of empathy which is the provision of caring, individualized attention to customers. His last variable of good service delivery is the concept of tangibility. The authors define tangibility as the appearance of physical facilities, equipment, personnel and communication materials.

In any “business to customer” (B2C) type of environment, satisfying a customer is the ultimate goal of business. It is an important theoretical as well as practical issue for most marketers and consumer researchers because organizations sometimes do not really understand what actually goes on in customer’s mind (Fournier, 1999). The concept of customer satisfaction is equally important for service organizations, such as banks, as many of them subscribe to the fact that higher customer satisfaction will lead to greater customer loyalty (Boulding, 1993) which in turn leads to future revenue. “Customer satisfaction” not only means a happy customer but rather more than that. The concept of customer satisfaction is a synthesis of two distinct words i.e. customer and his/her satisfaction. In common language, the word “customer” means a buyer who purchases a product or avails a service from another. “Satisfaction” occurs when one gets what one needs, desires, expects, deserves or deems to be one’s entitlement.

Oliver (1980) defined customer satisfaction as product performance equivalent to customer expectation. (Oliver R. 1981) expressed satisfaction as a psychological state resulting from a process of emotional and cognitive evaluation. Satisfying a customer in any banking business is the ultimate goal and objective. Satisfaction of customers is

being generated through quick services, affordable service charge, and easiness of depositing and withdrawing money, ATM booths, and account statement over SMS/email services and error free records.

Hansemark (2004) defined satisfaction is an overall customer attitude towards a service provider, or an emotional reaction to the difference between what customers anticipate and what they receive, regarding the fulfilment of some need, goal or desire.

Kotler (1997) defined satisfaction as a person's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations. Further customer satisfaction is a collective outcome of perception, evaluation and psychological reaction to the consumption experience with a product or service.

Hoyer (2001) expressed that satisfaction can be associated with the feelings of acceptance, happiness, relief, excitement and delight. In a competitive marketplace, where businesses compete for customers, customer satisfaction is seen as a key differentiator and increasingly has become a key element of business strategy. It can also be defined as a global issue that effects all organizations irrespective of their size, whether profit or non-profit, local or multinational companies that have a more satisfied customer base along with higher economic returns. If customers are satisfied with a particular service offering after its use, they are likely to engage in repeat purchase and try in building line extensions (East, 1997).

Satisfaction is not simply an overall evaluation of a service experience, but an influence of different components of the service (Datta, 2010). The boom of internet and electronic banking has evoked several research efforts aimed at understanding service satisfaction in relation to virtual business environment (Peterson, 2004). Thus, the unique characteristics of internet based services are extensive human- computer interactions and high level self-service may imply that customers perceive satisfaction from online services differently when contrasted with their offline counterparts (Ribbink, 2004). With the growing trend of information technology in banking sector, customers prefer to deal online with their bank because of the rising trend of technology effecting quality and customer satisfaction. Moreover, online banking facilitates cost-effective decision thinking and applications on the part of the e-bank's operations and

IT managers to enhance customer service quality, develops trust in customers and boosts market share in this expanding but increasingly competitive business area. It thus, generates customer satisfaction and also customer commitment (Cheung, 2008).

Customer satisfaction is defined as the number of customers, or percentage of total customers, whose reported experience with a firm, its products or its services (ratings) exceeds specified satisfaction goals (Farris et al., 2010). Customer satisfaction is a person's feelings of pleasure or disappointment resulting from comparing a product's perceived performance or outcome in relation to his or her expectations (Musiiime and Biyaki, 2010). Based on this study, customer satisfaction will be defined as the measure of how a product or service given to a customer meets the expectations of that particular customer.

2.6 Benefits of E-banking

The benefits of electronic banking cannot be over emphasized. This is to say that it provides a lot of benefits both to the customer and the bank itself. To begin with a foremost benefit e-banking service is competitive branding and as well as better appreciation to the market demands. As such banks that provide services are known to be leaders in technology implementation and advancement. Thus, the better image brand they enjoy.

The other advantages may be measured in terms of money. The primary objective of every institution is to increase profits with which banks cannot be excluded. Many contend that E-banking can do away the hitherto laborious and less viable methods for banking. As indicated by perspectives communicated by (Mols, 1999) it was opined that the Internet is a revolution that will do away the old request holds much influence. The internet revolution in electronic-banking transaction is much less expensive than branch or even telephone transactions. According to Jen and (Michael, 2006) electronic-banking has made common open doors for banks and businesses around the world, and that is clear in the way they sort out financial transaction. Although opportunities to banks, there are various difficulties such as the innovation of IT applications, the obscuring business sector limits, rupturing modern boundaries, the passage of emerging competitors, and the development of new plans of action.

Rotchanakitumnuai (2003) explored the e- banking provides various benefits to both banks and customers. With electronic banking customers can check accounts, transfer money and can have access to numerous banking products and services. Electronic banking assumes a vital part in the economy helping buyers and sellers to make financial worth via the exchange of goods and services by avoiding physical contacts. Through electronic banking, banks have the capacity to draw in versatile clients which give to a great degree huge profit by giving portable money related services. (Wind, 2001), demonstrated that numerous banks are roused to actualize E-banking by components identifying with augmenting their profit through expansion market scope. The increase use in credit card is attributable to electronic banking. Customers are able to shop worldwide without the need of carrying paper money.

2.7 Challenges of E- banking

Daft, R. L. (1982) demonstrated that the rise of E-banking may be a smart thought however with respect to customers they may confront some risk connected with the specific type of innovation. Daft identified what he described Strategic Risk. Management of financial institutions should know and understand risks associated with e- banking and provide remedies for it. Poor E-banking planning and investment decisions can increase a financial institution's strategic risk. The costs of establishing e-banking services are high. Establishing a trusted brand is very costly as it requires the purchase of expensive technology. Some of the problems that customers face in using electronic banking services include risk arising from fraud, network and system errors and other unanticipated events resulting in the organization's inability to convey banking products and services. This risk could be inherent in different products and services (Earl, 2000).

Earl further commented that banking activities can expand their activities of establishment's and the amount of its transaction or operational risk, particularly if the organization is putting forth imaginative administrations that have not been institutionalized. Financial institutions should therefore provide reliable services to help customers gain easy access at all times.

Another security issue associated with E-banking as introduced by the Economist journal (1999) recounts that E-banking insecurities is classified into three categories, firstly those associated with fraud and theft secondly those by hackers" and lastly flaws

in systems design or set up leading to security breaches (genuine users seeing / being able to transact on other users' accounts). All of these insecurities have financial and legal reputations.

Other challenges associated with electronic banking spans from the type of technology selected, lack of knowledge and lastly implementation. (Earl, 2000) furthermore identified that while managers understand their business and operational process, their employees mostly lack the skills and experience to adapt to software technologies and educate their customers.

Many corporate and consumers in some developing countries do not have access to the necessary infrastructure to enable them process electronic payments. There are a few ramifications of international electronic banking. It is for all intents and purposes realized that low transactional cost possibly make it much less demanding to conduct international banking electronically. For some banks, cross-border operations offer a chance to harvest economies of scale. But it requires a higher level of supervision. In response, many financial institutions have already modified their regulations to achieve their main objectives, ensuring the safety and soundness of the domestic banking system, promoting market discipline, and protecting customer rights and the public trust in the banking system.

2.8 Empirical review

Raza (2005) determined the effects of service quality dimensions on customer satisfaction in Pakistan by using the SERVQUAL model. The study used a survey research questionnaire of 30 items has been adopted, and the data of 400 respondents were collected from the users of Internet banking of different banks located in Karachi city of Pakistan. The results showed that reliability analysis shows that all dimensions are reliable. Results of the factor analysis confirmed the grouping of adopted questioner. At last, the regression analysis indicates a significant positive relationship between assurance, tangibility, reliability and responsiveness with customer satisfaction. Conversely, empathy shows a positive but insignificant effect on the customer satisfaction. It is recommended that the management of online banks has to focus on making the design and content of the Web sites more visually appealing to grab the attention of existing customers, as well as to attract new customers. The management has to take effective measures to further enhance the security and safety

of online bank accounts, so that customers can maintain long-term relationships with the usage of online banking. Online banks have to provide more reliable services to the customers at heart to make the customers more comfortable and confident. The management should develop more effective systems to quickly solve the issues of customers.

Ibrahim (2006) explored the key factors of the electronic service quality (e-SQ) perceptions of UK banking customers and to evaluate the customers' perceptions of their banks' actual performance on the identified e-SQ dimensions. The study used a survey to collect primary data and 135 usable questionnaires were used in the analysis. Questionnaire items were developed through a two-stage process involving a review of the main measurement scales employed in previous studies and two focus group interviews to identify a series of attributes for assessing electronic banking service quality. Factor analysis procedure was employed to identify the underlying structure among the explored e-SQ attributes. The results showed that exploratory factor analysis uncovered six composite dimensions of electronic service quality, including the provision of convenient/accurate electronic banking operations; the accessibility and reliability of service provision; good queue management; service personalisation; the provision of friendly and responsive customer service; and the provision of targeted customer service. Further analysis using importance-performance analysis revealed that the UK customers' perceptions of their bank actual performance on these revealed e-SQ dimensions were largely modest. Generally relate to the one industry focus, the exploratory factor analysis employed, and the rather generalized view of electronic banking adopted. Future research should aim to improve on these by replicating the study in multi-industry settings, assessing the stability of the revealed factor structure, and examining whether particular e-SQ factors vary in importance across different technology types.

Sadiqsohail (2008) measured the quality of service from customers' perspective. This study used the based on a questionnaire survey conducted in Saudi Arabia. Based on an extensive review of literature, the paper used empirical research to analyse service quality of internet banking services provided by banks in Saudi Arabia. The results showed that based on a factor analysis identify three factors that influence users' evaluation of service quality of internet banking services. These factors are labelled as

“efficiency and security”, “fulfilment” and “responsiveness”. This research is useful for banks in order to improved service quality and retain/gain a share of the market in a highly competitive industry. It is recommended that important to enable bank managers to have a better understanding of customers’ perception of service quality of internet banking and consequently of how to improve their satisfaction with respect to the online aspects of service quality.

Kaur (2009) examined the level of internal market orientation (IMO) in Indian banking as seen from the perspective of internal customers and suppliers, particularly with regard to the three components of market orientation: intelligence generation, intelligence dissemination, and responsiveness. The study used the based on primary research conducted with data gathered from 611 internal customers and 37 internal suppliers of an Indian private sector bank. The results showed that indicate that all the three components of market orientation mentioned above determine the IMO level. Furthermore, the continuous emphasis on IMO by internal suppliers results in organizational commitment and job satisfaction among internal customers. The study is limited to the three main dimensions of IMO: intelligence generation, intelligence dissemination, and responsiveness. Practical implications – In order to ensure increased satisfaction of internal customers, internal suppliers have to give due cognizance to the three aspects of IMO as these influence the internal customers’ commitment, loyalty and hence their retention.

Ahmad (2011) investigated the impact of various service quality dimensions, namely reliability, responsiveness, visibility, employee commitment and access to service on customer satisfaction in the private banking sector of Bangladesh. The research also investigated the relationship between customer satisfaction and loyalty and effect of demographic variables on customer satisfaction. The study used the researchers distributed 320 self-administered survey questionnaires among private banks’ customers in Bangladesh and obtained 200 useable responses with a 62.5% valid response rate. The research data were analysed using confirmatory factor analysis (CFA) and structural equation modelling (SEM) approaches. Analysis of variance and logistic regression have also been used to obtain the supplementary findings. The results showed that research findings indicated that visibility, responsiveness and employee commitment have positive and significant effect on customer satisfaction, whereas

reliability and access to service are found to have insignificant influence on customer satisfaction of private banking services. The findings of this study also revealed that customer satisfaction has positive and significant relationship with customer loyalty. But except respondents' occupation type, all other demographic variables have no statistically significant relation with customer satisfaction. The research focused solely on the private banking sector of Bangladesh, and thus the results may not be applicable to other service sectors.

Ganguli (2011) examined the generic service quality dimensions of technology-based banking. The study used that generic service quality dimensions are identified using an exploratory factor analysis (EFA). Next the reliability and validity of the factors and customer satisfaction and customer loyalty are established through confirmatory factor analysis (CFA) using AMOS 16.0 s/w. The related hypotheses were tested using structural equation modeling using AMOS 16.0. The results showed that identifies four generic service quality dimensions in the technology-based banking services – customer service, technology security and information quality, technology convenience, and technology usage easiness and reliability. It was found that customer service and technology usage easiness and reliability have positive and significant impact on customer satisfaction and customer loyalty. It was also found that technology convenience and customer satisfaction have significant and positive impact on customer loyalty. These dimensions of service quality should be viewed as the levers of improving perceived service quality with respect to technology-based banking in the minds of its current customers. Examining the service quality dimensions' impact on customer satisfaction and customer loyalty for technology-based banking can offer banks valuable insights regarding which aspects of the service to focus on in order to improve customer satisfaction and loyalty towards the firms.

Brun (2014) explored the better understand e-relationship marketing and to identify elements (key concepts) that are predominant to ensure success via the internet. The study used the exploratory cognitive mapping technique (Cossette, 2004) employs three types of respondents, namely a banking expert, online banking customer and academic expert. The results showed that study points up similarities with traditional relationship marketing (e.g. satisfaction, commitment by bank) and identifies several new concepts spawned by the web-based environment. More precisely, the study highlights the

importance of the simplicity and ease of the customer's web experience. The exploratory and qualitative nature of this study opens the door to validation with a broader sample using a self-administered questionnaire developed based on the cognitive mapping technique. In addition to guaranteeing customer satisfaction, it is important: that customers perceive the bank's investment in and commitment to the e-relationship strategy; and, that customers enjoy a highly positive web experience (e.g. perceived quality of site and ease-of-use).

Thakur (2014) explored the Focus on the mobile banking the importance of these concepts is even greater due to the increasing focus of banks on mobile phones in order to reach out to a larger set of customers. The study used influence of satisfaction and trust and their antecedents in developing customer loyalty in the m-banking were measured. The proposed model was tested through PLS-SEM. The results showed that satisfaction from m-banking based on previous interactions had a positive effect on customer loyalty. In addition, mobile interface usability and service were found to have a positive effect on customer satisfaction. It is recommended that developed customer loyalty in m-banking, banks should prioritize user friendly interface and provide services valued by m-banking customers.

Bedman Narteh (2015) identified the dimensions of Automated Teller Machine (ATM) service quality and to evaluate customers' perceptions of the relative importance of these dimensions. The study used a structured questionnaire gleaned from the literature and focused group studies was used to collect data from 530 ATM customers of 15 banks in Ghana. Descriptive statistics, exploratory and confirmatory factor analysis, as well as multiple regression, were used to identify the relative importance of the dimensions of ATM service quality. The results showed that paper identify five dimensions of the "ATMqual" model. In order of importance, these dimensions are reliability, convenience, responsiveness, ease of use and fulfillment. The variables of the ATMqual scale provided practical levers for bank managers to improve customer experience with ATMs.

Narteh (2015) investigated the effect of service quality and relationship quality on customer loyalty in different stages of the relationship life cycle in online banking services. The study used a total of 651 Iranian online banking customers participated in the research by completing questionnaires. The research hypotheses were tested using

structural modeling technique. The results showed that the relationship quality on customer loyalty in online banking services is affected by the relationship life cycle. The results also showed that online service quality, in the form of Utilitarian quality and Hedonic quality, has a positive effect both directly and indirectly on customer loyalty through online relationship quality. In this paper, the relationship dynamics was achieved through adding the relationship life cycle variable to the model. However, the study was a cross-sectional research and different results might be obtained if data was collected longitudinally.

Jun (2015) identified the key dimensions of mobile banking (m-banking) service quality. The study used the authors employ the critical incident technique to unveil the key dimensions of m-banking service quality as perceived by m-banking customers, and to identify critical satisfiers/dissatisfiers among the identified dimensions. The results showed that analysis reveals a total of 17 dimensions of m-banking service quality: m-banking application quality (content, accuracy, ease of use, speed, aesthetics, security, diverse mobile application service features, and mobile convenience), and m-banking customer service quality (reliability, responsiveness, competence, courtesy, credibility, access, communication, understanding the customer, and continuous improvement). Of these, five dimensions, such as mobile convenience, accuracy, diverse mobile application service features, ease of use, and continuous improvement, are considered as the main sources of customer satisfaction/dissatisfaction. M-bankers, based on the identified 17 dimensions, can develop a comprehensive service quality management system, which helps them identify and overcome key obstacles to the delivery of high quality m-banking customer services.

Amin (2016) examined the internet banking service quality and its implication on e-customer satisfaction and e-customer loyalty. The study used a total of 1,000 questionnaires were distributed for internet banking customers and 520 were returned (resulting 52 percentage of response rate). The results showed that confirmed that the all four dimensions (personal need, site organization, user friendliness, and efficiency of website) are distinct constructs. The results also indicated that internet banking service quality consisting of four dimensions has appropriate reliability and each dimensions has a positive significant relationship with internet banking service quality. The finding found that the relationship between internet banking service quality, e-

customer satisfaction and e-customer loyalty are significant. The results show that the higher level of internet banking service quality significantly impacts to e-customer satisfaction and consequently leads to e-customer loyalty and a lower intention to leave the relationship with bank.

Arcand (2017) investigated the multidimensional concept of mobile banking service quality (security/privacy, practicality, design/aesthetics, enjoyment and sociality) and the impact of the latter on the quality of the relationship (commitment, trust and satisfaction) between consumers and their primary financial institution. The study used an online survey using a sample of 375 respondents, all owners of a mobile device and all accustomed to conducting banking activities on mobile platforms. Results were analyzed using structural modeling techniques. The results showed that confirm that trust significantly and positively impacts commitment/satisfaction. Mobile banking service quality dimensions also influence trust and commitment/satisfaction. Trust is associated with security/privacy and practicality (regarded as utilitarian factors), while commitment/satisfaction is driven by enjoyment and sociality (dimensions more hedonic by nature). No link is found between interface design and either trust or commitment/satisfaction. This study contributed to bank marketing theory since it is the first to demonstrate how key mobile banking service quality dimensions drive customer perceptions of relationship quality. In doing so, this research extends beyond mobile adoption (short term) by addressing customer engagement with financial institutions and issues relating to relationship quality (long term).

Dauda (2017) evaluated the perceptions of Nigerian banking customers regarding customers' evaluation of their banks service quality based on their banks actual performance on current banking service delivery. The study used a survey collect primary data and 1,245 usable questionnaires were used in the analysis. A conjoint analysis with stated preference data were used to construct the consumers' behavior, while discrete choice method was employed to evaluate the preferences. More information was obtained by in cooperating heterogeneity into the model by the random coefficient and the test variance with the primary attributes and social demographics and individual characteristics. The results showed that discrete choice analysis shows that bank management should focus on: reduction of transaction errors, transaction cost, waiting time and initial online learning time. This four attributed have strong impact on

customer's satisfaction depending on quality performance. Relative to other services the reduction in waiting time and transaction cost are the most important services to the Nigerian banking customers. Other findings of willingness to pay and consumer preference for other attributes reveal more information for improved banking policies. The sample only focussed on the urban areas and did not consider rural dwellers. Future research should aim to improve on these by including a variable in the utility set up that captures the distance of the respondent to the main city.

Sahoo (2017) examined the potential influence of the mobile banking (M banking) services cape on customer attitude and engagement. The study used a web-based survey of 345 M banking users was conducted to gather data. The structural equation modelling technique was employed to analyse the conceptual model and test the proposed set of hypotheses. The results showed that M banking services cape is a strong predictor of customer attitude towards M banking, which then influences customer engagement. The findings also demonstrated that customer attitudes towards M banking mediate both the M banking services cape and engagement.

Awwad (2018) explored the following questions: How to measure customer satisfaction from the provisioning service of both: Islamic and Conventional banks? The study used a cross-sectional survey design was conducted to analyze a sample of customers. A total of 480 Jordanian participants were included in the study. The results showed that of confirmatory factor analysis show that the most important drivers of customer satisfaction are Sharia' compliance, complaints, pricing and convenience, whereas the least important drivers are e-banking, the perception of employees, enjoyment and tangibles. The result is limited to the selected sample, and hence, future research in other countries should contribute to a better understanding of the impact of customer satisfaction relationship on bank success or performance. This study provides a useful information for bank managers on the main driver of customer satisfaction and performance.

Arora (2018) determined the factors influencing customers' usage of electronic banking (e-banking) services. The results showed that e-banking usage is found to be high for female, more educated, younger, and middle income customers. Among the 11 perceptual variables studied, only six variables, namely: information, performance, self-interest, service quality, satisfaction, and experience are found to be significantly

and positively associated with e-banking usage. This study identified factors which may be focuses on by bankers during the formulation of their operations and marketing strategies to provide the best e-banking experience to their customers, enabling bankers to augment bank profitability through the strategic use of technologies.

Mbama (2018) examined the customers' perceptions of digital banking (DB), customer experience, satisfaction, loyalty and financial performance (FP) in UK banks. The study used the research consists of a survey of UK bank customers' perceptions of the above themes; use of banks' financial reports to obtain FP ratios; multivariate factor analysis; structural equation modelling; and analysis of variance tests to explore research hypotheses on the relationships among the study factors. The results showed that main factors which determine customer experience in DB are service quality, functional quality, perceived value (PV), employee-customer engagement, perceived usability and perceived risk. It is recommended that significant relationship among customer experience, satisfaction and loyalty, which is related to FP. This study concentrated on UK bank customers which limits its generalizability to other banks globally. However, the fact that banks typically adopt common standards in bank financial management implies that the findings are potentially robust for global bank management. Replicating the study in banks in other countries will further enhance this robustness.

Khan (2019) examined e-service quality (E-SQ) of online shopping in Pakistan using "E-S-QUAL scale." Moreover, in this study, the relationship of E-SQ with e-customer satisfaction (E-CS) and e-customer loyalty (E-CL) has been studied. The study used the following a quantitative research methodology, data were collected from 298 respondents using convenience sampling and survey research design was followed. In order to develop the model and test the hypotheses, structure equation modeling (SEM) was done through AMOS. The results showed that all of the first latent constructs are significant where E-CS and E-CL (dependent variables) are influenced by E-SQ (independent variable). Using SEM, statistically fit structural model was developed on the basis of confirmatory factor analysis. The analysis showed that there is a strong positive relation between E-SQ and E-CS and E-SQ and E-CL. Asian markets have been identified as the fastest growing e-commerce markets in present era. Similarly, retail sector in Pakistan is booming, at the same time an exponential increase is being observed in the number of internet users and online shopping. It is important for

marketers and retailers to explore new horizons and enter the age of e-commerce for expansion of their businesses.

Awan (2020) explored the e-banking service quality and its impact on the e-banking loyalty through a mediating impact of e-banking satisfaction. The study used the data collect through an adapted questionnaire by using emails and messaging applications. The database of a local marketing company in Pakistan was used, and 976 responses were included in the analysis. The structured equation modeling was used to test the propositions of study. The results showed delineate that reliability and website design proved to increase e-banking loyalty, particularly during COVID-19. The link between e-banking privacy and security and e-banking loyalty was proved as fully mediated by e-banking satisfaction; however, indirect effect of the reliability and website design with e-banking loyalty was partially mediated. In strategic planning of e-banking mechanisms and the associated consumer behavior, the results of this study can be helpful for policymakers. In case of similar epidemics and natural calamities, consumers may depict similar behavior as shown during the lockdown and social distancing during COVID-19; hence, the study can help regulatory bodies in preparing their safety roadmap.

Debruin (2020) explored the extent to which internal marketing influences employees' perceived ability to deliver service quality in the Islamic banking industry in Oman. Additionally, the influence of perceived service quality on perceived customer satisfaction is established. The study used data obtain from retail banking branch employees at the customer front line of Islamic banks in Oman using electronic and person-administered surveys, and 272 responses were deemed suitable for data analysis. The results showed that internal promotion, internal process and internal purpose are enablers of employees' perceived ability to deliver service quality in the Islamic banking industry of Oman. In addition, service quality was found to have a strong positive influence on perceived customer satisfaction in Islamic banks. This study demonstrated that internal product, internal price, internal promotion, internal process and internal purpose are influencers of service quality, and the latter has a direct relationship with perceived customer satisfaction in Islamic banking.

Table No 2.1

Literature review

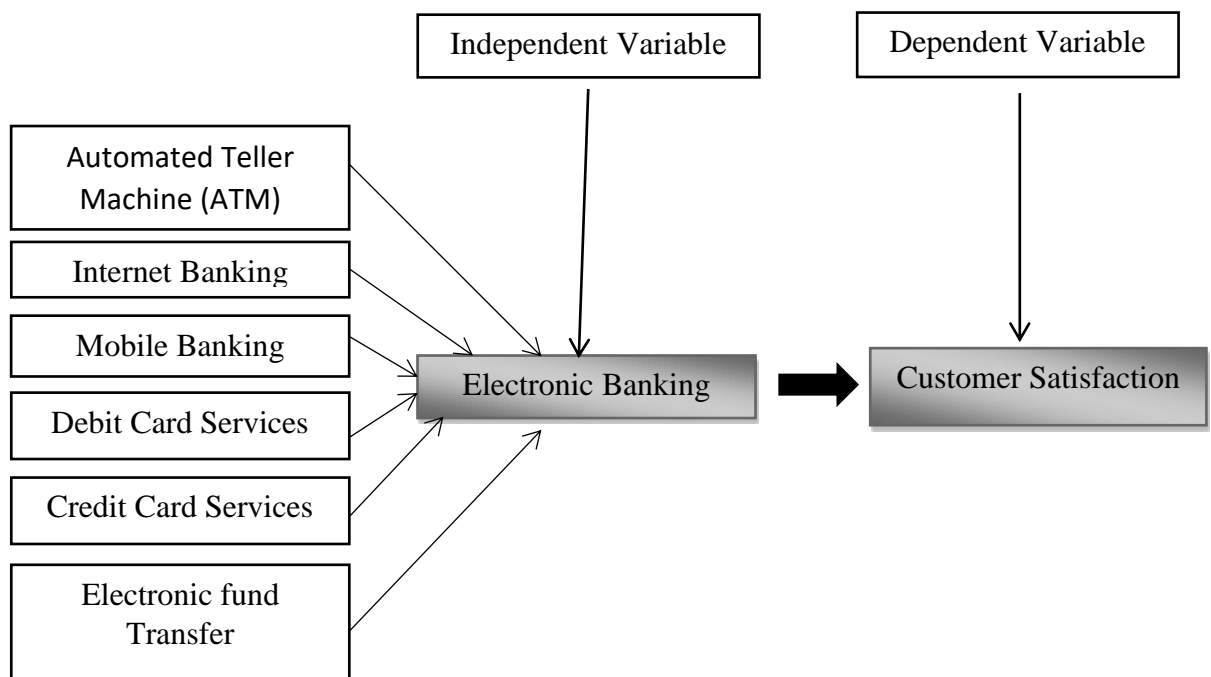
Author (s)	Objectives	Variables	Methodology	Major findings
Woldie, 2008	To evaluate Internet banking usefulness from the perspective of selected Ghanaian firms.	Reliability Responsiveness, Assurance	Descriptive research method	The research findings indicated that Internet banking services are at their infant stage. Majority of the interviewees said they would still visit the bank even if their company adopts Internet banking. Access to their account balance and understanding customer needs are the most important factors for facilitating a good bank client relationship for firms in Ghana and their banks.
Nupur, 2010	To understand the impact of variables of e-banking on customer satisfaction in Bangladesh.	reliability, responsiveness, assurance, empathy, and tangibles, customer satisfaction, ebanking	SERVQUAL model	The study found that these factors (reliability, responsiveness, assurance, empathy, and tangibles) were the core service quality dimensions for customer satisfaction in e-banking. The study also explored that reliability; responsiveness and assurance have more contribution to satisfy the customers of e-banking in Bangladesh.
Ahmad, 2011	To investigate the impact of e-banking on the outcomes of customer satisfaction.	Ebanking, Customer satisfaction, Loyalty, WOM	A purposive sampling technique	This research showed that adoption of e-banking (accessibility, convenience, security, privacy, content, design, speed, fees and charges) had a positive effect on Jordanian Commercial Bank customers' satisfaction, loyalty, and positive WOM.
Amaoko, 2012	To examine the customers satisfaction of GCB in the banking industry.	Tangible, assurance Reliability Empathy Responsiveness	A descriptive research method	Study concluded that Customer service at GCB from the customers' perspective is not satisfactory but has led to the increase in number of new customers, maintenance of existing customer and increase in profitability among others.
Khatri, 2013	To understand current status and trends of use of internet banking services;	Internet banking Gender religion,	Descriptive	Study concluded that the majority of the account holders use internet, have some knowledge about the internet banking provided by their bank but they have not developed the habit of utilizing this facility.

		education, occupation		Awareness about internet banking and its benefits and security were identified as the major reason behind less utilization of internet banking among the customers.
John & Rotiimi, 2014	investigating the impact of e-banking on customers' satisfaction	electronic banking and customers satisfaction	Descriptive statistics chi-square test.	The study found that there was a significant relationship between electronic banking and customers' satisfaction. Also that E-banking has become popular because of its convenience and flexibility, and transaction related benefits like speed, efficiency and accessibility
Mukhtar, 2018	To study the impact of electronic banking services on customer satisfaction at Sudanese banks.	electronic banking services, customer satisfaction, service quality	Statistical tools	This paper showed that the banking services over the internet has a positive impact on customer satisfaction.
Solanki, 2018	To study and analyze the progress made by Indian banking industry in adoption of technology.	e- banking services and customers satisfaction	Statistical and mathematical tools	The study highlighted the challenges faced by Indian banks in adoption of technology. Also concluded that in years to come e-banking will not only be acceptable mode of banking but preferred mode of banking.
Isibor, 2018	To examine the impact on both customers' satisfaction and economic growth	customer satisfaction and economic growth	statistical parametric test	The study found that e-banking has improved both customers' satisfaction and caused economic growth in Nigeria.
Singh, 2020	To examine the impact service quality of EBanking service on Customer satisfaction	Electronic Banking, Information Technology, Service Quality, Customer Satisfaction	The Multiple regression technique	This study found that the overall regression model has been a reasonable fit and there is a statistically significant association between service quality dimension and customer satisfaction.
Awan, 2020	To empirically explore e-	E-banking service	The structured	This study concluded that reliability and website design proved to increase e-banking

	banking service quality and its impact on the e-banking loyalty through a mediating impact of e-banking satisfaction	quality, E-banking satisfaction, E-banking loyalty, CMR theory, COVID-19	equation modeling	loyalty, particularly during COVID-19. The link between e-banking privacy and security and e-banking loyalty was proved as fully mediated by e-banking satisfaction; however, indirect effect of the reliability and website design with e-banking loyalty was partially mediated.
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2.9 Conceptual framework

The research is based upon the analysis and interpretation of dependent (customer satisfaction) and independent variables (Automated Teller Machine (ATM), Internet and Mobile banking, Credit cards, Debit cards and Electronic Fund Transfer).



Sources: (Mukhtar, 2018)

Figure 2.1 Conceptual framework of determinants of customer satisfaction

Dependent variables

The value of dependent variable is derived from the value of other variables. Sekraran (2012) dependent variable is the one on which the researcher have primary interest. The researcher tries to predict, describe or explain its variability. Customer Satisfaction is dependent variable for the current study. Customer Satisfaction Independent Variables

(Electronic Banking Services) Dependent Variables Automated Teller Machine (ATM) Services Electronic Fund Transfer at Point of Sale (EFTPOS) Services Internet Banking Services Mobile Banking Services Debit Card Services Credit Card Services.

Customer satisfaction

In this study, customer satisfaction is an emotional response to experience associated with the services of banking in comparison to customer's expectation (Zopounidis, New trends in banking management, 2012). The customer's satisfaction can be observed in terms of satisfaction with services offered by the bank, positive impression, continuous transactions and recommendation.

Independent variables

Sekraran (2012) independent variable is the one which influences the dependent variables in either positive or negative way. In this study, Automated Teller Machine (ATM), Internet and Mobile banking, Credit cards, Debit cards and Electronic Fund Transfer are independent variables.

Automated teller machine (ATM) Services

Automated tellers imply more productivity for the bank during banking hours. ATM is a terminal conveyed by a bank or any money related establishment which empowers the clients to withdraw money, make enquiries, request bank statements etc. It saves customers time in service delivery as alternative to queuing in the bank halls, customers can invest such time saved in other productive alternatives. (Rose, 1999) describes ATMs as follows: "an ATM combines a computer terminal, record keeping system and cash vault in one unit, permitting customers to enter the bank's book keeping system with a plastic card containing a Personal Identification Number (PIN) or by punching a special code number into the computer terminal linked to the bank's computerized records 24 hours a day".

Electronic fund transfers at point of sale (EFTPOS) services

The POS system allows customers to make retail purchases with a check card. The card looks like a credit card but does not function like it. The amount purchased is transferred immediately from the account of the debit card holder to that of the store. A POS uses a debit card to activate an Electronic Fund Transfer Process. Increased banking productivity results from the uses of EFTPOS to service customers shopping payment

requirements instead of clerical duties in handling cheques and cash withdrawals for shopping. Furthermore, the system continues after banking hours and hence continual productivity for the bank even after banking hours. A POS is a device that installed in sale centers to remove the need to transfer the physical money and to deduct money from the buyer account and to add it to seller account. Sale center and department stores are where POS is used (Amaoko, 2012).

Internet banking services

“Internet banking refers to the use of the internet as a delivery channel for banking services, which includes every single customary service for example, balance enquiry, statement of records, trust transfer to other records, charges payments, electronic bill presentment and payment” without going to bank (Nath, 2003). It eliminates the barriers of distance / time and provides continual productivity for the bank to unimaginable distant customers. The bank may have website to let their clients check their account remaining, accounts flow, loan applying and ordering their exchanging through internet. It helps in transferring currency to private account or other accounts, helps to see bills in according with account, helps in ordering the bill in chronological order, it also has got bill payment availability, and also has got the availability of seeing last 30 transactions.

Mobile banking services

Mobile banking refers to provision and accessibility of banking and financial services with the help of mobile telecommunication devices. The scope of offered services may include facilities of performing balance checks, account transactions, payments etc. via mobile device such as a mobile phone. Mobile banking today is most often performed via, SMS or the Mobile Internet but can also use special program downloaded to mobile device. Therefore, it plays a vital role to improve the productivity of bank.

Debit card services

A Debit Card (also known as a bank card, plastic card or check card) is a plastic payment card that can be used instead of cash when making purchases. It is similar to credit card, but unlike a credit card, the money comes directly from the user’s bank account when performing a transaction. Debit Card usually also allows for instant withdrawal of cash, acting as an ATM card for withdrawing cash. Merchants may also offer cashbacks facilities to customers, where a customer can withdraw cash along with

their purchase. In many countries the use of debit card has become so widespread that their volumes have overtaken or entirely replaced cheques and, in some instances, cash transactions. A debit card is a more convenient way to spend money than by using cash.

Credit card services

A Credit Card is a payment card issued to users (cardholders) to enable the cardholder to pay a merchant for goods and services based on the cardholder's promise to the card issuer to pay them for the amounts so paid plus the other agreed charges. The credit company provider may also grant a line of credit (LOC) to the cardholder which allows the holder to borrow the money in the form of cash advance. A credit card allows you to borrow money from a bank to make purchases, whether you're buying a burger or a round-trip ticket. As long as you pay back the money you borrow within the "grace period" of 25-30 days, you don't have to pay extra. If you don't pay it back in that time period, you'll have to pay interest, a percentage of the money you owe the bank on top of what you borrowed.

2.10 Research gap

Although, there are abundant studies on customer satisfaction and e-banking worldwide, the focus of those studies was both on customer satisfaction and on service quality offered by the banks as well as on the organizational. For instance of these studies are Sonja (2010) conducted a study on the impacts of computerization in banking industry in Uganda, Ishengoma (2011) in Tanzania, Nurpus (2010) of 25 Bangladesh, Sadeghi and Hamzaee (2010) of Iran, Ahmad and Al-Zu'bi (2011), Ankit (2011), Ali and Akter (2010), Shamsuddoha and Alamgir (2010) investigated customer loyalty and customer satisfaction in India. Santouridis (2009) of Greece investigated factors leading to customer loyalty and Amaoko (2012) of Ghana conducted a study on the effects of ICT on e-banking. However, this study will mainly address the effects of electronic banking on customer satisfaction in Nepalese banking industries.

Previous studies are failed to coverage the impact of electronic banking on customer satisfaction of government employees whose working area is in Dhangadhi sub Metropolitan. They only focus to get satisfaction level from different city of Nepal except Dhangadhi. Also, those previous studies are failed to cover government employee's satisfaction about e-banking. As per government rules and regulations the

working time of employee is 9:00 AM to evening 5:00 PM so they are obligated to use e-banking for the making banking transactions and it does matter.

Thus, research gap weakness is found in past studies, this research have been conducted to find out the impact of e-banking on customer satisfaction by collecting the data from government employees those working area is Dhangadhi sub Metropolitan.

CHAPTER III

RESEARCH METHODOLOGY

Research methodology refers to the adopted method that is followed by a set of procedures applicable for a particular study. In this chapter, research methods of the study are presented. This chapter begins with the research design of the study followed by the population and sample, data collection, data collection techniques, validity test, reliability test, data analysis and software used.

3.1 Research design

Research design is an overall plan for connecting the conceptual research problems to the empirical research. Research design involves and highlights the methodological rigor and appropriateness of intellectual design for conducting research (Malhotra & Birks, 2007). A research design is a framework that guides how research should be conducted based on certain philosophies, principles and assumption. Further, it articulates what data is required, what method is going to be used to collect and analyze the data, and how all of this is going to answer the research question.

The study is based on descriptive and analytical research design. To describe the components of e-banking services descriptive research design is used. Similarly, casual design helps to determine the relationship between dependent (customer satisfaction) and independent variable (e-banking services). Further casual research design is used to examine the impact of e-banking service delivery on customer satisfaction of banking industry in Nepal. As per Sekaran and Bougie (2012) a descriptive study is undertaken in order to ascertain and be able to describe the characteristics of value of interest.

The study used quantitative method for data collection for the purpose of analysis. Mainly structured questionnaire survey was used to generate response based on which statistical analysis is done to test hypothesis.

3.2 Population and sample

This study is collected the responses of government employees who using the electronic banking services so, the total population of this study is infinite. The study was calculated using the Cochran formula.

$$n = Z^2 pq / e^2$$

Where,

n= Sample size

e= Margin of error/ sampling error

Z= Statistical parameter that depends on the confidence level

p= The numerical probability of a success

q= The numerical probability of a failure (1-p)

This research assumes 95% confidence level (Z value 1.96), 5% margin of error and p= 0.5 (maximum variability):

$$n = 1.96^2 * .5 * .5 / .5^2$$

$$n = 384$$

According to above calculation this study has used 384 respondents to get appropriate result.

3.3 Sources of data

Primary sources of data were used to collect and analyze the impact of e-banking services on customer satisfaction.

3.3.1 Primary sources of data collection

The study research is based on the primary source of data for research questions. Primary data are the first hand data collected by the researcher to test the working of hypothesis and then used as evidence to support a researcher's claim. For the purpose of primary data the researcher used questionnaire method to collect the data. The respondents were requested to fill the questionnaire and were made fully aware about for what purpose the research was being carried out and the main objective of the study. This method of collecting data made a better understanding of customer regarding e-banking services and customer satisfaction of banking industry in Nepal. The questionnaire were distributed and collected during any flexible time of respondent and researcher.

3.4 Data collection techniques

Data collection is a process of gathering information from identified respondents to answer the research questions. This study was based on the primary data. Primary data

sources include observations, experiments, social surveys like questionnaires and interviews. A questionnaire method is used in this research to get information from the respondents.

3.4.1 Questionnaires

In order to conduct the study, structured questionnaire were used. A research questionnaire containing carefully framed questions was used to collect data for the study. The questionnaire was in two parts. The first part aimed at the collection of demographic information on the participants. There included age, sex, educational, marital status, designation, income level, number of years transacting business with the Bank, information sources about e- banking , reason of using e-banking , respondent opinions about linkage of e- banking and customers satisfactions and encouraging factor to use e-banking services of the financial institutions.

The second section has included 48 likert scale statement of internet banking, mobile banking services, ATM services, credit card services, debit card services, electronic fund transfer services and customer satisfaction. Five likert scales refers as 1= strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree). The individual score were summed and averaged for analysis.

Sources: (Mukhtar, 2018)

3.5 Reliability test

Reliability tests is one of the important elements to make sure that instrument developed to measure a particular concept is indeed accurately measuring the variable and that, in fact, actually measures the concept set out by the study to measure. Reliability ensures consistent measurement across various items in the instrument. In this study, Cronbach's Alpha is used to measure the reliability of the various items.

Table 3.1

Reliability analysis

E-banking Services	No of Items	Cronbach Alpha
Internet Banking (IB)	6	0.689
Mobile Banking (MB)	7	0.801
Automated Teller Machine (ATM)	7	0.705
Debit Card Services (DCS)	7	0.834
Credit Card Services (CCS)	7	0.821
Electronic Fund Transfer (EFT)	6	0.789
Customers Satisfaction (CS)	8	0.882
Overall	48	0.788

The calculation of Cronbach's Alpha is presented in the table 3.1. It depicts the Cronbach's Alpha for the components of e-banking service delivery on customer satisfaction. It is observed that Internet banking has Cronbach's Alpha of 0.689, Mobile banking has Cronbach's Alpha of 0.801, Automated Teller Machine has Cronbach's alpha of 0.705, Debit card services has Cronbach's Alpha of 0.834, Credit card services has Cronbach's Alpha of 0.821, Electronic fund transfer services has Cronbach's Alpha of 0.789 and customer satisfaction has the Cronbach's Alpha of 0.882. The table 3.1 revealed that Cronbach's Alpha for all the statement is above 0.6 which is acceptable. (Cortina, 1993). Therefore, the statement regarding internet banking, mobile banking, automated teller machine, debit card services, credit card services, electronic fund transfer services and customer satisfaction have a good internal consistency and hence, the statement are acceptable.

3.6 Data analysis

The frequency tables that report the percentage of each of the categories and frequency that are easy to understand and interpret were used. Other than the descriptive analysis, correlation and regression analysis were conducted to validate the hypothesis. As an overall, this study has used the descriptive and inferential statistical tools to make the proper analysis. In the descriptive analysis we calculated the mean, frequencies, percentages, standard deviation and minimum and maximum score of the survey where inferential analysis has calculated the Cronbach's Alpha, Regression analysis, ANNOVA and correlation analysis.

3.6.1 Descriptive analysis

Descriptive statistics were used to explain the demographic characteristics of the respondents along with e-banking services and customer satisfaction. Frequencies, percentages, mean and standard deviation was calculated to describe the variables.

3.6.2 Correlation analysis

The correlation coefficient was used to depict the association of e-banking services and customer satisfaction.

3.6.3 Regression analysis

To examine the impact of e-banking services and customer satisfaction, regression model was used. The regression model is formulated based on the Amaoko (2012), Mukhtar (2018), Awan (2020).

The model is specified as: $Y = \beta_0 + \beta_1 (\text{ATM}) + \beta_2 (\text{Internet Banking Services}) + \beta_3 (\text{Mobile Banking Services}) + \beta_4 (\text{Credit Card Services}) + \beta_5 (\text{Debit Card Services}) + \beta_6 (\text{Electronic Fund Transfer Services}) + e_i$

The regression line is:

$$Y = \beta_0 + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \beta_5 + \beta_6 + e_i$$

Where,

Customer Satisfaction = Y

Regression Coefficients = $\beta_0 + \beta_1 + \beta_2 + \beta_3 + \beta_4 + \beta_5 + \beta_6$

Error term = e_i

3.7 Software used

The responses collected from the distribution of questionnaire were entered in Microsoft Office Excel 2019 and IBM SPSS V 25. After that data were analyzed, interpreted and was presented in the written format using Microsoft Office Word 2019.

CHAPTER IV

RESULTS AND DISCUSSION

The chapter deals with the analysis of the data collected from surveys. The data are analyzed statistically and result are presented and interpreted. With an aim to fulfill the objective of the study, the collected data through questionnaire had been analyzed using statistical tool. This chapter also covers the test of hypothesis which was formulated in the previous chapter.

4.1. Respondents demographic profile

This section deals with the demographic analysis and interpretation of primary data collected through questionnaires. In this section, the respondents profile was analyzed in terms of gender, age, education, designation, annual income, reason of using e-banking, encourage factor of e-banking and frequency of years of using e-banking services. Out of 412 questionnaires were sent to potential respondents, only 384 responses were collected. There were no one response errors and hence the valid response rate was 93.2 percent. All the respondents were from the Dhangadhi Sub Metropolitan.

Table 4.1

Gender of the respondent

Gender of Respondent	Frequency	Percent	Cumulative Percent
Male	249	64.8	64.8
Female	135	35.2	100.0
Total	384	100.0	

Source: Field Survey, 2022

The table 4.1 illustrates that the percent distribution of the respondents on the basis of gender. In this study, data from 384 respondents were collected and analyzed. Out of the total respondent's male respondents accounted for 64.8 percent (249) of the sample and female respondents accounted for 35.2 percent (135) of the total sample. This shows that there is slightly higher number of male respondents in comparison to female respondents taken for this study.

Table 4.2

Age of respondents

Age of Respondent	Frequency	Percent	Cumulative Percent
18-30	105	27.3	27.3
31-40	163	42.4	69.7
41-50	60	15.6	85.3
51- above	56	14.6	100.0
Total	384	100.0	

Source: Field Survey, 2022

The table 4.2 shows the percentage distribution of the respondents on the basis of their age group. The column shows that most of the respondents belong to age group 31-40 years, which accounts for 42.4 percent of the respondents. It is followed by age group by 18-30 years group representing 27.3 percent of the respondents. 15.6 percent were between the ages of 41 to 50 years and 14.6 percent occupied by the age group of 50 above. The government employee's age group 31 to 40 years was most willing to use electronic banking service because they don't have the sufficient time to make banking transactions from the manual way.

Table 4.3

Education of respondent

Education of Respondents	Frequency	Percent	Cumulative Percent
Under Graduate	74	19.3	19.3
Graduate	180	46.9	66.2
Master's Degree and Above	130	33.8	100.0
Total	384	100.0	

Source: Field Survey, 2022

The table 4.3 presents the profile of respondents based on their education. Table shows that, the majority of the respondents were Graduate. There are 180 Graduate employees representing 46.9 percent while 130 Master's degree & above programmers representing 33.8 percent and 74 Under Graduate respondents representing 19.3 percent. This finding is attributed to the fact that banking processes requires some basic literacy and as such it was no surprise that all the respondents had some level of formal

education.

Table 4.4

Annual income of respondent

Annual Income of Respondent	Frequency	Percent	Cumulative Percent
Rs 101000 - Rs 300000	95	24.7	24.7
Rs 301000 - Rs 500000	239	62.2	86.9
Rs 501000 and Above	50	13	100.0
Total	384	100.0	

Source: Field Survey, 2022

The table 4.4 presents the profile of respondents based on their income level. The majority of the respondents are on Rs. 301,000 – Rs. 500,000 level of income representing 62.2 percent following by the Rs. 101,000 - Rs. 300,000 level of income representing 24.7 percent. Further, the table shows 13 percent of the respondents have annual income Rs. 501,000 and above.

Table 4.5

Years of using electronic banking services of respondents

Years of using electronic banking	Frequency	Percent	Cumulative Percent
Less Than a year	18	4.7	4.7
1-2 years	113	29.4	34.1
2-3 years	115	29.9	64.0
3-5 years	86	22.4	86.4
More than 5 years	52	13.5	100.0
Total	384	100.0	

Source: Field Survey, 2022

The table 4.5 illustrates information regarding respondent's years of using electronic banking services of the bank. Out of 384 respondents, 115 respondents are representing 29.9 percent have been using the electronic banking services for about 2-3 years while a total of 113 representing 29.4 percent have been using the electronic banking services for about 1-2 years. It was also found that, 86 respondents representing 22.4 percent

have been using the digital banking services for about 3-5 years, 52 respondents representing 13.5 percent have been using the services for more than 5 years and 18 respondents representing 4.7 percent have been using the services for less than a year.

Table 4.6

Marital status of respondent

Marital Status	Frequency	Percent	Cumulative Percent
Married	328	85.4	85.4
Unmarried	48	12.5	97.9
Divorced	8	2.1	100.0
Total	384	100.0	

Source: Field Survey, 2022

The table 4.6 elaborates that the 85.4 percent of married respondents are using the digital banking where 12.5 percent unmarried respondents are prefer to using electronic banking services. Table showing only 8 divorced respondents are using the electronic banking services for the banking transactions that occupied 2.1 percent. It shows that married respondents are dominant electronic banking users among them.

Table 4.7

Designation of respondent

Designation of Respondent	Frequency	Valid Percent	Cumulative Percent
Forth Level	164	42.7	42.7
Fifth Level	102	26.6	69.3
Sixth Level	58	15.1	84.4
Seventh Level	11	2.8	87.2
Eighth Level	29	7.6	94.8
Ninth Level	20	5.2	100.0
Total	384	100.0	

Source: Field Survey, 2022

Table 4.7 shows that the majority of forth level government employees are using digital banking services. Total 164 respondents are working in forth level and it occupied

42.7percent. Fifth level 102 respondents are using electronic banking services and they occupied 26.6 percent. 58 respondents are working in sixth level they occupied 15.1 percent. Seventh, eighth and ninth level of employees are occupied by 2.8%, 7.6% & 5.2% respectively. Most of the forth level respondents are using electronic banking services and seventh level respondents are lower than other.

4.2 Descriptive analysis

Descriptive analysis is a summary statistic that quantitatively describes or summarizes features of a collection of information. In this study, mean is used as a central tendency and standard deviation as measures of variability of different variables like Automated Teller Machine, Internet Banking, Mobile Banking, Credit Card, Debit Card, Electronic Fund transfer and Customer Satisfaction. The higher mean value means more respondent agrees to those variables which could have greater impact. When analyzing the mean and standard deviation of variables, it is important to take note that a significantly large value of standard deviation means that the data being tested is far away from the mean whereas a smaller value means that the tested variables are closer to the mean. In this study, five scale of measurement is taken for each statement (1 = strongly disagree, 2 = disagree, 3 = Neutral, 4= agree, and 5 = strongly agree).

The scale to analyze the obtained score of each item of the e-banking services as:

$$\text{Total score} = 1+2+3+4+5$$

$$\text{No. of options} = 5$$

$$\text{The test scale to analysis} = \frac{1+2+3+4+5}{5}$$

$$= 3$$

Hence, the average mean of the score is 3. This study concluded that the mean more than 3 represents the satisfied with the e-banking services and below 3 represents the not satisfied with the e-banking services. Also this study elaborates that mean below 3 reject the hypothesis and mean more than 3 is accept the hypothesis.

4.2.1 Automated teller machine

As presented in table 4.2, the highest score of mean is for “The ATM makes cash withdrawal very convenient” with mean score value of 4.2370. It means that the particular factor is most agreed among the component of Automated Teller Machine services. Similarly, the lowest mean score is 3.5729 for the statement “ATM is the

cheaper way to conduct banking” which shows that the most of the respondents agrees less compared to other statements.

Likewise, the highest standard deviation is 0.94033 for the factor “I get the service of internet banking 24 hours per day and 7 days a week” which shows that high risk is associated with this particular factor among the factors of Automated teller machine. Similarly, the lowest standard deviation is 0.62464 for the factor “The ATM makes cash withdrawal very convenient” which represents it has low risk associated among the factors of Automated teller machine.

As an overall all the items/statement have the mean more than calculated scale 3 so the study concluded that the hypothesis (H3) is accepted and there is existing statically significant relationship between ATM and the customer satisfaction.

Table 4.8

Descriptive statistics of automated teller machine services

Statements	Frequency	Scale	Mean	Std. deviation
The ATM makes cash withdrawal very convenient	384	3	4.2370	.62464
There is less queuing using the ATM	384	3	3.9167	.85706
ATM is a cheaper way to conduct banking.	384	3	3.5729	.88792
Transaction on the ATM is Secured.	384	3	3.6979	.77990
Transactions on the ATM is reliable	384	3	3.8542	.65404
I get the service of ATM 24 hours per day and 7 days a week.	384	3	3.8281	.94033
ATM does not share my personal information with others.	384	3	3.9167	.88109

Source: Field Survey, 2022

4.2.2 Internet banking services

As presented in table 4.3, the highest score of mean is for “Internet banking helps customers to complete transactions quickly” with the mean value of 4.3672. It means that the particular factor is the most agreed factor among the component of internet banking services. Similarly, the lowest mean score is 3.5260 for the statement “Internet banking is cheaper way to conduct banking” which shows that most of the respondents agree less compared to other statements.

Likewise, the highest standard deviation is 0.96916 for the factor “Internet banking is cheaper way to conduct banking” which shows that high risk is associated with the particular factor among the factors of internet banking services. Similarly, the lowest standard deviation is 0.61262 for the factor “Internet banking is easy to use” which represents it has low risk associated among the factors of internet banking services.

Each item of Internet Banking Services (IBS) have the mean more than the average scale 3 so the study concluded that the Internet Banking Services and customers satisfaction have a positive relationship and it meets the H1.

Table 4.9

Descriptive statistics of internet banking services

Statements	Frequency	Scale	Mean	Std. deviation
Internet banking is easy to use	384	3	4.1927	.61262
Internet banking is safe for transactions.	384	3	3.9063	.66353
Internet banking is a cheaper way to conduct banking.	384	3	3.5260	.96916
Internet banking helps customers to complete transactions quickly.	384	3	4.3672	.72484
I get the service of internet banking 24 hours per day and 7 days a week.	384	3	4.3438	.67136
Using internet banking avoids contact with bank employees.	384	3	3.7813	.82015

Source: Field Survey, 2022

4.2.3 Mobile banking services

As presented in table 4.4, the highest score of mean is for “Mobile banking is easy to use” with the mean value of 4.3307. It means that the particular factor is the most agreed factor among the component of internet banking services. Similarly, the lowest mean score is 3.6536 for the statement “Mobile banking does not share my personal information” which shows that most of the respondents agree less compared to other statements.

Likewise, the highest standard deviation is 0.96807 for the factor “Mobile banking does not share my personal information” which shows that high risk is associated with the particular factor among the factors of mobile banking services. Similarly, the lowest standard deviation is 0.62372 for the factor “Mobile banking is easy to use” which represents it has low risk associated among the factors of mobile banking services.

The following table data shows the significant relationship between the Mobile Banking Services (MBS) and customer satisfaction. All of the single item's mean value is exceeding the test scale value so the H2 is accepted.

Table 4.10

Descriptive statistics of mobile banking services

Statements	Frequency	Scale	Mean	Std. deviation
Mobile banking is easy to use.	384	3	4.3307	.62372
Mobile banking is safe for transactions.	384	3	4.0677	.81153
Mobile banking is a cheaper way to conduct banking.	384	3	3.8464	.90824
Mobile banking helps customers to complete transaction quickly.	384	3	4.2578	.63303
I get the service of Mobile banking 24 hours per day and 7 days a week.	384	3	4.1615	.81113
Mobile banking does not share my personal information.	384	3	3.6536	.96807
Transactions on mobile banking are reliable.	384	3	3.8724	.66769

Source: Field Survey, 2022

4.2.4 Credit card services

As presented in table 4.5, the highest score of mean is for “Credit card helps to buy in advance and pay later” with the mean value of 4.0859. It means that the particular factor is the most agreed factor among the component of internet banking services. Similarly, the lowest mean score is 3.3802 for the statement “Credit card is cheaper way to conduct banking” which shows that most of the respondents agree less compared to other statements.

Likewise, the highest standard deviation is 0.80950 for the factor “I get the service of credit card 24 hours per day and 7 days a week” which shows that high risk is associated with the particular factor among the factors of credit card services. Similarly, the lowest standard deviation is 0.56862 for the factor “I trust the devices used in credit card” which represents it has low risk associated among the factors of credit card services.

In table 4.5 the mean value of each items exceeding the test scale value 3 so there is existed the positive relation between the Credit Card Services (CCS) and the customer satisfaction (CS). Also table shows that the hypothesis (H5) is accepted.

Table 4.11

Descriptive statistics of credit card services

Statements	Frequency	Scale	Mean	Std. deviation
Credit card is easy to use.	384	3	3.6406	.79227
Credit card helps to buy in advance and pay later.	384	3	4.0859	.71567
Credit card is a cheaper way to conduct banking.	384	3	3.3802	.76900
Credit card is very convenient when travelling.	384	3	4.0469	.77688
I get the service of credit card 24 hours per day and 7 days a week.	384	3	4.0078	.80950
I trust the devices used in Credit card.	384	3	4.0208	.56862
I expect to continue to use credit card in the future.	384	3	4.0729	.65826

Source: Field Survey, 2022

4.2.5 Debit card services

As presented in table 4.6, the highest score of mean is for “Debit card helps customers to complete transaction quickly” with the mean value of 4.1927. It means that the particular factor is the most agreed factor among the component of internet banking services. Similarly, the lowest mean score is 3.5521 for the statement “Debit card is cheaper way to conduct banking” which shows that most of the respondents agree less compared to other statements.

Likewise, the highest standard deviation is 0.90093 for the factor “I get the service of Debit card 24 hours per day and 7 days a week” which shows that high risk is associated with the particular factor among the factors of debit card services. Similarly, the lowest standard deviation is 0.55373 for the factor “Debit card is easy to carry” which represents it has low risk associated among the factors of debit card services.

In table 4.6 there all of the mean value is exceeding the test scale value so there is statistically significance relationship between the Debit Card Services (DCS) and Customer Satisfaction (CS). Due to all of higher mean value than the scale the hypothesis H4 is accepted.

Table 4.12

Descriptive statistics for debit card services

Statements	Frequency	Scale	Mean	Std. deviation
Debit card is easy to use.	384	3	4.0000	.74399
Debit card is a cheaper way to conduct banking.	384	3	3.5521	.84729
Debit card helps customers to complete transaction quickly.	384	3	4.1927	.62108
I get the service of debit card 24 hours per day and 7 days a week.	384	3	3.9818	.90093
Transaction via debit card is secured.	384	3	3.8464	.75433
Transaction via debit card is reliable.	384	3	3.8932	.70177
Debit card is easy to carry.	384	3	4.2370	.55373

Source: Field Survey, 2022

4.2.6 Electronic fund transfers services

As presented in table 4.7, the highest score of mean is for “Electronic fund transfer helps customers to complete transaction quickly” with the mean value of 4.3555. It means that the particular factor is the most agreed factor among the component of internet banking services. Similarly, the lowest mean score is 4.0391 for the statement “Electronic fund transfer is cheaper way to conduct banking” which shows that most of the respondents agree less compared to other statements.

Likewise, the highest standard deviation is 0.78483 for the factor “I get service of electronic fund transfer 24 hours per day and 7 days a week” which shows that high risk is associated with the particular factor among the factors of electronic fund transfer services. Similarly, the lowest standard deviation is 0.6105 for the factor “Electronic fund transfer is a cheaper way to conduct banking” which represents it has low risk associated among the factors of electronic fund transfer services.

In table 4.7 there all of the mean value is exceeding the test scale value so there is statistically significance relationship between the Electronic Fund Transfer Services (EFTS) and Customer Satisfaction (CS). Due to all of higher mean value than the scale the hypothesis H6 is accepted.

Table 4.13

Descriptive statistics of electronic fund transfer

Statements	Frequency	Scale	Mean	Std. deviation
Electronic fund transfer is easy to use.	384	3	4.2161	.74234
Electronic fund transfer is safe and reliable.	384	3	4.0755	.69465
Electronic fund transfer is cheaper way to conduct banking.	384	3	4.0391	.61405
Electronic fund transfer helps customers to complete transaction quickly.	384	3	4.3255	.68993
Electronic fund transfer makes transferring money between accounts easier.	384	3	4.2708	.67757
I get the service of electronic fund transfer 24 hours per day and 7 days a week.	384	3	4.2109	.78483

Source: Field Survey, 2022

4.2.7 Customer satisfaction

As presented in table 4.8, the highest score of mean is for “I am satisfied with the online service provided by the bank” with mean score of 4.2500. It means that the particular factor is the most agreed factor among the component of customer’s satisfaction. Similarly, the lowest mean score is 2.9844 for the statement “If there is a mistake, the bank can make it right quickly and effectively” which shows that most of the respondents agree less compared to other statements and it is the least preferable factor for being the influential factor in that particular customer satisfaction.

Likewise, the highest standard deviation is 0.93068 for the factor “I am satisfied with the service charges of my bank account” which shows that high risk is associated with this particular factor among the factors of customer satisfaction. Similarly, the lowest standard deviation is 0.55735 for the factor “Will you continue using the e-banking services from the same bank” which represents it has low risk associated among the factors of customer satisfaction.

In table 4.8 there except one item, all of the mean value is exceeding the test scale value so there is statistically significance relationship between the e-banking services and Customer Satisfaction (CS). The e-banking services that provided by the bank is reliable to the customers but mean value 2.9844 indicates that there is not satisfaction with the statement " If there is a mistake, the bank can make it right quickly and effectively" so the bank should be consider about it in future.

Table 4.14

Descriptive statistics of customer satisfaction

Statements	Frequency	Scale	Mean	Std. deviation
I am satisfied with the online services provided by my bank.	384	3	4.2500	.63821
The bank provides a sufficient number of ATM machines & card service centers.	384	3	3.4323	.90001
I am satisfied with the service charges of my bank account.	384	3	3.1927	.93068
I prefer using e-banking instead of visiting branch for making transactions.	384	3	3.8099	.67619
If there is a mistake, the bank can make it right quickly and effectively.	384	3	2.9844	.92528
Will you continue using the e-banking service from the same bank.	384	3	3.9922	.55735
Would you recommend other people to use the online banking service offered by the bank.	384	3	4.1875	.79571
I feel secure in providing sensitive information for online transaction.	384	3	3.9063	.91495

Source: Field Survey, 2022

4.3 Summary of descriptive analysis

The table 4.9 depicts that Electronic Fund Transfer Service (EFTS) ranks first i.e. the highest mean value of 4.1897. Similarly, Automated Teller Machine (ATM) ranks last i.e. sixth with mean value of 3.8605. Likewise, Mobile Banking Service (MBS), Internet Banking Service (IBS), Debit Card Services (DCS), Credit Card Services (CCS) ranks second, third, fourth and fifth with mean value of 4.0271, 4.0195, 3.9576 and 3.8936 respectively. From the validity perspective, Electronic Fund Transfer Service (EFTS) ranks first with the lowest standard deviation of 0.7005. Similarly, Automated Teller Machine (ATM) ranks sixth and has the highest standard deviation of 0.8036. Likewise, Credit Card Services (CCS), Debit Card Services (DCS), Internet Banking Services (IBS) and Mobile Banking Services (MBS) ranks second, third, fourth and fifth with the standard deviation of 0.7272, 0.7319, 0.7441 and 0.7748 respectively.

Table 4.15

Descriptive statistics summary

Components of e-banking services	Mean	Std. Deviation
Internet Banking Service (IBS)	4.0195	0.7441
Mobile Banking Service (MBS)	4.0271	0.7748
Automated Teller Machine (ATM)	3.8605	0.8036
Debit Card Service (DCS)	3.9576	0.7319
Credit Card Service (CCS)	3.8936	0.7272
Electronic Fund Transfer services (EFTS)	4.1897	0.7005
Customer Satisfaction (CS)	3.7194	0.7923

Source: Field Survey, 2022

4.4 Relationship between Dependent and Independent Variables

In order to assess the direction and strength of relationship of independent variables (Internet Banking, Mobile Banking, Automated Teller Machine, Debit Card Services, Credit Card Services, Electronic Fund Transfer Services) on dependent variables (customer satisfaction) Pearson's correlation was used. The sample correlation coefficient, denoted r , ranges between -1 and +1. The correlation between two variables can be positive (i.e. higher level of one variables are associated with higher levels of the other) or negative (i.e. higher level of one variables are associated

with lower levels of the other). The sign of the correlation coefficient indicates the direction of the association. The magnitude of the correlation coefficient indicates the strength of the association.

The measurement of the Pearson's correlation has five level of scales those are perfectly correlated, high degree correlated, moderate degree correlated, low degree correlated and no correlated. The segregation of the point as different scales is as below.

Perfect: If the value is near ± 1 , then it said to be a perfect correlation: as one variable increases, the other variable tends to also increase (if positive) or decrease (if negative).

High degree: If the coefficient value lies between ± 0.50 and ± 1 , then it is said to be a strong correlation.

Moderate degree: If the value lies between ± 0.30 and ± 0.49 , then it is said to be a medium correlation.

Low degree: When the value lies below $\pm .29$, then it is said to be a small correlation.

No correlation: When the value is zero.

According to the results reflected in Table, the analysis depicts that the r value is 0.386 Which indicates there is moderate degree of positive linear relationship between Internet Banking Service (IBS) and customer satisfaction (CS). Moreover, the p value is 0.000 which is less than 0.05. It's not technically zero. SPSS does not give p-values to more than three decimal places.

The statistical hypothesis test for this p-value is:

H₀: There is no significant relationship between Internet Banking Service (IBS) and Customers Satisfaction (CS).

H_a: There is a statistically significant relationship between Internet Banking Service (IBS) and Customers Satisfaction (CS).

Because $p < .05$, reject the null of no relationship and conclude that the relationship is statistically significant.

The analysis depicts that the r value is 0.652 which indicates there is high degree of positive linear relationship between Mobile Banking Services (MBS) and customer

satisfaction (CS). Moreover, p-value of this correlation is 0.000 which is less than 0.05. It's not technically zero. SPSS does not give p-values to more than three decimal places.

The statistical hypothesis test for this p-value is:

H₀: There is no significant relationship between Mobile Banking Service (IBS) and Customers Satisfaction (CS).

H_a: There is a statistically significant relationship between Mobile Banking Service (IBS) and Customers Satisfaction (CS).

Because $p < .05$, reject the null of no relationship and conclude that the relationship is statistically significant.

The analysis depicts that the r value is 0.615 which indicates there is high degree of positive linear relationship between Automated Teller Machine (ATM) and customer satisfaction (CS). Moreover, p-value of this correlation is 0.000 which is less than 0.05. It's not technically zero. SPSS does not give p-values to more than three decimal places.

The statistical hypothesis test for this p-value is:

H₀: There is no significant relationship between Automated Teller Machine (ATM) and Customers Satisfaction (CS).

H_a: There is a statistically significant relationship between Automatic Teller Machine (IBS) and Customers Satisfaction (CS).

Because $p < .05$, reject the null of no relationship and conclude that the relationship is statistically significant.

The analysis depicts that the r value is 0.513 which indicates there is high degree of positive linear relationship between Debit Card Services (DCS) and customer satisfaction (CS). Moreover, p-value of this correlation is 0.000 which is less than 0.05. It's not technically zero. SPSS does not give p-values to more than three decimal places.

The statistical hypothesis test for this p-value is:

H₀: There is no significant relationship between Debit Card Services (DCS) and Customers Satisfaction (CS).

H_a: There is a statistically significant relationship between Debit Card Services (DCS) and Customers Satisfaction (CS).

Because $p < .05$, reject the null of no relationship and conclude that the relationship is statistically significant.

The analysis depicts that the r value is 0.532 which indicates there is high degree of positive linear relationship between Credit Card Services (CCS) and customer satisfaction (CS). Moreover, p -value of this correlation is 0.000 which is less than 0.05. It's not technically zero. SPSS does not give p -values to more than three decimal places.

The statistical hypothesis test for this p -value is:

H₀: There is no significant relationship between Credit Card Services (CCS) and Customers Satisfaction (CS).

H_a: There is a statistically significant relationship between Credit Card Services (CCS) and Customers Satisfaction (CS).

Because $p < .05$, reject the null of no relationship and conclude that the relationship is statistically significant.

The analysis depicts that the r value is 0.683 which indicates there is high degree of positive linear relationship between Electronic Fund Transfer Services (EFTS) and customer satisfaction (CS). Moreover, p -value of this correlation is 0.000 which is less than 0.05. It's not technically zero. SPSS does not give p -values to more than three decimal places.

The statistical hypothesis test for this p -value is:

H₀: There is no significant relationship between Electronic Fund Transfer Services (EFTS) and Customers Satisfaction (CS).

H_a: There is a statistically significant relationship between Electronic Fund Transfer Services (EFTS) and Customers Satisfaction (CS).

Because $p < .05$, reject the null of no relationship and conclude that the relationship

is statistically significant.

Table 4.16

Correlations of e-banking services and customer satisfaction

		IBS	MBS	ATM	DCS	CCS	EFT	CS
IBS	Pearson Correlation	1	.723**	.385**	.484**	.271**	.391**	.391**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
	N	384	384	384	384	384	384	384
MBS	Pearson Correlation	.723**	1	.721**	.721**	.551**	.589**	.652**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000	0.000
	N	384	384	384	384	384	384	384
ATM	Pearson Correlation	.385**	.721**	1	.735**	.555**	.608**	.615**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000	0.000
	N	384	384	384	384	384	384	384
DCS	Pearson Correlation	.484**	.721**	.735**	1	.637**	.532**	.513**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000
	N	384	384	384	384	384	384	384
CCS	Pearson Correlation	.271**	.551**	.555**	.637**	1	.601**	.532**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		0.000	0.000
	N	384	384	384	384	384	384	384
EFT	Pearson Correlation	.391**	.589**	.608**	.532**	.601**	1	.683**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000
	N	384	384	384	384	384	384	384
CS	Pearson Correlation	.391**	.652**	.615**	.513**	.532**	.683**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	
	N	384	384	384	384	384	384	384

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

Source: Field Survey, 2022

4.5 Electronic banking services and customer satisfaction

Linear regression analysis was done to find out the E-banking on customer satisfaction in Dhangadhi. The independent variables are Automated Teller Machine, Internet Banking Services, Mobile Banking Services, Credit Card Services, Debit Card Services and Electronic Fund Transfer Services and the dependent variable is customer satisfaction.

The model fit summary of regression analysis has been reported in table 4.11. Study found that the adjusted R^2 of this model is 0.574 with the $R^2 = .581$ that means that the linear regression explains 57.4% of the variance in the data.

Table 4.17

Model summary

Adjusted	R Std. Error of the		
Model	R	R Square	Square
Estimate 1	.762 ^a	.581	
	.574	2.48323	

Source: Field Survey, 2022

a. Predictors: (Constant), IBS, MBS, ATM, DCS, CCS, EFTS

b. Dependent variable: CS

The F-ratio in the ANOVA (Table 4.12) tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F(6, 377) = 87.091$, $p(.000) < .05$ (i.e., the regression model is a good fit of the data).

Table 4.18

Anova

Model	Sum Squares	Df	Mean Square	F	Sig.
Regression	3222.250	6	537.042	87.091	.000 ^b
Residual	2324.740	377	6.166		
Total	5546.990	383			

Source: Field Survey, 2022

a. Dependent Variable: CS

b. Predictors : (Constant), IBS, MBS, ATM, DCS, CCS, EFTS

Given that, the t-value and corresponding p-value are in the "t" and "Sig." columns (Table 4.18), respectively, the tests tell us that Mobile Banking Services (MBS) has the $p(.000) < 0.05$ and Electronic fund Transfer Services (EFTS) $p(.000) < 0.05$ are significant, but Internet Banking Services (IBS), Automated Teller Machine (ATM), Debit Card Services (DCS) and Credit Card Services (CCS) are not significant because they have a p value greater than the level of significance. IBS, ATM, DCS and CCS have the p value and level of significance as $p(.106) > 0.05$, $p(.010) > 0.05$, $p(.049) > 0.05$ and $P(.094) > 0.05$ respectively. This means that the explanatory variable Internet Banking Services (IBS), Automated Teller Machine (ATM), Debit Card Services (DCS) and Credit Card Services (CCS) are no more useful in the model, when the other two variables are already in the model.

Like the standard error of model fit discussed above, the standard error of the coefficients in regression output are also wished to be as small as possible. It reflect show wrong study could be, while estimating its value. For instance, in this table relative to the coefficient .0442 of Electronic Fund Transfer services (EFTS) its standard error .053 is small.

Further, statistical estimates of the predictors of regression model have been reported in table 4.18. The results of the findings showed that the effect of Internet Banking service (IBS) whose ($b = -0.122$, $p < 0.05$) on Customer Satisfaction (CS) was found to be statistically insignificant because p-value is less than 0.05. The standard error and the coefficient of this IBS are 0.075 and -0.122 respectively. IBS has the higher standard error it means that was insignificant and not useful for the model.

The effect of Mobile Banking Services (MBS) whose ($b = 0.420$, $p < 0.05$) on Customer Satisfaction (CS) was found to be statistically significant because p-value is less than 0.05. Its standard error and the coefficient are 0.073 and 0.420 respectively.

The effect of Automated Teller Machine (ATM) whose ($b = 0.182$, $p < 0.05$) on Customer Satisfaction (CS) was found to be statistically insignificant because p-value is less than 0.05. Its standard error and the coefficient are 0.070 and 0.182 respectively.

The effect of Debit card services (DCS) whose ($b = -0.143$, $p < 0.05$) on Customer Satisfaction (CS) was found to be statistically insignificant because p-value is more than 0.05. Its standard error and the coefficient are 0.072 and -0.143 respectively.

The effect of Credit Card services (CCS) whose ($b = 0.099$, $p < 0.05$) on Customer Satisfaction (CS) was found to be statistically insignificant because p-value is more than 0.05. Its standard error and the coefficient are 0.059 and 0.099 respectively.

The effect of Electronic Fund Transfer Services (EFTS) whose ($b = 0.442$, $p < 0.05$) on Customer Satisfaction (CS) was found to be statistically significant because p-value is less than 0.05. Its standard error and the coefficient are 0.053 and 0.442 respectively. Among other e-banking services it has the lowest standard error which shows the consistency.

In table 4.18, B represents if 1% changed in independent variables, the dependent variable will be changed as B ratio. Suppose that If Electronic Fund Transfer Services (EFTS) is increase/decrease by one percent the effect will be placed on customers satisfaction by 0.442 (44.2%) percent.

The overall regression line of this study is:

$$Y = 6.115 + (-0.122) \times \text{IBS} + 0.420 \times \text{MBS} + 0.182 \times \text{ATM} + (-0.143) \times \text{DCS} + 0.099 \times \text{CCS} + 0.442 \times \text{EFTS}$$

Table 4.19
Coefficients

Model		Unstandardized		Standardized		t	Sig.
		Coefficients		Coefficients			
		B	Std. Error	Beta			
1	(Constant)	6.115	1.603			3.814	0.000
	IBS	-0.122	0.075	-0.084		-1.620	0.106
	MBS	0.420	0.073	0.408		5.709	0.000
	ATM	0.182	0.070	0.151		2.588	0.010
	DCS	-0.143	0.072	-0.115		-1.979	0.049
	CCS	0.099	0.059	0.081		1.678	0.094
	EFTS	0.442	0.053	0.395		8.395	0.000

Source: Field Survey, 2022

4.6 Challenges of electronic banking

Electronic banking is the growing technology of banking sector in order to enhance their service area and customer satisfaction as well as number of users. This innovative world is rapidly launching the new technology day by day so there might be exists some problems and challenges regarding the electronic banking services. This study was conducted to discover the challenges and problems regarding the electronic banking services.

Table 4.20

Challenges of electronic banking

Items	Frequency	Yes	Percent	No	Percent	Chall. Percent
Service Error	384	192	50	192	50	50
Privacy	384	54	14	330	86	14
Security	384	54	14	330	86	14
Reliability	384	87	22.7	297	77.3	22.7
Accuracy	384	84	22	300	78	22

Source: Field Survey, 2022

According to the response of the respondent most of the given challenges has the low rating of all the items. This study was given the questionnaire to the respondent to discover whether there is existing challenges on service error, privacy, security, reliability and accuracy or not. According to the findings of table 4.14 most of the respondents are suffering from the service error which occupied the 50%. Similarly reliability problem also the second challenges of the electronic banking which occupied 22.7%. Furthermore, this study concluded that there are less challenges on factors privacy, security and accuracy they occupied 14%, 14% and 22% respectively.

As an overall all the challenges of the electronic banking services are not much rather than its benefits. So the relevant bank or electronic banking services provided bank must continue its services by considering the challenges that noticed by the users.

4.7 Prospects of electronic banking

This study is emphasized to find out the prospects of electronic banking services. The survey was conducted to know that, there are extremely benefits or not. Study determined the five factors that directly help to benefit the customers as well as them

helps to enhance the customers' satisfaction. Those five factors are easy, quick, 24/7 services, charges and fees, and queuing. The responses of the respondents are showing in Table 4.21.

Table 4.21

Prospects of electronic banking

Items	Frequency	Yes	Percent	No	Percent	Beft. Percent
Easy	384	320	83.3	64	16.7	83.3
Quick	384	346	90	38	10	90
24/7 Services	384	297	77.3	87	22.7	77.3
Charges & Fees	384	307	80	77	20	80
Queuing	384	323	84	61	16	84

Source: Field Survey, 2022

In table 4.21, there are majority of the respondents are the positive with the electronic banking services. Most of the respondents are agree with it does the transactions quickly which is 90%. Similarly, respondents are using electronic banking services to avoid the queuing so they are feeling they are benefitted from this factor so it occupied 84 % out of the 100%. Also, 24 hours service per day and 7 days in a week (24/7) is 77.3% which showing people are benefitted from any time banking services. Furthermore, Charges & fees and the easiness of the services are accepting by the customers in positively. So they are 80% and 83.3% respectively.

As an overall, the government employees are happy with the electronic banking services that indicate there are few challenges and most of the prospects of the electronic banking. The perspective of government employees towards the electronic banking services is significant because they even can make banking transaction in their busy schedule of work. This study concluded that there is no any bad perception of the respondents about the electronic banking services that provided by the bank so bank and financial institutions must do continue to promote their services.

4.8 Summary of result of hypothesis

Table 4.22

Summary of result of hypothesis

Variables	Hypothesis	P- value	Results
Internet Banking Services (IBS)	H1: There is significant relationship between Internet Banking Services(IBS)andcustomers' satisfaction.	000	Accepted
Mobile Banking Services (MBS)	H2: There is significant relationship between Mobile Banking Services (MBS) and customers' satisfaction.	000	Accepted
Automated Teller Machine (ATM)	H3: There is significant relationship between Automated Teller Machine (ATM) and customers' satisfaction.	000	Accepted
Debit Card Services (DCC)	H4: There is significant relationship between Debit Card Services (DCC) and customers' satisfaction.	000	Accepted
Credit Card Services (CCS)	H5: There is significant relationship between Credit Card Services (CCS) and customers' satisfaction.	000	Accepted
Electronic Fund Transfer Services (EFTS)	H6: There is significant relationship between Electronic Fund Transfer Services (EFTS) and customers' satisfaction.	000	Accepted

4.9 Major findings

The key findings of the study are summarized as follows.

- Electronic Fund Transfer Services (EFTS) has the highest mean value and Automated Teller Machine (ATM) has the lowest mean value. Hence, it can be implied that banking customers were more satisfied with Electronic Fund Transfer Services (EFTS) as bank gives more preference to EFTS and less priority to Automated Teller Machine Service (ATM) in terms of customer satisfaction.
- EFTS has the lowest variation and ATM has highest variation. This shows

that banking institutions in Nepal have been providing EFTS services more than other services.

- The r value of ATM and customer satisfaction which indicates that there is high degree of positive relationship. P value generated is 0.000 Which indicates that ATM and customer satisfaction has statically significant association.
- The r value of Internet Banking Services (IBS) and customer satisfaction which indicates there is low degree of positive relationship. Moreover, the p value is 0.000 which is less than 0.05. It indicates that Internet Banking Services (IBS) and customer satisfaction has statically significant association.
- The r value of Mobile Banking Services (MBS) and customer satisfaction which indicates there is high degree of positive relationship. Moreover, the p value is 0.000 which is less than 0.05. It indicates that Mobile Banking Services (MBS) and customer satisfaction has statically significant association.
- The r value of Credit Card Services (CCS) and customer satisfaction which indicates there is high degree of positive relationship. Moreover, the p value is 0.000 which is less than 0.05. It indicates that Credit Card Services (CCS) and customer satisfaction has statically significant association.
- The r value of Debit Card Services (DCS) and customer satisfaction Which indicates there is high degree of positive relationship. Moreover, the p value is 0.000 which is less than 0.05. It indicates that Debit Card Services (DCS) and customer satisfaction has statically significant association.
- The r value of Electronic Fund Transfer Services (EFTS) and customer satisfaction which indicates there is high degree of positive relationship. Moreover, the p value is 0.000 which is less than 0.05. It indicates that Electronic Fund Transfer Services (EFTS) and customer satisfaction has statically significant association.
- Hypothesis 1 was accepted. The result showed that the impact of ATM on customer satisfaction was found to be statistically significant.
- Hypothesis 2 was accepted. The result showed that the impact of Internet banking services on customer satisfaction was found to be statistically

significant.

- Hypothesis 3 was accepted. The result showed that the impact of Mobile banking services on customer satisfaction was found to be statistically significant.
- Hypothesis 4 was accepted. The result showed that the impact of Credit Card services on customer satisfaction was found to be statistically significant.
- Hypothesis 5 was accepted. The result showed that the impact of Debit Card services on customer satisfaction was found to be statistically significant.
- Hypothesis 6 was accepted. The result showed that the impact of Electronic fund transfer services on customer satisfaction was found to be statistically significant.

4.10 Discussion

This study was conducted with the authentic data and genuine statistical tools so finding also the authentic and genuine as per the analysis. This study is massively acceptable because previous study is supported to its findings. In different demographic factors may effect to the findings and gives the different findings though maximum of the previous studies are supporting to this study findings.

Ishengoma, (2011) found that the 79% of the total population are using Mobile Banking Services (MBS) and almost 100% of them are satisfied with the e-banking services. Further, uneducated and illiterate users are facing some problem about it operation. This study was conducted with the government employees so there is no any problem about operation so this is supporting to its finding.

Woldie, (2008) concluded that the Internet Banking Service (IBS) is an infant stage so the customers are still visiting the bank branch which statement is contradict with this study finding. In this scenario many of financial institutions are adopted the ICT so it is on trending now. Due to presence of e- wallet services (e-sewa, Khalti, IME Pay) , e- banking also rising in these days. Similarly, people are interested cashless transaction on utility payment (electricity, insurance, water supply, air ticket, to pup & so on) and shopping (purchase something) so they prefer ATM, EFTS,MBS,CCS and DCS, Khatri, (2013) concluded that majority of the account holders use e-banking services but they have not developed the habit of utilizing this facility which statement is supporting to its findings. This study also concluded that the many government

employees are using the e-banking services and satisfied with it but not fully adopting it. Awareness about internet banking and its benefits and security were identified as the major reason behind less utilization of e-banking among customers.

Ahmad, (2011) concluded that adoption of e-banking had a positive effect on Jordanian commercial bank customers' satisfaction, loyalty and positive WOM which supports this study findings. (John & Rotimi, 2014) accept that there was a significant relationship between electronic banking and customers satisfaction. (Isibor, 2018) also found that e-banking has improved both customers satisfaction and caused economic growth.

CHAPTER V

SUMMARY AND CONCLUSION

This chapter presents discussion, conclusion and implications that could be drawn from the study. It is divided into three sections. In first section, the results will be discussed, the second section draws the conclusion of the study and finally, in the last section, the implications are drawn.

5.1 Summary

Electronic banking, also known as online banking or internet banking, has become an integral part of modern banking services. However, it comes with its own set of issues and challenges that can impact customer satisfaction. Here are some current issues related to electronic banking and their potential effects on customer satisfaction.

Security breaches, data leaks, and phishing attacks are significant concerns in electronic banking. Customers worry about the safety of their financial information and transactions. Technical issues, such as system outages or slow response times, can disrupt online banking services. Customers expect these services to be available 24/7, and any downtime can lead to dissatisfaction. Issues with app functionality, compatibility with various devices, and frequent updates can affect the customer experience. Banks must adhere to strict regulations related to electronic banking, including Know Your Customer (KYC) and anti-money laundering (AML) requirements. Ensuring compliance while maintaining a smooth customer experience can be challenging.

The main objectives of the study explored the extent to analyze the present pattern of using e- banking to investigate the multidimensional concept of e- banking service quality. The basic limitation of this study is that it only considers customers perspective of e-banking and it does not take in to consideration what perspective do all bankers employees have on the technology.

The rationale for electronic mobile banking is rooted in its ability to provide convenient, secure, and accessible financial services to customers while offering cost-saving and operational efficiency benefits to financial institutions. This technology has become an integral part of modern banking, catering to the evolving needs of consumers in an

increasingly digital world. The limitation of electronic mobile banking it is essential to be aware of these limitations and take appropriate precautions to mitigate risks.

Research gap weakness is pass found in the past studies, customers perceive electronic banking services as insecure or susceptible to fraud, it can erode trust and satisfaction. Banks need to continually invest in security measures and communicate their commitment to protecting customer data. Electronic banking services need to be available to customers around the clock. The data was collected through an adapted questionnaire by using emails and messaging applications.

A questionnaire was administered with a sample of 384 respondents from Dhangadhi. Mediation and moderation analyses were performed to explore the role of e-banking service on customer satisfaction.

Linear regression analysis was done to find out the E-banking on customer satisfaction in Dhangadhi. The independent variables are Automated Teller Machine, Internet Banking Services, Mobile Banking Services, Credit Card Services, Debit Card Services and Electronic Fund Transfer Services and the dependent variable is customer satisfaction.

The model fit summary of regression analysis has been reported in table 4.11. Study found that the adjusted R^2 of this model is 0.574 with the $R^2 = .581$ that means that the linear regression explains 57.4% of the variance in the data.

The F-ratio in the ANOVA (Table 4.12) tests whether the overall regression model is a good fit for the data. The table shows that the independent variables statistically significantly predict the dependent variable, $F(6, 377) = 87.091, p(.000) < .05$ (i.e., the regression model is a good fit of the data).

Further, statistical estimates of the predictors of regression model have been reported in table 4.13. The results of the findings showed that the effect of Internet Banking service (IBS) whose ($b = -0.122, p < 0.05$) on Customer Satisfaction (CS) was found to be statistically insignificant because p-value is less than 0.05. The standard error and the coefficient of this IBS are 0.075 and -0.122 respectively. IBS has the higher standard error it means that was insignificant and not useful for the model.

This study was conducted not only to improve the e-banking loyalty through utilizing and offering high-quality services in e-banking environment, but also to check the behavioral changes in account holders during the pandemic times. The findings are consistent with earlier researchers (Blut et al., 2015; Chaudhry et al., 2009; Safi and Awan, 2018; Shankar and Jebarajakirthy, 2019) with some exceptions probably because of this hard time of COVID-19. The insignificant relationship of privacy and security and customer service and support was proved, mediation wasn't expected (Quach et al., 2016). The findings are novel as people usually do not pay attention toward website design because of busy schedules; however, they are concerned about website design and reliability. The account holders need to be satisfied from the customer services and support which then becomes a source of loyalty during COVID-19. Therefore, the indirect effect of reliability and website design on EBL via EBS proved to be partially mediated however the customer service and support confirmed full mediation. The rejected indirect effect of customer service and support on e-banking loyalty via e-banking satisfaction might be the reason people did not find their problems are fully resolved by the customer service and support department during the pandemic times. The customers will never be satisfied and loyal until and unless his problem and concern will not be addressed, hence serious concern of banks and similar organizations is needed especially during the hard times same as Coronavirus pandemic. The structured responses recorded or generated through ICT or artificial intelligence applications has a limited amount of information and may not solve the problem.

5.2 Conclusions

The main objectives of the study explored the extent to analyze the present pattern of using e-banking to investigate the multidimensional concept of e-banking service quality and the impact of the latter on the quality of the relationship (commitment, trust and satisfaction) between consumers and their primary financial institution. The study shows the confirm that trust significantly and positively impacts commitment/satisfaction. Electronic banking service quality dimensions also influence trust and commitment/satisfaction. Trust is associated with security/privacy and practicality (regarded as utilitarian factors), while commitment/satisfaction is driven by enjoyment and sociality. The study findings have important implications from the dual standpoint of theory and practice. To our knowledge, ours is the first study to assess the

impact of the dimensions of mobile banking service quality on relationship quality respecting financial institutions, thereby contributing to bank marketing theory. The research conducted indeed extends beyond attitudes to technology and adoption of mobile capability (short-term goal) and assesses the impact of mobile service quality on long term relationships. The result is expanded knowledge on how financial institutions can use this recently integrated channel to interact more effectively and bond with their customer base.

This study examine the empirically explore e-banking service on customer satisfaction with quality and its impact on the e-banking service through a mediating impact of e-banking satisfaction. The account holders of three domestic systemically important banks of Nepal were surveyed during COVID-19 to examine the electronic services provided by these banks. The study findings delineate that reliability and website design proved to increase e-banking automated teller machine, internet banking, mobile banking, debit and credit card services, electronic fund transfer, particularly during COVID-19. The link between e-banking privacy and security and e-banking was proved as fully mediated by e-banking satisfaction; however, indirect effect of the reliability and website design with e-banking service was partially mediated. The current circumstances progress the requirement of e-banking, had a critical influence on the usage of conventional banking and focused on the influence during the pandemic, however their preferences related to trust, safety and security, reliability, website designs and customer support, and an interesting change from previous literature is noted. The probable reason is the hard times of the ongoing pandemic (COVID-19). Moreover, service providers can also understand customer's perception and factors which make them more satisfied and loyal toward e-banking services. Also, this study serves as a source of understanding for customers' priorities and focuses required from e-banking services to become loyal and satisfied from the online banking platforms during the lockdown. Additionally, it assists banks in strategic decisions making for improvements in the e-banking future of nepal and manage COVID-19 and digitalization.

5.3 Implications

The findings of the study contribute to bankers, businessman, employees, law and policy makers, scholars, customers, academicians and researchers in similar field. This study found that Internet Banking Service (IBS), Mobile Banking Service (MBS), Automated Teller Machine (ATM), Debit Card Services (DCS), Credit Card Services (CCS) and Electronic Fund Transfer Services (EFTS) had statistically significant impact on customer's satisfactions.

According to the digital banking is one of the most popular upgrading systems for the make banking transactions. People are choosing different digital banking instruments to conduct banking activities in easy and convenient way. Due to the pace of technology change most of the financial institutions are adopting the digital banking services to conduct cashless transactions. Banks and financial institutions are providing the digital banking services to those customers who have access of internet. Without access of internet there is no any use of digital banking instruments. Different Nepalese financial institutions are providing the different digital banking services to their customers like, SMS banking, Telephone Banking, Internet Banking, ATM, Debit Card, Credit Card and Electronic fund transfer.

This study was collected the data regarding to satisfaction of government employees about digital banking services they used. Findings showed that the financial institutions are still unable to solve the problem quickly and effectively so the digital banking providing banks and financial institutions must consider about it and should established the direct support desk to solve the error properly.

As the bank's commitment they are providing digital banking services with 24/7 operating hour but actually the government employees are not satisfied with this statement because they have faced the error on ATM booth many times so this study recommend that the relevant bank must consider it and established the specific team to take care the health situation of the ATM system. Also, the banks and financial institutions must increase the ATM machines to avoid the queuing to withdraw the money.

Most of the digital banking users are not fully satisfied with the charges and fees the bank cuts. The study recommended that the bank must reduce the cost of digital

banking instruments to promote cashless transaction and reduce the manual visiting of branches.

Among the digital banking services the credit card is not easily getting from the banks and financial institutions. If the banks make some loose policy to use this service, most of the job holders will use it. So the study recommended that the credit card services must make easy to use.

5.4 Implications for the researchers

- Research Implications digital banking services have become one of the mainstream banking strategies globally. In spite of its numerous dimensions and advantages there have been some challenges which hinders its optimum usage both to the public and the bank themselves.
- The complexities associated with digital banking patronage are so large that a single study could not discover all. Again, due to limited resources and time this study could sample only 384 government employees of Dhangadhi Metropolitan even though the study could have covered a wide setting.
- The future researchers can be increased the sample size of the relevant study.
- This study is only focus to cover the satisfaction of the government employees of Dhangadhi metropolitan but further study can collect the data from all of digital banking users to find out the satisfaction. Moreover, future researcher can conduct the study of all over the Nepal by collecting the data from different region.
- The methodology of this study was descriptive but future researcher can use the SEM methodology to get the results.

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Appendix
Questionnaire for e-Banking Customers
Questionnaire

Dear Valued e-Banking Customers, I am conducting a research study on “**Electronic Banking and Customer Satisfaction in Dhangadhi**”. I am very pleased to have you as my respondent and really appreciate your contribution to this academic exercise. Your inputs will provide the most valuable information in disseminating finding for my research project. The information given will be treated as private and confidential and will only be used for the purpose of this research only.

Sincerely yours,

Ramesh Padal

Section One: Demographic Information

Name of the Customer (Optional):

1. Age of respondents

- a) 18-30 years and above b) 31-40 years c) 41-50 years d) 51 years

2. Gender

- a) Male b) Female c) Other

3. Marital Status

- a) Married b) Unmarried c) widow d) Divorced

3. Education

- a) Under Graduate b) Graduate c) Master’s Degree and above

4. Annual Income

- a) Up to Rs. 100,000
Rs. 500,000 b) Rs. 101,000 – Rs. 300,000 c) Rs. 301,000-
Rs. 500,000
d) Rs. 501,000 and above

What is your Occupation?

- a) Private Employee b) Government Employee c) Business Owner d) student e) Others

if you are a government employee please mention your designation.

- a) Forth Level b) Fifth Level c)Sixth Level d) Seventh Level
 e) Eight Level f) Ninth level g) Tenth Level
 h) If other mention.....

Where is your working area ?

- a) Dhangadhi b) Kathmandu c) Butwal d) Some other parts of Nepal

5. Since when have you been using E- banking Services?

- a) Less than 1 year b) 1-2 years c) 2-3 years d) 3-5 years
 e) More than 5 years

6. How did you come to know about E-banking services provided by your bank?

- a) From bank officials b) Advertisement in print media c) Television Advertisement
 d) On line advertisement e) From family members f) From Friends
 g) Any other (specify)

7. Which one is the main reason for you to use e-banking?

- a) Better Information b) Simplification of processes c) 24 Hr. service
 d) Limited time available

8. In your opinion do you think there is any connection between e-banking and customer satisfaction?

- i). Yes [] ii). No []

9. What would encourage you to use more the electronic banking services?

- a) Rewards (discounted fees for certain services) b) Simpler/ clearer service
 c) Higher Security d) Free transactions e) Other (specify)

Section two: Internet banking

No	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	strongly Agree
1	I understand what it means by Internet banking.					
2	Internet Banking is easy to use.					
3	Internet Banking is safe for business transactions.					
4	Internet banking is a cheaper way to conduct banking.					
5	Internet banking helps customers to complete transaction quickly.					
6	Internet banking can do everything for me an employee does.					
7	Internet Banking makes transferring money between accounts easier.					
8	I get the service of Internet banking 24 hours per day and 7 days a week.					
9	I do most of my banking transactions with Internet Banking					
10	I think using Internet banking puts my privacy at risk.					
11	I trust the devices used in Internet banking.					
12	I expect to continue to use Internet banking in the future.					
13	Controlling my bank account has improved after using Internet Banking					
14	Using Internet banking avoids contact with bank employees.					
15	When compared with the cost, do you think the quality of Internet Banking that you received is appropriate.					

Mobile banking

No	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	strongly Agree
1	I understand what it means by Mobile banking.					
2	Mobile banking is easy to use.					
3	Mobile banking is safe for business transactions.					
4	Mobile banking is a cheaper way to conduct banking.					
5	Mobile banking helps customers to complete transaction quickly.					
6	Mobile banking can do everything for me an employee does.					
7	Mobile banking makes transferring money between accounts easier.					
8	I get the service of Mobile banking 24 hours per day and 7 days a week.					
9	I do most of my banking transactions with Mobile banking.					
10	I think using mobile banking puts my privacy at risk.					
11	I trust the devices used in Mobile banking.					
12	I expect to continue to use Mobile banking in the future.					
13	Controlling my bank account has improved after using Mobile banking.					
14	Using Mobile banking avoids contact with bank employees.					
15	When compared with the cost, do you think the quality of Mobile banking service that you received is appropriate.					

ATM (Automated teller machine)

No	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	strongly Agree
1	I understand what it means by ATM.					
2	ATM is easy to use.					
3	ATM is safe for business transactions.					
4	ATM is a cheaper way to conduct banking.					
5	ATM helps customers to complete transaction quickly.					
6	ATM can do everything for me an employee does.					
7	I get the service of ATM 24 hours per day and 7 days a week.					
8	I do most of my banking transactions with ATM.					
9	I think using ATM puts my privacy at risk.					
10	I expect to continue to use ATM in the future.					
11	Using ATM avoids contact with bank employees.					
12	When compared with the cost, do you think the quality of ATM that you received is appropriate.					

Debit card service

No	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	strongly Agree
1	I understand what it means by Debit Card Service.					
2	Debit Card is easy to use.					
3	Debit card is safe for business transactions.					
4	Debit card is a cheaper way to conduct banking.					
5	Debit card helps customers to complete transaction quickly.					
6	Debit Card can do everything for me an employee does.					
7						
8	I get the service of Debit Card 24 hours per day and 7 days a week.					
9	I do most of my banking transactions Debit card.					
10	I think using Debit card puts my privacy at risk.					
11	I trust the devices used in Debit card.					
12	I expect to continue to use Debit card in the future.					
13						
14	Using Debit card avoids contact with bank employees.					
15	When compared with the cost, do you think the quality of debit card service that you received is appropriate.					

Credit card services

No	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	strongly Agree
1	I understand what it means by Credit Card.					
2	Credit Card is easy to use.					
3	Credit card is safe for business transactions.					
4	Credit Card is a cheaper way to conduct banking.					
5	Credit Card helps customers to complete transaction quickly.					
6	Credit card can do everything for me an employee does.					
8	I get the service of Credit Card 24 hours per day and 7 days a week.					
9	I do most of my banking transactions with Credit Card.					
10	I think using Credit card puts my privacy at risk.					
11	I trust the devices used in Credit Card.					
12	I expect to continue to use Credit Card in the future.					
14	Using Credit Card avoids contact with bank employees.					
15	When compared with the cost, do you think the quality of Credit Card that you received is appropriate.					

Electronic fund transfer

No	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	strongly Agree
1	I understand what it means by Electronic Fund Transfer.					
2	Electronic fund transfer is easy to use.					
3	Electronic Fund Transfer is safe for business transactions.					
4	Electronic Fund Transfer is a cheaper way to conduct banking.					
5	Electronic Fund Transfer helps customers to complete transaction quickly.					
6	Electronic Fund Transfer can do everything for me an employee does.					
7	Electronic Fund transfer makes transferring money between accounts easier.					
8	I get the service of Electronic Fund Transfer 24 hours per day and 7 days a week.					
9	I do most of my banking transactions with E-Fund Transfer.					
10	I think using electronic fund transfer puts my privacy at risk.					
11	I trust the devices used in Electronic fund transfer.					
12	I expect to continue to use Electronic fund transfer in the future.					
13	Controlling my bank account has improved after using E-fund transfer.					
14	Using E-fund transfer avoids contact with bank employees.					
15	When compared with the cost, do you think the quality of e-fund transfer service that you received is appropriate.					

Rate e-banking services as per your experience.

Sn	E-banking Services	1	2	3	4	5	6
1	Internet Bankig						
2	Mobile Banking						
3	Debit Card Services						
4	Credit card Services						
5	Electronic fund Transfer						
6	ATM service						

Section Three: Customer satisfaction

No	Questions	1	2	3	4	5
		Strongly Disagree	Disagree	Neutral	Agree	strongly Agree
1	I am satisfied with the online services provided by my bank.					
2	The bank provides a Sufficient number of ATM machines.					
3	I don't expect the bank's online service to have an error or defect in the service.					
4	How well do you expect the bank's online banking service to respond to your personal needs?					
5	I am satisfied with the service charges of my bank account.					
6	I prefer using E-banking instead of visiting branch for making transactions.					
7	If there is a mistake, the bank can make it right quickly and effectively.					
8	The bank always provides the services at the promised time.					
9	The behaviour of the bank's employees					

	instills confidence in customer.					
10	Employees of bank have the knowledge to answer customer questions .					
11	Will you continue using the Ebanking service from the same bank.					
12	Would you recommend other people to use the online banking service offered by the bank.					
13	when I use mobile banking Hackers might control my bank account .					
14	Even if not monitored, I would trust Mobile banking to do the job right.					
15	I feel secure in providing sensitive information (like credit card details) for online transaction					

Thank you for completing our survey and your answers are highly appreciated