

# **CUSTOMER SATISFACTION TOWARDS CARDLESS CASH WITHDRAWAL FROM ATM**

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## **CERTIFICATION OF AUTHORSHIP**

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

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## REPORT OF RESEARCH COMMITTEE

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Figure 3.1: Research Framework

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## ABBREVIATIONS

ANOVA	Analysis of Variance
ATM	Automated Teller Machine
BACS	Bankers Automated Clearing Service
BFI	Bank and Financial Institutions
CB	Card less Banking
Cs	Customer Satisfaction
E-commerce	Electronic Commerce
EDI	Electronic Data Interchange
EFT	Electronic Fund Transfer
FDIC	Federal Deposit Insurance Corporation
ICT	Information and communication Technology
IT	Information Technology
M-banking	Mobile banking
POS	Point of Sale
QR	Quick Response
RTGS	Real Time Gross Settlement
SEM	Structural Equation Mode
SMS	Short Message Service
SPSS	Statistical Package for Social Scientists

## ABSTRACT

CB is described as the withdrawal and/or transfer of funds by banked, under banked, or unbanked consumers using Automated Teller Machines (ATMs) through a wireless network (Karthikeyan 2012). The main purpose of this research is to examine the impact of cardless cash withdrawal from ATM. In Nepal, at present there are various financial institutions, among them only certain service providers have been selected for research purpose. Only certain service providers have been purposively selected in terms of their aggressive adaptation, system up-gradation to digital products and selling digital products to customers on a huge basis. Thus purposive sampling techniques have been employed.

As per nature of research, only primary data were used for analysis. Similarly primary data are collected through questionnaire. This study uses descriptive research design and casual comparative research design. Appropriate frequency tables were used, a coefficient correlation and multiple regression analysis is also used to explain the relationship between the variables and present the findings. The conclusion of this research is Cardless cash withdrawal from ATM had a positive and significant impact on customer satisfaction. Still majority of the population are unaware about Cardless cash withdrawal from ATM and their uses, so financial institutions need to conduct awareness programs for maximum use of cardless services, locating ATM booths at convenient places, making cardless transactions more secure and reliable.

*Key Words: Customer satisfaction, cardless withdrawal, Accessibility, reliability, Information and Communication Technology, Privacy and security and convenience.*

# CHAPTER-I

## INTRODUCTION

### 1.1 Background of the Study

This project work aims to study and analyze the customer satisfaction towards card less cash withdrawal from ATM. New development of electronic banking service such as mobile banking applications, smart phones, wireless communication networks have emerged the mobile banking and SMS banking was the mobile banking used.

The way banks provide their services has been dramatically revolutionized by information technology. Consequently, Nzotta and Okereke (2009), industrialization has made the financial sector becoming more competitive internationally. The majority of developing nations' banking procedures have undergone significant transformation as a result of technology advancements, e-commerce, and the globalization of corporate activities (Calisir, 2014). Every bank is frantically trying to modify their own processes to meet the demands of an increasingly picky clientele. The banking business has been greatly impacted by the global information and communication technology revolution (Al-Qeisi & Hegazy, 2015). Innovation has been a major driving force behind the improvement of service standards in the financial institution sector Over the past few years, advancements in information technology have altered how businesses conduct and run their operations (Al-Jabri & Sohail, 2012). Technology progress has resulted in the banking industry's development of online and mobile banking, which has altered how commercial banks conduct business. In addition to enabling financial institutions to offer online and mobile banking services, mobile banking and the internet have also given their clients simple access to these services as well as additional advantages.

A bank is an institution that accepts various types of deposits and then advances money inform of loan to the people requiring it. In other words, banks collect the surplus of million individual savers who are widely scattered. The money so collected is channelized to the investor i.e. those requesting loans to make more investments. These days banks not only collect funds but its acts as super market which provides various services at a time like e banking services, atm card, RTGS, IPS many more due to digitalization.

The creation of customer value and the realization that processes must be improved rather than merely automated are prerequisites for the success of the digital transformation. Customer satisfaction via digital transformation consequently focuses on providing them with information on whether the company they have chosen is adequately satisfying their needs.

Information technology in banking has completely transformed the way in which banks deliver their services. According to Nzotta and Okereke (2009), globalization has caused intense competition in the banking industry throughout the world. Banking practices have been significantly altered in the majority of emerging countries and economies by technology advancements, e-commerce, and the globalization of corporate transactions (Calisir, 2014). To meet the demands of an increasingly picky customer base, every bank is scrambling to modify its own procedures. Al-Qeisi & Hegazy (2015) state that the banking business has been greatly impacted by the global information and communication technology revolution. Innovation has greatly accelerated the financial institution industry, which is crucial in raising service quality requirements. The way that businesses conduct and run their operations has altered in recent years due to advancements in information technology (Al-Jabri & Sohail, 2012). Technology advancements have brought about the growth of online and mobile banking, which has altered how commercial banks do business. In addition to enabling financial institutions to offer online and mobile banking services, mobile banking and the internet have also given their clients simple access to a range of other advantages.

Digitalization is taken as hot topic these days, due to breakout of recent COVID 19 individual and corporate customer were forced to use digital form for their banking transaction and business activities. Moving from such manual banking to digital form requires change in organizational culture and practices also. Due to COVID-19 almost all sector are being paralyzed but it has brought some radical change and improvement on banking sector, it has encourage people for using Electronic-banking (E-banking) facility. With the use of e-banking the level of competition among banking sector is very high. And due to high completion customers are able to grab more opportunity from it. They are getting better and quick facility at reasonable price.

Thanks to innovations in information and communications technology, the world of banking is still modernizing. Significant changes have occurred in the last few years in the way financial services are delivered. Commercial banks are being forced to innovate in order to survive, since the global banking sector is getting more and more competitive and chaotic. With the aid of technology advancements, banks have responded to the problems by implementing new strategies that prioritize trying to give better products and services to increase customer satisfaction while cutting down on operational expenditures (Sohail & Shanmugham, 2003).

Electronic banking (E-banking) is the use of electronic and telecommunication networks to deliver a wide range of value-added products and services to bank customers (Steven, 2002). E-banking generally implies the transaction done through electronic medium rather than physical transaction. All transactions are done through online system or through the internet. Information technology is being rapidly changing and it has provides lots of benefits to customer and banks as well. According to Bakshi (2012), there has been a recent surge in dynamism and development in the banking industry due to the speed at which technology advancements are happening. Global business practices, policies, and circumstances have a significant impact on and determine the requirements and preferences of customers. New revolutions in the banking business have been brought about by technological innovation. When it comes to providing its services, the banking industry has seen numerous changes in recent years. Individuals of days are more tech-savvy and demand prompt, affordable service. The financial industry uses e-banking as one of its tactics to keep its current clientele. In Nepal's banking industry, it is the newest method of service delivery. According to Trivedi (2013), banks are undergoing a shift and establishing frameworks that are appropriate for utilizing digitalized customer services and systems. In Nepal mainly following forms of e- banking are in use:

- ATM (Automated Teller Machines)
- Mobile Banking
- Internet Banking
- Telephone Banking
- Electronic Funds Transfer
- ECS(Electronic clearing services)
- Door-step banking

- QR Code(Quick Response)
- POS(Point –of –Sale)

According to Kumbhar (2009) today's customers are now looking for multiple delivery channels and flexible as well as convenient working hours neither the clock nor the geographical locations are constraints. So to provide the service as prefer by customer, financial sector are innovating new technology and alternative ways also. Thus need of customer and digital transformation in banking sector has developed different tools like automated teller machines (ATM), SMS-banking, POS, QR Code, Credit card , RTGS, Corporate Pay, e-mail solution etc.

Mobile banking (SMS-banking) is the part of e-banking where transaction is performed through use of mobile phone instead of physical cheque. It is an easy and cheap method for exchanging payments for almost any type of financial work. Through the use of a mobile device, such as a PDA, smartphone, or cell phone, m-banking users can accomplish financial transactions via the internet.

Al-Jabri and Sohail (2012). Young people are using m-banking more frequently these days since it offers them a number of benefits, Including the power to perform cash withdrawals without any kind of an ATM card, buy tickets, pay fees, and settle any form of bill.

The "Card less" ATM is a new technological solution that provides customers with the utmost convenience. Instead of using debit cards or automated teller machines, customers can make cash withdrawals from their own accounts by utilizing a straightforward mobile application thanks to smartphone technology. The app can generate an authentication key for you to use when making a withdrawal from a card-less ATM. This key can be generated by scanning the ATM's QR code or by punching in a number. Card-less withdrawal often refer to cash withdrawals made via the mobile banking app with an OTP (one-time password) in place of a card. These days, a lot of people are drawn to card-less withdrawal because they are quick, simple, safe, and require less time. Once customer is register with m banking service with service provider bank they can easily enjoy card less function.

**Following are the Instructions for Card less Transaction:**

1. Customer need to login into the mobile banking Application of concern service provider.
2. Then they need to Select Card less withdraw option from mobile banking.
3. Enter the amount which you want to withdrawal amount but it should be in the multiple of Rs 500 and 500 rupees is the smallest sum that may be generated while 25,000 rupees is the highest.
4. Individual need to check amount, account Number then confirm the transaction.
5. Then it request for Mobile Banking Pin.
6. Then the OTP will be generated and sent to the registered mobile number which will be valid for certain time.
7. Individual needs to go to nearest service provider ATM Terminal and select the Cardless Withdrawal option.
8. Select preferred language.
9. Enter register mobile number.
10. Enter the amount. Double-check that the amount is the same as what you had previously set in mobile banking.
11. Enter OTP which individual have received in registered mobile number.
12. Once the entered details are verified, individual will receive cash from ATM Machine.

During the COVID-19 pandemic, Sunrise Bank introduced cardless ATMs to Nepal for the first time. This facility is offered by the majority of banks that are currently in operation. The Nepal Electronic Payment System is in charge of running card-less ATM services in Nepal (NCHL). Combining the benefits of ATM cards and mobile banking is cardless cash withdrawal. Before using the cardless withdrawal feature, an individual must register with the concerned service provider's mobile banking service. However, there is no additional cost for the consumer to use this function. They can readily use mobile banking services once they've registered, albeit the withdrawal limit may differ amongst service providers.

### **Benefit of card less withdrawal**

Due to the numerous advantages of cardless withdrawal, all customers in Nepal are accepting of it, and financial institutions at all levels have adopted it. In an effort to keep their valued customers, almost every bank and financial institution offered card-less services. cardless withdrawal is easy to use, secure and safe, cost-effective, utilizes less time, and is easily accessible at all times.

### **Customer satisfaction**

According to Tahir, Waggett, and Hoffman (2013), "a customer's perspective based on expectation and then subsequent post purchase experience" is what is meant by customer satisfaction. To put it another way, it's an assessment of the degree of quality that goods or services meet or surpass the expectations of the client. Customer satisfaction is a term that has been around for a while. Since it increases a company's profitability, a lot of academics and researchers have stressed how important it is for a business to succeed in the marketplace and how vital it is for a business to survive. (Novikova, 2009; Zekiri & Angelova, 2011) Consumer satisfaction is positively correlated with purchasing behavior, and this relationship cannot be disputed. In a market characterized by intense competition, fostering strong and enduring customer-company connections is contingent upon achieving high customer satisfaction. In order to attain this kind of success, many businesses and service providers now consider measuring customer satisfaction to be really important. In Muhammad (2012). When a customer's expectations and reality match up, they are said to be satisfied. It is the customer's evaluation of any real or intangible goods or services. Customers of today possess a high degree of education, and as technology advances, so do their expectations and levels of pleasure. In this cutthroat industry, achieving and understanding customer satisfaction is the most challenging task. In order to succeed in any type of business, whether it be traditional or online, customer satisfaction is essential. Customer satisfaction is more important than ever for any business because dissatisfied consumers are quick to switch to another service provider and permanently leave that business. Consumers also expect high-quality products and services. Knowing the needs of the customer is therefore essential to achieving a good level.

Since two out of every three consumers are more likely to tell others about a negative experience than a positive one, research has shown that customer dissatisfaction has a

stronger psychological impact and lasts longer than positive encounters. Bad service therefore has a multiplier effect; it damages the bank's reputation and bottom line in addition to implying additional expenses associated with losing new clients in addition to current ones. Additionally, several studies have demonstrated that obtaining new customers entails higher expenses than keeping current ones (Reichheld & Sasser, 1990; Reichheld, 1996). To put it briefly, providing excellent services and receiving high marks for them improves customer experience, which in turn boosts customer loyalty and retention, which in turn boosts business performance.

Various definitions of customer satisfaction exist, stemming from the diverse perspectives of scholars studying this phenomenon. Oliver, for instance, claims that pleasure is a psychological state that arises from the combination of a customer's previous feelings regarding the consumption experience and the emotion around unfulfilled expectations. According to Kotler, satisfaction is the sensation of contentment or discontent that an individual gets by evaluating a product's perceived performance or result in comparison to their expectations. Hoyer and MacInnis claimed that emotions such as acceptance, joy, relief, excitement, and delight are linked to contentment. In contrast, Hansermark and Albinsson defined satisfaction as a client's general attitude toward a service provider or their emotional response to a discrepancy between their expectations and reality when it comes to the fulfillment of a need, objective, or desire.

It is presumed that m-banking preference is largely affected by various factors such as occupation type, education level and age group thus these factors are paid importance to and are linked to m-banking cardless withdrawal to determine whether they really do have an impact on m-banking. Thus, the desired outcomes that were set concentrated on the customer bank accounts, demographics, and types of professions.

A number of issues that neither banks nor users had anticipated arose with the expansion of the ATM network, including phishing, skimming, hacking, and card cloning. The idea for cardless ATMs was developed as a result of these incidents. ATMs had cutting-edge features including biometric fingerprint or iris-based access, as well as cardless and contactless cash withdrawals. Customers may not have needed expedited delivery of the new card if they could access cash in lieu of replacing a lost, stolen, or compromised card thanks to this cardless option. Cardless cash innovations advance the concepts of anytime,

anywhere access to money by making it possible users to access cash via their smartphone or tablet without a card. Additionally, customers seem at ease when they can make withdrawals without carrying their cards. Therefore, cardless solutions are the most suitable means of satisfying customers' convenience needs.

## **1.2 Problem Statement**

It is very difficult to understand the customer satisfaction in a competitive market. The satisfaction of the user differs with one bank to other when other bank launches new application in the market. And it may differ from one situation to another situation. Customer satisfaction is the state of mind and level of customer satisfaction cannot be measure and determine.

The study by Jannat and Ahmed found that the most important variables affecting second generation banks' mobile banking customers' happiness. The most important elements influencing consumer satisfaction, according to the data analysis, are cost effectiveness, responsiveness, transaction speed, ease of use, correctness of transactions, security and trust, and system availability. Customer satisfaction and the nine independent factors were shown to have a good correlation. Every single variable (independent) has the potential to influence client happiness. It is not certain that these nine variables are the only factors influencing mobile banking, even though they do have a positive association with the dependent variable (consumer satisfaction) when compared to earlier studies.

(B Arthi, March 2018) Has studied 'A Study on Consumer Satisfaction towards Mobile Banking' the emerging technology the banks have marked around the globe of Mobile Banking (m-banking). Banks are conducting financial services through wireless as per the convenience of the customer between smart phones. The influence of m-banking towards the customer satisfaction identifies the key factors of mobile technology. The point of contact between the financial sector and telecommunications is m-banking.

The study focused on the use of mobile banking and the quality of growth analysis There is an associated link between mobile banking and inclusive development which influences inequality, growth, and poverty. In this studies the conclusion can be drawn that m-banking app will play a vital role in responding to the problem of inequality, growth of the developing countries. (Simplice A.Asongu, Mobile Banking Usage, 2017).

Various studies have been concluded offering many theories about how different factors affect the customer satisfaction level towards mobile banking and ATM card services separately but no such studies are available about card less cash withdrawal from Atm. As Card less withdrawal is latest facility emerged after COVID 19 and it is mixed service which includes feature of both m banking and Atm Card, so this study tries to study about customer satisfaction towards card less cash withdrawal . This study looks at how satisfied customers are with the card-less service provided by a Nepalese commercial bank based on several literatures. The analysis of the aforementioned studies attempted to determine how various independent variables—such as convenience, security and privacy, reliability, and accessibility—impacted the dependent variables (consumer satisfactions). Various studies have been conducted in the context of other countries and in Nepal also but no such findings exists that content recent data in Nepal hence, this study will focus on identifying customer satisfaction towards careless withdrawal services provided by various commercial banks of Nepal. The following inquire about is the main objective of the present research.

- To what extend customer are satisfied towards card less withdrawal service ?
- What are the most significant factors affecting in using card less cash withdrawal service ?

### **1.3 Objectives of the Study**

Whatever we do there always remains some objectives similarly this study also have some major objectives which are as follows:

- To analyze customer satisfaction towards card less withdrawal service.
- To identify the factors affecting in using card less withdrawal service.

### **1.4 Hypothesis**

Some of the hypothesis that has been drawn for the purpose is identifying relationship between dependent and independent variable in this research. Some of these hypotheses are drawn from the theoretical framework of the study.

- H1: There is significant relationship between reliability of card less withdrawal and customer satisfaction.
- H2: There is significant relationship between convenience of card less withdrawal and customer satisfaction.

- H3: There is significant relationship between accessibility of card less withdrawal and customer satisfaction.
- H4: There is significant relationship between security and privacy of card less withdrawal and customer satisfaction.

### **1.5 Rationale of the Study**

This study will be helpful to future researchers at academic institutions and to individuals who may be interested in conducting research on a related subject. The banking sector in Nepal depends on customer satisfaction with cardless withdrawals (mobile banking). This research study will assist in updating the m-banking system and creating guidelines for policy makers. Investigating this topic will reveal how satisfied customers are with cardless withdrawals, assist the bank in resolving customer issues, and enable it to improve and personalize its m-banking offerings to meet consumer needs.

The variables associated with m-banking have huge impact on the level of customer satisfaction. Through this study the various factors that are affecting the customer satisfaction while using card less withdrawal service has been identified.

### **1.6 Limitations of the Study**

Limitation is described as the weak point or weakness which results due to unavailability of resources or minimum number of sample size (James & Murnan, 2004). Data problem is the main problem in conducting this kind of study in the context of Nepal. Considering efforts being made to draw significant findings from the study, multiple obstacles are taken taken into account to ensure an accurate interpretation of the results. The key constraints of the study are as follows:

- This study is concentrated on Customer Satisfaction towards Card Less ATM Cash Withdrawal
- Kathmandu valley is taken for the study.
- The study is mainly based on primary data.

## **CHAPTER II**

### **LITERATURE REVIEW**

This chapter discusses about the review of studies done previously on related topics. Various books, articles, research reports are available in the market; a comprehensive study is done on this chapter. Further, this chapter provides a conceptual framework which helps to know about the relationship between customer satisfaction and cardless cash withdrawal from ATMs. This study can help those researchers in the future who are interested in related topics. Before starting any study, it is very important to review the studies done previously so that we can have broad knowledge of the subject matter and avoid repetition and duplication of material. This chapter is categorized into three parts. The first part consists of an in-depth review of similar topics done previously, i.e., Theoretical review. The second part consists of a conceptual review, and the last part contains an empirical review followed by a research gap.

#### **2.1 Theoretical Review**

##### **The Commercial Banks in Nepal**

Numerous barriers still stand in the way of financial development in many developing economies, including Nepal. These include macroeconomic volatility, the brittleness of stock markets, the narrowing of capital markets, and the ineffectiveness of development and specialized banks. Even with these drawbacks, banking institutions are nevertheless essential to overall economic systems in developing nations, and they are a crucial component of every development initiative (Zeinab, 2006). Nowadays, it is believed that Nepal's financial institutions are mostly driven by its commercial banks. The founding of Nepal Bank Limited in 1937 marked the beginning of the financial services industry (Baral, 2005). After the financial sector liberalization launched in the mid-1980s, the government granted authorization for the incorporation of commercial banks in collaboration with foreign banks.

Since then, there have been several financial institutions that expose and showcase financial products and services, leading to significant structural changes in the Nepalese financial sector.

In Nepal presently there are 20 commercial banks (NRB, 2023).<sup>17</sup> Development bank, 17 Finance companies and 52 microfinance and one infrastructure development bank. After merger and acquisition competition among financial institutions is increasing due to which customer are able to enjoy various facility from single financial institutions at affordable price. Some example to latest facilities introduce by Nepalese banking sectors are Miscall banking, smart fone loan, Nea Bill payment with a miscall, payment of any transaction, ticket booking, card less withdrawal, QR code etc.

### **Mobile Banking (M-Banking)**

One of the financial services with the highest perceived value addition is mobile banking. Financial institutions have been able to eliminate traditional in-person banking transactions by using automated services whenever feasible because to the facilities offered by mobile baking services. Furthermore, it is anticipated that any financial transactions that were previously completed by online fixed terminals will switch to mobile-based technologies as mobile phones gain popularity. Lee and Chung explicitly state that mobile banking "would fundamentally alter how consumers do bank transactions considering electronic banking systems start providing effective computerized banking facilities through wireless technology systems." Mobile banking has the power to completely reimagine every aspect of the financial services industry's operations and business models.

### **Card less Banking (CB)**

According to Kartikan (2012), CB is defined as the withdrawal and/or transmission of money using Automated Teller Machines (ATMs) via a wireless network by banked, underbanked, or unbanked clients. For the purposes of this research, CB refers to customers' online access to bank funds and services without the need for a bank card. As customers are not required to carry their bank cards in order to withdraw, access, and transfer funds, this kind of banking represents a significant advancement in the banking sector with regard to the battle against financial crime (FIS 2015). Card-not-present (CB) transactions, which typically occur when a customer swaps or inserts their card into an ATM or point-of-sale (POS) terminal to make a purchase, shields them from card fraud, skimming, and counterfeiting (Budhram 2012). According to information from the ATM marketplace, more than 31.8 million customers had their cards hacked in 2014, resulting in a \$1 billion loss (NASDAQ 2015).

### **Introduction of Electronic Payment Methods**

The possibilities for digital payments in the mobile commerce sector have expanded significantly due to technological developments and the steadily rising mobile density (Au & Kaufman, 2008). A digital platform transaction generally refers to as a digital payment which is paperless transaction. In this case, payments are made and accepted digitally by both the sender and the recipient. Another name for it is electronic payment. The government of India is ready for a huge spike in the use of digital payments in the upcoming years due to the country's growing internet and smartphone penetration (Singh & Rana, 2017). Digital payments and card less transaction have been expanding rapidly in nepal. Credit card and debit card payments, mobile wallets, internet and mobile banking, email solutions, e-com cards, travel cards, and more are among the various digital and electronic payment methods.

The payment systems have seen significant changes over the last twenty years. Originally, banks would exchange paper payment instructions to make payments to one another; this was known as the "paper-based payment system." But processing paper work with paper instructions and manual handling became extremely challenging as the quantity of payments skyrocketed. As a result, individuals attempted to use information technology (IT) in relation to the payment system. Initially, these payment methods were referred to as "electronic payment systems." But soon, the moniker was out of style, and these systems were just referred to as "payment systems." This was a result of the majority of payment systems quickly switching to electronic ones.

### **Conception of Card less Cash Technology**

The expansion of the ATM network brought with it additional issues that neither banks nor consumers had any control over, like card skimming, hacking, cloning, and phishing. These kinds of incidents led to the conception of cardless ATMs. Modern technology were introduced into ATMs, such as biometric fingerprint or iris-based access, card-less and contactless cash withdrawals. Customers who used this card-less alternative were able to access cash until their lost, stolen, or infringing card was replaced, which may have reduced the requirement for the new card to be delivered quickly. Cardless cash technology is a big step toward digital innovation where anyone can access cash anytime, anywhere that is powered by a mobile device and does not require a card. When they can make withdrawals without carrying their cards, customers also seem more at ease.

Therefore, card-less solutions are the best way to satisfy customers' convenience needs. Tokenization is incorporated as an extra degree of security for ATM access since, as Singh and Srivastava (2020) note, clients are likewise worried about security (Finserv, 2016). Therefore, card-less cash technology is a great way to give clients more security.

The "Card less" ATM is a new technological solution that offers customers with the greatest level of comfort. Instead of using debit cards or automated teller machines, customers can make cash withdrawals from their own accounts by utilizing a straightforward mobile application thanks to smartphone technology. The app can generate an authentication key, such as by scanning the ATM's QR code or a numeric code that you can punch in, when you wish to make a withdrawal at a cardless ATM. Card-less withdrawals often refer to cash withdrawals made via the mobile banking app with an OTP (one-time password) in place of a card. These days, a lot of people are drawn to card-less withdrawal because they are quick, simple, safe, and require less time. After the client registers

### **Nepal's History of Cash Withdrawals Without Cards**

Sunrise Bank started card less ATM for the first time in Nepal during the Covid-19 period. Most of the banks and financial service provider are offering card less service these days. Card less ATM service in Nepal is operated by Nepal Electronic Payment System (NCHL).

One of the banking services with the most added value is mobile banking. Financial organizations have been able to decrease traditional in-person banking transactions by using automated services whenever feasible because to the facilities offered by mobile banking services. Additionally, it is anticipated that as mobile phones gain popularity, all banking transactions currently conducted through online fixed terminals would switch to mobile-based technologies. When electronic banking systems begin to provide effective automated banking services through wireless networks, Lee and Chung predict that mobile banking would fundamentally alter the manner that consumers conduct bank transactions. The financial services industry's whole business and business model landscape could be completely redesigned and redefined by mobile banking.

Banking without cards (CB) CB is defined as the use of Automated Teller Machines (ATMs) via a wireless network to facilitate the withdrawal and/or transfer of payments by banked, underbanked, or unbanked clients (Karthikeyan 2012). In this study, "CB" refers to customers' virtual access to bank funds and services without the need for a bank card. Because customers may access, withdraw, and transfer money without carrying their bank cards, this kind of banking represents a significant advancement in the banking sector in the fight against financial crime (FIS 2015). When making purchases with a credit card or debit card at an ATM or point of sale (POS) terminal, customers are typically vulnerable to card fraud, skimming, and counterfeiting. CB guards against these types of incidents (Budhram 2012). A \$1 billion loss occurred in 2014 due to card compromises affecting over 31.8 million customers, according to research from the ATM marketplace (NASDAQ 2015).

### **Customer Satisfaction**

Customer satisfaction reflects how well a company's goods or services fulfill the specifications and expectations of its customers. One of the most significant predictors of client loyalty and purchase intentions is customer satisfaction. Providing top-notch service can win over your customers' hearts and establish your brand within your target market. These days, social media is a major decision-making tool, therefore it's critical to monitor the kind of customer service you offer. If you are not worried about your customers' delight, you can't expect these individuals to feel passionately about your products or services.

Modern financial services use many features of the system that are implemented globally. There are studies that are broad and research that are in-depth about this service industry. Customers are requesting services when they're needed. Longer branch opening hours and a wider selection of delivery options are signs that customers are wanting a higher degree of ease of accessibility and convenience. The way that customers live has drastically changed recently, with more money being spent on leisure activities. Customers are obliged to accept the working hours of banks and have greater convenience and accessibility from their bank account.

## **2.2 Conceptual Review**

Conceptual Review is related with review of related concept about cardless banking service and customer satisfaction which are discussed as follows:

### **Automated Teller Machine (ATM)**

According to Ogbujiet al. (2012), one of the most recent replacements to the labor-intensive, cascading transaction system undertaken by paper-based payment instruments is the automated teller machine (ATM). It is the facility provided by banks to its customer for quick and easy cash withdrawal without any hassle. ATM card provided by any commercial bank is accepted by all ATM terminals. Such universal use of visa card makes it more fruitful. ATM is also known as self-service device and it is beneficial to both bank and customers.

### **Mobile banking (M-banking)**

Digitalization is taken as hot topic these days, due to breakout of recent COVID 19 individual and corporate customer were forced to use digital form for their banking transaction and business activities. Happily, they are aggressively accepting the new a financial transaction that needs layout. Moving from such manual banking to digital form requires change in organizational culture and practices also. Due to COVID-19 almost all sector are being paralyzed but it has brought some radical change and improvement on banking sector, it has encourage people for using Electronic-banking (E-banking) facility. With the use of e-banking the level of competition among banking sector is very high. And due to high completion customers are able to grab more opportunity from it. They are getting better and quick facility at reasonable price.

Using a mobile phone to complete a transaction rather than a paper check is known as mobile banking, or SMS-banking. Transferring money in any financial instruction is a quick and affordable process. Personal digital assistants (PDAs), cell phones, or smartphones are examples of mobile devices that can be used for financial transactions remotely. Al-Jabri & Sohail (2012) define m-banking as an application of m-commerce provided by banks or financial institutions.

### **Card less Cash Withdrawal form Atm**

The "Card less" ATM is a new technological solution that provides customers with the utmost convenience. Instead of using debit cards or automated teller machines, customers can make cash withdrawals from their own accounts by utilizing a straightforward mobile application thanks to smartphone technology. The app can generate an authentication key, such as by scanning the ATM's QR code or a numeric code that you can punch in, so that you can withdraw money from a card-less ATM. Card less withdrawal generally implies the withdrawal of cash without use of Card using m banking app and OTP (one time password). These days many people are getting attracted towards card less withdrawal as its instant, easy, secure, less time consuming. Once customer is register with m banking service with service provider bank they can easily enjoy card less function. In other words, card less facility is combine feature of atm card and m banking because customer needs to get register with m banking facility of service provider and need to visit ATM terminal for cash withdrawal.

These days banking channel has totally moved to paperless transaction where ancient banking channel has totally replaced by modern equipment and procedure. Customer does not need to be on line for withdrawal and carry cheque book or passbook for cash withdrawal. They card perform transaction within one click.

### **Customer Satisfaction**

Customer satisfaction is an evaluation of how well an organization fulfills the requirements and desires of its customer base in relationship to its products or services. One of the most significant predictors of client loyalty and purchase intentions is customer satisfaction. Providing top-notch service can win over your customers' hearts and establish your brand within your target market. These days, social media is a major decision-making tool, therefore it's critical to monitor the kind of customer service you offer. If you fail to care about your customers' happiness and you can't expect these individuals to care about your products or services.

Modern techniques are used in financial services worldwide in a variety of departments. Certain research on this service industry are narrow, while other research on it is occasionally comprehensive. As needed, customers are requesting services. Extended branch opening hours and an expansion of available delivery mechanisms are indicative

of the increasing demands from customers for easier accessibility and more convenience. Customers' lives have drastically changed in the last few years, with more money being spent on leisure pursuits. Customers must accept the working hours of banks and believe that their bank accounts are more convenient and readily available.

### **2.3 Empirical Review**

Books, previous study, magazine and research reports related to current issues are reviewed in this section. This study tries to show the relationship between customer satisfaction and card less cash withdrawal. The empirical reviews of literature that have been undertaken are as follows:

Asfour and Haddad (2014) examined the impact of mobile banking on enhancing customers' E-satisfaction. The objective of study was to assess customers E-satisfaction towards m-banking. The study used simple regression to analyze data. The results showed statically significant impact of the overall dimensions of mobile banking service on customer E-satisfaction and among various factor Privacy and accessibility are more influential comparing to others mobile banking dimensions. They concluded that bank should give more time and effort to activate and develop mobile banking services to do many different banking transactions in order to reach a customer E-satisfaction.

Sherpa (2015) assessed development and impact of mobile banking in Nepal. The main objective of the research was to figure out Nepal's current mobile banking scenario. The study used an informal interview as a methodology for data collection. The findings of the study, mobile banking offers a positive effect on Nepalese citizens. The research study discovered that younger individuals constitute the largest percentage of mobile banking users.

(Iberahim, 2015) Examine the current level of ATMs service quality. The aim of the research was to explore the correlation between customer satisfaction and the responsiveness and dependability of ATM services. The study used inferential statistic for data analysis. The Result of survey showed that relationships of three out of four elements of service quality dimensions (consistency, dependability and timeliness) are important to maximizing customer satisfaction. The study concluded that focus needs to be placed to

the consistency, dependability and timeliness of ATMs services for better customer satisfaction.

Mwatsika (2016) examined the factors Influencing Customer Satisfaction with ATM Banking. The objective of study was to analyze the factor of ATM banking which mostly influence customer satisfaction. For data analysis the researcher used multiple regressions. The study showed that reliability and responsibility are key service quality dimensions of ATM banking. The study concluded that other attributes like ATM fees, cleanliness of ATM, accuracy of ATM transactions, ease of access to ATMs, readable slips, convenient location, employee accessibility to solve ATM problems, privacy at ATM stations, and employee speed in solving ATM issues also influence customer satisfaction.

Hegde and Sharath (2016) conducted research on ATM cash withdrawals without a card: A simple and Alternate Approach. The main objective of study was to explain that card less ATM cash withdrawal is easy and effective method of cash withdrawal as compared to other method of withdrawal. The result shows that it is preferred by all kinds of user. Additionally, the researcher informed that proposed method deals with the withdrawal process in the same bank but can be extended for inter – branch transactions in future.

Hossain *et al.* (2018) studied on the impact of QR codes on purchase intention and customer satisfaction on the basis of perceived flow. The objective of study was to analyze impact of QR code on customer satisfaction. The study used Stimulus–Organism–Response theoretical model. The study clarified the utilization of QR codes simply because of their reception, usefulness, and applicability. The study concluded that QR codes have a big impact on purchase intention of customer and their level of satisfaction.

Joshi (2019) studied impact of automated teller machine (ATM) service quality on customer satisfaction in the Nepalese commercial banks. The objective of study was to evaluate the customer satisfaction towards ATM service. The study used Correlations and multiple linear regressions for analyzing data. The results of the study mentioned a significant positive association between consumer fulfillment and ATM service quality

variables. The study concluded that the availability of cash influence customer satisfaction.

Sohail and Nabaz (2019) conducted research effect of ATM service quality on customer's satisfaction and loyalty. The main objective of this research was to pinpoint the components which influence user loyalty and satisfaction. The study used correlation, coefficient, multiple regression and ANOVA for data analysis. The results showed that majority of dimensions are significantly correlated with overall customer satisfaction. The study concluded that for customer satisfaction and loyalty financial sector further needed to improve ATM service quality.

Ekonomi and Islam (2021) studied about Mobile banking services quality and its impact on customer satisfaction. The main objective of research was to investigate the influential factors of mobile banking service quality dimension. The study used Partial Least Square for Structural Equation Modeling (PLS-SEM) approach. The findings shown that customer satisfaction is highly impacted by Islamic mobile banks' application system, design, security, and level of enjoyment. The study concluded that the most important factor affecting customer satisfaction is the number of mobile banking application systems that Islamic banks should focus on expanding.

Younis and Hussain (2021) studied on impact of mobile banking on customer satisfaction. The objective of study was to analyze the impact of m banking on customer satisfaction. The study used descriptive, correlation and simple linear regression for analyzing data. The study reveals a significant and beneficial correlation between features unique to mobile banking and satisfaction for customers. The study concluded that perceived usefulness, ease of use, credibility and customer attitude have significant influence on determination of customer and recommendation to provide additional services with added value through user-friendly banking apps for mobile devices.

Nambiar and Bolar (2022) studied asses factors influencing customer preference of card less technology over the card for cash withdrawals. The objective of study was to analyze the reason behind the customer preference for card less withdrawal. The study used predictive analytics approach with various statistical. The study showed customer preferred card less cash because of its usefulness over the Card rather than perceived ease

of use, customer trust, or perceived security. The study concluded it also prevents critical payment data from being inserted into physical transaction points and ensures that customer data are never stored on the mobile facilities the customer is transacting on.

Pote(2023) studied on safe and Convenient Cash Withdrawal. The main objective of study was to studied about safe and Convenient Cash Withdrawal The study used survey questions to understand customer views. The study showed majority of customer accept card less as ease mobile banking service. The study concluded that improvement of latest versions to accommodate several bank accounts for a single customer during the registration stage.

Ogundipe, Fasola, Akinttunde and Falana (2023) studied on Automatic Teller Machine and Bank Customer Satisfaction. The main objective of the study was to analyze customer satisfaction and ATM machine. The used descriptive and inferential statistics method for data analysis. The study showed that was positive, but significant effect on customer's satisfaction. The study found that in order to improve the distribution of cash to customers, bank management should guarantee that there is always cash available in ATMs and that there is a continuous and effective maintenance culture. More ATM terminals should be placed in busy areas for proximity reasons.

Lelasari and Bernarto (2023) examined the Impact of Customer Satisfaction on Customer Loyalty of BCA mobile banking. The objective of the study was to ascertain what variables affect customer loyalty in the usage of BCA mobile banking in Indonesia. The study used quantitative methodology for data analysis. The result showed that convenience had the greatest influence on increasing customer satisfaction. Finally the study concluded that cost factor has no effect on increasing customer satisfaction and responsive factor only has an effect on increasing satisfaction but does not affect customer loyalty.

K C (2024) conducted research on topic ATM Services and customer satisfaction of Commercial Bank in Itahari, Nepal. The aim of the research was to evaluate the degree of consumer satisfaction with ATM services. The study used a quantitative research methodology and an analytical research design. The results revealed that ATM services have a significant effect on customer satisfaction. The study concluded that among the

factors, the transaction fee is found a key factor influencing customer satisfaction, followed by customer support and transaction speed.

Kumar (2024) conducted study on topic customer satisfaction towards HDFC bank ATM. The main objective of study was to measure the level of satisfaction with various aspects such as accessibility, convenience, reliability, security, and overall quality of service provided at the bank's ATMs and CDMs the study used descriptive and inferential method for data analysis. The study showed that there was positive and significant relation between variables. The study concluded that HDFC Bank should focus on implementing targeted improvements to enhance the overall customer experience.

Table 1

*Summary of Articles Review*

<b>Author's Name</b>	Asfour and Haddad (2014)
<b>Title</b>	Impact of mobile banking on enhancing customers' E-satisfaction.
<b>Objectives</b>	To assess customers E-satisfaction towards m-banking
<b>Major Findings</b>	Showed statically significant impact of the overall dimensions of mobile banking service on customer E-satisfaction
<b>Author's Name</b>	Sherpa (2015)
<b>Title</b>	Assessed development and impact of mobile banking in Nepal
<b>Objectives</b>	To figure out Nepal's current mobile banking scenario
<b>Major Findings</b>	Mobile banking offers a positive affect on Nepalese citizens
<b>Author's Name</b>	(Iberahim, 2015)
<b>Title</b>	Examine the current level of ATMs service quality
<b>Objectives</b>	Explore the correlation between customer satisfaction and the responsiveness and dependability of ATM services
<b>Major Findings</b>	Showed that relationships of three out of four elements of service quality dimensions (consistency, dependability and timeliness) are important to maximizing customer satisfaction.

<b>Author's Name</b>	Mwatsika (2016)
<b>Title</b>	Examined the factors Influencing Customer Satisfaction with ATM Banking.
<b>Objectives</b>	To analyze the factor of ATM banking which mostly influence customer satisfaction.
<b>Major Findings</b>	Reliability and responsibility are key service quality dimensions of ATM banking.
<b>Author's Name</b>	Hossain <i>et al.</i> (2018)
<b>Title</b>	Analyze impact of QR code on customer satisfaction.
<b>Objectives</b>	To analyze impact of QR code on customer satisfaction.
<b>Major Findings</b>	Clarified the utilization of QR codes simply because of their reception, usefulness, and applicability
<b>Author's Name</b>	Joshi (2019)
<b>Title</b>	Impact of automated teller machine (ATM) service quality on customer satisfaction in the Nepalese commercial banks
<b>Objectives</b>	To evaluate the customer satisfaction towards ATM service.
<b>Major Findings</b>	Availability of cash influence customer satisfaction.
<b>Author's Name</b>	Sohail and Nabaz (2019)
<b>Title</b>	Study the pinpoint the components which influence user loyalty and satisfaction.
<b>Objectives</b>	To pinpoint the components which influence user loyalty and satisfaction.
<b>Major Findings</b>	Majority of dimensions are significantly correlated with overall customer satisfaction
<b>Author's Name</b>	Ekonomi and Islam (2021)
<b>Title</b>	Studied about Mobile banking services quality and its impact on customer satisfaction. T
<b>Objectives</b>	To investigate the influential factors of mobile banking service quality dimension.

Major Findings	Customer satisfaction is highly impacted by Islamic mobile banks' application system, design, security, and level of enjoyment.
<b>Author's Name</b>	Younis and Hussain (2021)
Title	Impact of m banking on customer satisfaction.
Objectives	To analyze the impact of m banking on customer satisfaction.
Major Findings	Reveals a significant and beneficial correlation between features unique to mobile banking and satisfaction for customers.
<b>Author's Name</b>	Nambiar and Bolar (2022)
Title	Asses factors influencing customer preference of card less technology over the card for cash withdrawals
Objectives	To analyze the reason behind the customer preference for card less withdrawal.
Major Findings	Customer preferred card less cash because of its usefulness over the Card rather than perceived ease of use, customer trust, or perceived security.
<b>Author's Name</b>	Pote(2023)
Title	Studied on safe and Convenient Cash Withdrawal
Objectives	To studied about safe and Convenient Cash Withdrawal
Major Findings	Majority of customer accept card less as ease mobile banking service.
<b>Author's Name</b>	Ogundipe, Fasola, Akinttunde and Falana (2023)
Title	Studied on Automatic Teller Machine and Bank Customer Satisfaction.
Objectives	To analyze customer satisfaction and ATM machine.
Major Findings	Showed that was positive, but significant effect on customer's satisfaction.
<b>Author's Name</b>	Lelasari and Bernarto (2023)

Title	Impact of Customer Satisfaction on Customer Loyalty of BCA mobile banking.
Objectives	To ascertain what variables affect customer loyalty in the usage of BCA mobile banking in Indonesia
Major Findings	Convenience had the greatest influence on increasing customer satisfaction.
<b>Author's Name</b>	KC (2024)
Title	ATM Services and customer satisfaction of Commercial Bank in Itahari, Nepal.
Objectives	To evaluate the degree of consumer satisfaction with ATM services.
Major Findings	ATM services have a significant effect on customer satisfaction.
<b>Author's Name</b>	Kumar (2024)
Title	Study Satisfaction towards HDFC bank ATM
Objectives	To measure the level of satisfaction with various aspects such as accessibility, convenience, reliability, security, and overall quality of service provided at the bank's ATMs and CDMs
Major Findings	There was positive and significant relation between variables..

## 2.4 Research Gap

A research gap is a challenge or topic of investigation that lacks considerable or sufficient research attention in one specific area of study. This stage is very crucial to proceed with writing literature review since research questions can be framed only when the gap is identified. The gap itself becomes the purpose of research in the later stages. As per the tools for data analysis, here in this study the statistical and financial tools have been taken into consideration for the meaningful evaluation of findings analysis.

Various studies have been concluded offering many theories about how different factors affect the customer satisfaction level towards mobile banking and ATM card services separately but no such studies are available about card less cash withdrawal from Atm. As Card less withdrawal is latest facility emerged after COVID 19 so this study tries to study about customer satisfaction towards card less cash withdrawal .Based on different

literatures, this study attempts to analyze the customer satisfaction towards card less service offered by Nepalese commercial bank. The analysis from all above study tried to see the impact of different independent variable (Accessibility, Reliability, Security and privacy, Convenience) upon dependent variables (customer satisfactions)

## **CHAPTER-III**

### **RESEARCH METHODOLOGY**

Research methodology specifies the definite procedure which guides the research process to fulfill the set objective of research. As the study must be carried out within the stipulated time period a systematic methodology is adopted for its effectiveness. This chapter aims to provide the description about the methods, types of data, sample and population. It includes step-by-step instructions for performing the assignment and also functions as an instruction manual for collecting, analyzing, and figuring out data. It further helps to allocate the resources for its maximum uses.

This chapter includes five sections where first section describes about research design, second section describes about population and sample and sample designed, similarly third section includes describes about nature and sources of data with instrument of data collection, fourth section describes about method of data analysis and lastly fifth part explain about research framework and definition of variables.

#### **3.1 Research Design**

Research design, according to Kerlinger (1980), is the framework, planning, and study plan developed for managing variability and present an approach to an area of study. Research design helps in getting a solution of problem through planned and systematic collecting, analyzing and interpretation of data and factors. Research design it's a road map which guides the study from beginning to end. it acts as blueprint for data collection and helps in effective allocation of resources. A good research design should be flexible, appropriate with our objective, economic, reliable, valid and efficient. Analytical, exploratory, experimental, and descriptive study designs are every possible in the future.

To conduct this study descriptive and causal-comparative research designs have been employed. Descriptive research design aims to study the subject matter in depth and explain the facts and characteristic related to customer satisfaction towards card less cash withdrawal from ATM. This research design uses scientific method for data collection, classification and data analysis even it's descriptive in nature. Casual research design

helps to show the cause of problem. It explains the relationship between dependent variables and independent variables.

### 3.2 Population Sample and Sampling Design

For data collection primary sources are used. Populations were the individual engaged in different profession with different age group .Well-structured questioner was developed and distributed to sample population of different age group to collect their response. Total four hundred and eight numbers of respondents are considered for study.

The industries that provide the same kind of service and product are referred to as the population and universe. The term "sample" refers to the representative portions of the population chosen in order to further explore its characteristics. A sample is an aspect of the population designated that allows for an inference of conclusions about the category subject of study. The survey approach has been used in this study to achieve its goal. The goal of the study, which was stated in the opening chapter, served as the overall guidance for the survey and the investigation. Finding out how cardless cash withdrawal and customer satisfaction relate to one another in Nepalese culture was the study's main objective.

Table 2

*List of sample banks selected for the study along with the number of observations*

S.N.	Name of the banks	Observations
1.	ADBL	2
2.	Citizens Bank International Limited	14
3.	Kumari Bank Limited	8
4.	Laxmi Sunrise Bank Limited	256
5.	Machhapuchre Bank Limited	20
6.	Maha Laxmi Bikash Bank	2
7.	Muktinath Development Bank Limited	12
8.	Nabil Bank Limited	20
9.	NIC Asia Bank Limited	14
10.	NIMB Bank Limited	2
11.	NMB Bank Limited	14
12.	Prabhu bank Limited	16
13.	Siddhartha Bank Limited	28
<b>Total number of respondents</b>		<b>408</b>

### **3.3 Nature and Sources of Data**

Primary data have been collected to complete this study. A well-structured questionnaire was developed for primary data collection. The variables used for this study are Reliability, variability, convenience safety and security as independent variables customer satisfaction as dependent variables. A survey instrument designed to gather respondents' opinions was split into two sections: one section had respondents' personal information, while the other section contained the key components, such as multiple-choice questions concerning the subject matter and explanations.

This study was designed to understand the opinions of respondents towards customer satisfaction regarding card less cash withdrawal from ATM. Respondent were requested to provided their response in five points liker scale questions ranging from (1-fully disagree to 5- fully agree). The study's questionnaire might be located in the appendix below.

### **3.4 Methods of Analysis**

The main purpose of data analysis in this study is to analyze the customer satisfaction towards cash less cash withdrawal. First, all the data were collected through and then it was managed. After gathering all the completed questionnaires from the respondents, it was analyzed and presented in proper tables. The questionnaire covers for individual information about the participant, such as gender, age, marital status, profession, earnings per month, grade school education. In this study, descriptive, correlational, and regression analytic techniques are employed. Utilizing the Statistical Package for Social Science (SPSS), the data are examined. The variables' minimum and maximum values, as well as the mean and standard deviations, are utilized in descriptive statistics to characterize the traits of the respondents. To determine which way the dependent and independent variables are related, correlation analysis is utilized. Determining the affect of the independent variable on the dependent variable is another aspect of regression analysis.

#### **3.4.1 Model Specification**

The model developed for this study looks at how satisfied customers are with cashless withdrawals. This study examines the empirical association between customer satisfaction and cashless ATM withdrawals using the regression model that follows. As a result, the model equation that follows is intended to evaluate the hypothesis:

Customer Satisfaction = f (Accessibility, Reliability, Convenience, Safety and security))

To be more specific, the provided model has been categorized into the subsequent models:

$$\text{Customer Satisfaction} = \beta_0 + \beta_1 \text{ Accessibility} + \beta_2 \text{ Reliability} + \beta_3 \text{ Convenience} + \beta_4 \text{ Safety \& Security} + \varepsilon$$

Where,

### **Dependent variable**

Customer Satisfaction

### **Independent variables**

Accessibility

Reliability

Convenience

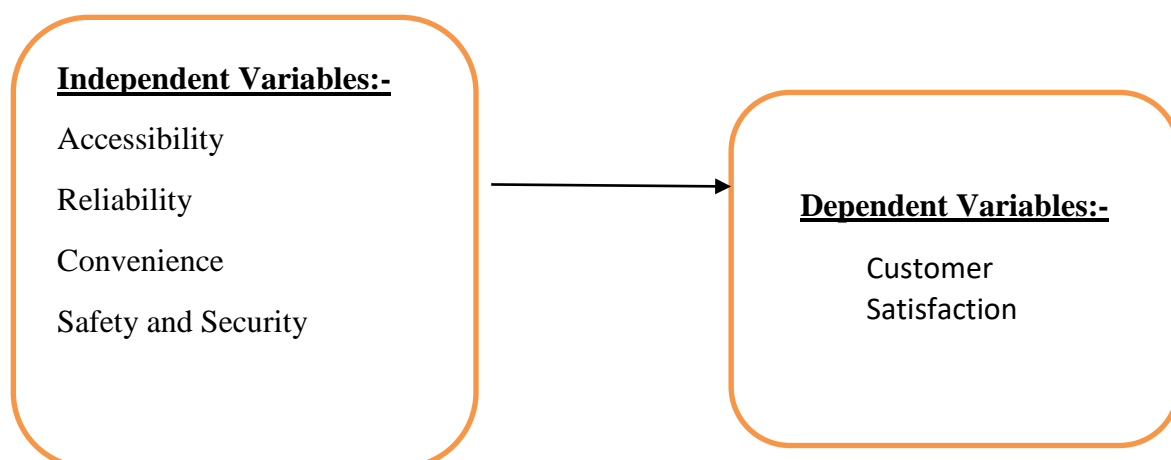
Safety and security

$\varepsilon_{it}$  is the error term.

The beta coefficients of the explanatory variables that need to be estimated are  $\beta_1$ ,  $\beta_2$ ,  $\beta_3$ , and  $\beta_4$ , whereas  $\beta_0$  is the constant.

### **3.5 Research Framework**

Research framework is a conceptual model which shows relationship among various factors which has been identifies as important to the problems. It explains how dependent and independent variables are associated.



*Figure 3.1: Research Framework*

*(Source: Asfour & Haddad, 2014).*

### **Definition of Variables**

This part of study deals with the variables that have impact on customer satisfaction of commercial bank towards card less cash withdrawal. This study includes following dependent and independent variables:

#### **Customer Satisfaction**

Consumer needs and happiness should be the primary emphasis of every business, as they are the key stakeholders who ultimately determine the success or failure of any enterprise. Customer perception of your business is reflected in their level of satisfaction. It involves contrasting the kind of experience that customers truly have with the seller with their expectations. Put another way, a client's level of happiness following a transaction with a business is known as customer satisfaction. Excellent customer experiences and customer satisfaction go hand in hand. Therefore, the degree to which clients are satisfied with the caliber of goods and services offered by a company is referred to as customer satisfaction. According to Doreen (2018), Customer satisfaction reflects how pleased clients are with everything that an organization offers.

#### **Independent Variables**

The design and delivery of personal financial services are fast evolving due to m-banking. In an effort to streamline operations and cut expenses, Nepalese financial institutions and commercial banks are currently attempting to implement m-banking. Even with all of the efforts made to create more user-friendly and better mobile banking systems, clients continue to mostly ignore and underuse these services despite their availability. Thus, it's important to comprehend how m-banking services affect Nepali commercial banks' customers' satisfaction levels. The dimensions of card-less m banking services are as follows:

**Accessibility:** Customer satisfaction and perceived service quality were found to be significantly impacted by accessibility and convenience of use, according to Peterson, Zsidisin, and Daily (1999). The ability of a user to access online resources and services is known as accessibility, and it depends on a variety of factors. They cover the format's content, the user's hardware, software, and settings; internet connections; the user's ability; and the user's surroundings; and impairments.

**Reliability:** Joseph, McClure, and Joseph additionally regarded an essential component of the service's quality and dependability (1999). Since reliability is a crucial quality, research employs computers or other technologies with similar features that also have an impact on performance. The dependability of the technology should have a particular impact on the customer because there is a chance that it could malfunction. Its elements comprise consistency and dependability in working properly. Being reliable entails keeping promises made on things like timely service delivery, accurate billing, and appropriate record keeping. It is stated by Zeithmal (2005). This study demonstrated that accuracy and reliability are suitable metrics for evaluating technology-related services.

**Security and privacy:** The assurance of security and privacy pertains to the degree to which the website ensures the protection of the client's financial and personal data, an area that has seen a growth in interest in study. All online transactions that take place on a bank's secure server. Banks are equipped with the necessary software and data to carry out every transaction. Customers use the bank's mobile banking services by visiting the application, logging in, and using it. The range of innovative services and products offered by banks includes bill payment, financial transfers across accounts, and account access and review. Many mechanisms are in place to ensure internet security, and security is a major factor in mobile banking.

Additionally, security can be guaranteed by showing the logos of reliable parties, providing the privacy statement, and providing information about the security of the shopping mechanisms. It has been demonstrated that showing the trusted parties' logos assures a certain degree of security protection and has a major impact on consumers' perceptions of the m-vendors' reliability (Gerrard, 2003).

**Convenience:** An important factor that draws users to the delivery of m-banking is the availability of customer interaction. The consumer can access m-banking at all times and locations thanks to the enhanced level of convenience that it offers. Perceived relative advantage is measured by how easy computers are to access. The ability of an invention to satisfy user wants by utilizing the many characteristics of the website is found to be one of the other criteria of utmost importance for m-banking's success. Interactive loan calculators, exchange rate converters, and mortgage calculators are among the features that entice users and visitors to the bank's website. (Politoglu, 2001).

## **CHAPTER-IV**

### **RESULTS AND DISCUSSION**

In this chapter, collected data are systematically and orderly presented, interpreted and analysis with the issues associated with the digital transformation with Nepalese commercial banks financial performance. Result is mainly based on the response of the questionnaire administrated to the different individual from different age groups and financial data collected from sample commercial banks. Several statistical and regression models, as explained in chapter three, have been utilized to get the right results. There are three sections in this chapter. The first part, on descriptive analysis, covers the findings of a questionnaire survey together with the presentation and analysis of primary data. The examination of the regression model, including correlation analysis, is covered in the second and third sections. The final part of the document offers a discussion of the key conclusions drawn from the primary and secondary data analysis.

#### **Results**

To archive the result as set both statistical and financial tools have been employed. The previous chapter described the method and manner in which descriptive data was collected and the statistically technique used for analysis. This chapter shows the information about the findings of the process and explains the result.

The main purpose is to test the relationship between the attributes of m-banking cardless cash withdrawal and customer satisfaction along with the dependent variable which is employee engagement and independent variable such as accessibility, reliability, convenience, security and privacy. The third part analyzes the collected data through hypothesis testing.

#### **4.1 Respondent's Profile**

The respondents' profile reveals the personal characteristics of respondents combined on the basis of different personal characteristics such as: gender, age group, academic qualification, marital status, profession, monthly income and status of usage. Demographic characteristic plays a significant role in understanding behavior of the individuals in the performance of banking sector. This study is based on primary data

analysis, which mainly deals with qualitative aspects in terms of factors influencing customer satisfaction. This section also reports the results of questionnaire survey conducted among the different respondents and their customer satisfaction. To understand the views of the respondent on study topic well-structured questionnaire was developed. A set of questionnaires including multiple choices, and Likert scale questions are provided. The biographical information of the participants, accompanied by their unique characteristics and the survey's consequence, is displayed below.

#### 4.1.1 Gender of Respondent

The questionnaire was distributed to both male and female respondents. The intention was to identify the share of those who respond which classified within the two genders. The frequency, percentage and cumulative percentage is depicted in below Table.

Table 3

##### *Gender of Respondent*

Respondent's character	Number of responses	Percentage
Gender		
Male	286	70.1
Female	122	29.9
Total	408	100

*(Source: Field Survey, 2024)*

Table 3 show gender distribution of the respondents. From the above figure and table, it is clear that out of total respondents, 286 were male and 122 were female.

#### 4.1.2 Age group of Respondents

A variety of age groups of respondents answered the questionnaire. This was done in order to identify the percentage distribution of the age groups represented in Table 2 by the respondents to the given questionnaire.

Table 4

*Age group of Respondents*

Respondent's character	Number of responses	Percentage
Age group (in years)		
Below 20 years	42	10.3
20-30 years	138	33.8
31-40 years	172	42.2
41-50 years	46	11.3
Above 50 years	10	2.5
Total	408	100

(Source: Field Survey, 2024)

Table 4 shows that the age group of respondents is divided into different group ranging from age below 20 to above 50, where majority of the respondents 172 fall under the age group of 31-40. From the above table it is clear that 10 respondents were above 51, 46 respondents were of age group 41-50, 138 respondents were of age group 21-30 and 12 respondents were of age group of 41-50. According to research, more than half of the users of card-less products are under the age range of 31 and 40.

#### 4.1.3 Qualification of Respondents

The questionnaire was distributed to respondents having different levels of academic experience. The educational qualification of respondents is shown in below Table

Table 5

*Qualification of Respondents*

Respondent's character	Number of responses	Percentage
Education		
Intermediate	84	20.6
Bachelor degree	168	41.2
Master's degree	142	34.8
M. Phil / PHD	14	3.4
Total	408	100

(Source: Field Survey, 2024)

Table 5 above, the majority of respondents (168 out of 408) have a bachelor's degree, followed by a master's degree (142), an intermediate degree (84), And The remaining 14 respondents have M Phil.

#### 4.1.4 Occupation of Respondents

The questionnaire was distributed to respondents working in different fields. The occupation of respondents is shown in Table 6

Table 6

##### *Occupation of Respondents*

Respondent's character	Number of responses	Percentage
<b>Profession</b>		
Student	48	11.8
Business	62	15.2
Service	240	58.8
Other	58	14.2
<b>Total</b>	<b>408</b>	<b>100</b>

*(Source: Field Survey, 2024)*

Table 6 above, employees of service providers make up the bulk of respondents (240 out of 408), followed by business employees 62, other employees 58 and students 48.

#### 4.2 Descriptive Analysis

Descriptive analyses were performed undertaken so that there are descriptive scores for each parameter that made up the survey. A brief account of the sample and the observations is offered by descriptive statistics. In this study, descriptive analysis incorporates the calculation of statistical measures such as mean and standard deviation. A total of 25 questions with particular mean score were obtained as output. A five-point Likert scale was used for each question ranging from 'Strongly Disagree' to 'Strongly Agree'; coded by 1 representing 'Strongly Disagree', 2 representing 'Disagree', 3 representing 'Neutral', 4 representing 'Agree' and 5 representing 'Strongly Agree'. The values of these numbers are employed in the statistical evaluation of the data in conjunction with variables and research subject matter in terms of frequency and

aggregate. Descriptive statistical tools help to explain the activities or fundamental characteristics or behavior of groups. Frequency, mean, median, and mode are taken as descriptive tools. It helps to get summarized information of sample units.

#### 4.2.1 Accessibility on Card less Cash Withdrawal

Accessibility of card less cash withdrawal is one of the independent variables of the research. Each question comes with a descriptive analysis, and the conclusions of this variable's examination appear below:

Table 7

*Customer Opinion*

*Regarding Accessibility of Card Less Withdrawal*

S.n	Statement	N	Mean	Std. Deviation
	Card less service of the bank use understandable language			
A1	to all	408	3.9510	0.7063
A2	Card less service of the bank is properly designed	408	3.9853	0.6461
A3	Access the service anytime and anywhere I go.	408	3.8235	0.7858
A4	Speed to OTP of application is fast	408	4.0294	0.7413
A5	ATM booths are located in convenient place.	408	3.6618	0.9238

*Source: Appendix I*

Table 7 represents the descriptive statistics of the independent variable Accessibility. It includes five statements to determine customer Accessibility towards card less cash withdrawal services. Among the five statements "Speed to OTP of application is fast" has the highest mean value of 4.0294 with minimal standard deviation of 0.7413 which implies that this statement has high degree of consistency than that of other statements and it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

Similarly, among five statements "ATM booths are located in convenient place" has the lowest mean value of 3.6618 with maximum standard deviation of 0.9238 which implies

that this statement has low degree of consistency than that of other statements but it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

The mean of Accessibility of card less withdrawal and value ranges from a minimum value of 3.66 to maximum value of 4.03. Among them, the most significant observations of the respondents regarding Accessibility of card less withdrawal is “Speed to OTP of application is fast” with mean value of 4.03 whereas, the most insignificant observation is “ATM booths are located in convenient place.” with mean value of 3.66.

Weighted average mean value for accessibility of card less cash withdrawal is 3.89, which indicate that there is higher accessibility of card less cash withdrawal.

#### 4.2.2 Reliability on Card Less Cash Withdrawal

The research incorporates reliability of card-less cash withdrawal as a single of the study's independent factors. Descriptive study of each question is drafted and study on this variable is shown below:

Table 8

##### *Customer Opinion Regarding Reliability of Card Less Service*

S.n	Statement	N	Mean	Std. Deviation
R1	Card less withdrawal is reliable than ATM service	408	4.0098	0.7742
R2	No dispute occurs while doing transaction Mobile banking application of the bank does not	408	3.5833	0.9845
R3	freeze during transaction	408	3.5931	0.9804
R4	Feel safe with accuracy of card less transaction	408	3.9755	0.8780
R5	The card less option provides an error free transaction	408	3.7451	0.9631

Table 8 represents the descriptive statistics of the independent variable reliability. It includes five statements to determine customer reliability towards card less cash withdrawal services. Among the five statements “Card less withdrawal is reliable than ATM service” has the highest mean value of 4.0098 with minimal standard deviation of 0.7742 which implies that this statement has high degree of consistency than that of other statements and it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

Similarly, among five statements “No dispute occurs while doing transaction” has the lowest mean value of 3.5833 with maximum standard deviation of 0.9845 which implies that this statement has low degree of consistency than that of other statements but it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

The mean of Reliability on card less service and value ranges from a minimum value of 3.58 to maximum value of 4.00. Among them, the most significant observations of the respondents regarding Reliability of card less withdrawal is “Card less withdrawal is reliable than ATM service” with mean value of 4.00 whereas, the most insignificant observation is “No dispute occurs while doing transaction” with mean value of 3.58.

#### 4.2.3 Customer Opinion Regarding Convenience of Card Less Withdrawal

Convenience of card less banking is one of the independent variables of the research. Each question involves a draft descriptive study, and the analysis on this variable appears below:

Table 9

*Customer Opinion Regarding Convenience of Card Less Service*

Customer opinion regarding Convenience on card less service				
S.n	Statement	N	Mean	Std. Deviation
C1	Language and contents used in application is easy to understand	408	3.9951	0.7837
C2	The card less service of banks is easy to use	408	4.1373	0.7424
C3	find card less banking cost effective as compare to cost of ATM	408	4.0931	0.8212
C4	The bank handles complain and solves quickly	408	3.9363	0.8872
C5	Card less service is convenient in comparison to ATM card	408	4.0147	0.8381

Table 9 represents the descriptive statistics of the independent variable Convenience. It includes five statements to determine customer Convenience towards card less cash withdrawal services. Among the five statements “The card less service of banks is easy to

use” has the highest mean value of 4.1373 with minimal standard deviation of 0.7424 which implies that this statement has high degree of consistency than that of other statements and it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

Similarly, among five statements “The bank handles complain and solves quickly” has the lowest mean value of 3.9363 with maximum standard deviation of 0.8872 which implies that this statement has low degree of consistency than that of other statements but it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

The mean of Convenience on card less service and value ranges from a minimum value of 3.58 to maximum value of 3.94 Among them, the most significant observations of the respondents regarding Reliability of card less withdrawal is “The card less service of banks is easy to use” with mean value of 4.14 whereas, the most insignificant observation is “The bank handles complain and solves quickly” with mean value of 3.94 Weighted average mean value for Convenience on card less service is 4.03, which indicate that there is higher Convenience on card less service.

#### 4.2.4 Privacy and Security of Card Less Cash Withdrawal

Card-less service security and privacy constitute the last and fourth independent variable in the present investigation. The following displays the descriptive analysis of each draft question as well as the overall descriptive analysis of this variable:

Table 10

*Customer Opinion Regarding Privacy and Security of card less Banking Cash Withdrawal*

S.n	Statement	N	Mean	Std. Deviation
S1	The transaction on card less application is confidential and secure	408	4.0980	0.7486
S2	Dispute amount immediately gets reverse to account	408	3.9167	0.8687
S3	The card less service of bank asks for password before conduction of transaction.	408	4.1078	0.7472
S4	Alerts system of transaction is very fast	408	3.9902	0.8114
S5	The banks send message and mails during every card less transaction to alert or notify	408	4.0833	0.7601

Table 10 represents the descriptive statistics of the independent variable Privacy and Security. It includes five statements to determine customer Privacy and Security towards card less cash withdrawal services. Among the five statements “The card less service of bank asks for password before conduction of transaction ” has the highest mean value of 4.1078 with minimal standard deviation of 0.7472 which implies that this statement has high degree of consistency than that of other statements and it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

Similarly, among five statements “Dispute amount immediately gets reverse to account” has the lowest mean value of 3.9167 with maximum standard deviation of 0.8687 which implies that this statement has low degree of consistency than that of other statements but it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

#### 4.2.5 Customer Satisfaction

Customer Satisfaction of m-banking is one of the independent variables of the research. Every issue comes with a descriptive analysis, and the conclusions of this variable's examination will appear below:

Table 11

*Customer Opinion Regarding Customer Satisfaction on Cardless Cash Withdrawal*

S.n	Statement	N	Mean	Std. Deviation
	Easy to access the mobile banking card less service			
Sa1	of the bank satisfies the customer	408	4.1078	0.7603
	Reliability on card less service of the bank			
Sa2	encourages using the service	408	4.1422	0.7179
	User-friendly characteristics of card less service of			
Sa3	bank satisfies the customer	408	4.1078	0.7067
	Monthly available limit of card less transaction			
Sa4	satisfies the customer	408	3.7304	0.9818
	Card less service is the cheapest way of making			
Sa5	transactions.	408	4.0931	0.7393

The result in table shows descriptive statistics of individual item and as a whole Customer Satisfaction sub factor. This section provides the information of Customer Satisfaction of card less cash withdrawal from atm . There are four statements that is used to measure the responses in the five point Likert scale.

Table 9 displays the descriptive statistics of the dependent variable Customer Satisfaction. It includes five statements to determine Customer Satisfaction towards card less cash withdrawal services. Among the five statements “Reliability on card less service of the bank encourages using the service ” has the highest mean value of 4.1422 with minimal standard deviation of 0.7179 which implies that this statement has high degree of consistency than that of other statements and it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

Similarly, among five statements “Monthly available limit of card less transaction satisfies the customer” has the lowest mean value of 3.7304with maximum standard deviation of 0.9818 which implies that this statement has low degree of consistency than that of other statements but it does have a relevant impact on customer satisfaction towards card less cash withdrawal.

The mean value of all these five question ranges from 3.73 to 4.14, it indicates that, there is Customer Satisfaction in responses of the respondents on the specified Likert scale item. The statement i.e. “Reliability in card less service of the bank encourages using the service” has the highest mean value of 3.73 .However, the statement i.e. “Monthly available limit of card less transaction satisfies the customer” has the lowest range mean of 4.14. The weighted average mean for customer satisfaction is 4.04.

### **4.3 Inferential Analysis**

The approach for evaluating the empirical data and testing the hypothesis set developed in the previous chapter is presented in this part. By using processes known as inferential statistics, researchers can extrapolate or infer findings from samples to the entire population. It permits deriving values for a population from one or more observational samples. Tests of hypotheses using inferential analysis establish whether observed variations in variables or groups are true or the result of random variation. By drawing

conclusions and hypotheses from samples, it generates new information. This section comprises two available statistical tools. They are

### 4.3.1 Pearson Correlation Analysis

The degree of a link between two variables is known as correlation. A weak or low correlation indicates that there is little to no association between the variables, whereas a strong or high correlation indicates that two or more variables have a significant relationship. The correlation coefficients between card-less ATM cash withdrawals and customer satisfaction are computed and displayed in Table 12.

Table 12

#### *Pearson Correlation Analysis of Define Variable*

	Accessibility	Reliability	Convenience	Security	Satisfaction
Accessibility	1	.740**	.647**	.608**	.616**
Reliability		1	.715**	.709**	.679**
Convenience			1	.853**	.847**
Security				1	.822**
Satisfaction					1

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

According to table no 12, the range of the output is between -1 to 1. If a value becomes favorable, it represents a positive connection among the variables, but if it is unfavorable it represents that there is no relationship. The correlation between card less cash withdrawal and customer satisfaction has the following association between them which are being interpreted and the hypothesis is tested which are as follows:

#### **Correlation between Accessibility and Customer Satisfaction**

At the 1% level of significance, the Pearson coefficient of correlation between accessibility and customer satisfaction has an R-value of 0.616, indicating that there is some strong positive association between the two. This indicates that there is a positive relative rise in customer satisfaction for each positive increase in accessibility.

### **Correlation between Reliability and Customer Satisfaction**

The Pearson coefficient of correlation between Reliability and the Customer Satisfaction has the R-value 0.679, which shows that there is a slightly high degree of positive relationship between reliability and customer satisfaction at 1% level of significance. This means for every positive increase in reliability, there is a positive increase of a fixed proportion in the Customer Satisfaction.

### **Correlation between Convenience and Customer Satisfaction**

The R-value of 0.847 indicates a somewhat strong positive connection between convenience and customer fulfillment at the 1% significance level, according to the Pearson coefficient of correlation between convenience and customer satisfaction. This implies that there is a positive proportional rise in customer satisfaction for each positive improvement in accessibility.

### **Correlation between Privacy and Security and Customer Satisfaction**

According to the 1% significance level, there is a relatively strong positive association between privacy and security and customer happiness, as indicated by the R-value of 0.822 for the Pearson correlation between privacy and security and customer satisfaction. It may be inferred that a fixed proportion of customer satisfaction increases positively for each unit increase in accessibility.

### **4.3.2 Regression Analysis**

To ascertain the relationship between the variables, a set of statistical techniques known as regression analysis is performed. A few independent variables and one or more dependent variables are presented along with the connection between them. Regression analysis is primarily utilized to forecast dependent variable behavior based on the responses of two or more independent variables. By performing a regression analysis, it can determine whether these independent variables have impacted the particular dependent variables and if so, to what extent. From this information, it can reveal that which elements of independent variables are being well received, and where it needs to be focused so the further improvement can be done. The approach facilitates to recognize the most significant elements, the factors that deserve to be disregarded, and the connections within all of these elements.

### Regression Investigation Relating Customer Satisfaction and Mobile Banking

Regression analysis is conducted for analyzing the data. The following table includes the main findings of the regression analysis.

Table 13

#### *Model Summary<sup>b</sup>*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871 <sup>a</sup>	0.759	0.756	0.32459

a. Predictors: (Constant), Security, Accessibility, Reliability, Convenience

Table 13 the model's R-squared and adjusted-R-squared statistics were 75.9% and 75.6%, respectively. The results demonstrate that the variations in the independent variables might be responsible for 75.6% of the changes in the dependent variable.. That is, 75.6% of the variations in consumer satisfaction may be explained by accessibility, dependability, security, and ease. Other factors not covered by the model accounted for the remaining 24.4% of the changes.

Table 14

#### *Analysis of Variable*

##### ANOVA<sup>a</sup>

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	133.403	4	33.351	316.539	.000 <sup>b</sup>
	Residual	42.46	403	0.105		
	Total	175.863	407			

a Dependent Variable: Satisfaction

b Predictors: (Constant), Security, Accessibility, Reliability, Convenience

Regression result in table 14 indicates that the independent variables are statistically significant in predicting the customer satisfaction. The study established a significant value of  $p=0.000$  showing a statistical significance relationship.

Table 15

*Regression results of customer satisfaction on card less cash withdrawal from ATM*

Coefficients<sup>a</sup>

Model	Sig.	Unstandardized Coefficients		Standardized Coefficients	t
		B	Std. Error	Beta	
1		(Constant)	0.413 0.115	3.58	0.00 0.00
		Accessibility	0.065 0.041	0.06	1.603 0.11
		Reliability	0.042 0.037	0.048	1.145 0.253
		Convenience	0.458 0.047	0.486	9.729 0.00
		Security	0.337 0.049	0.337	6.928 0.00

a Dependent Variable: Satisfaction

In the table 15, the significance value of Security (0.000), Convenience (0.000) is less than p value (0.05) which implies that the null hypothesis is rejected, and alternative hypothesis is accepted. This shows that there is significant relationship of these variables with the Customer Satisfaction. Although accessibility and reliability contain significance measurements of 0.11 and 0.253, correspondingly, which are higher than the p-value of 0.05, it suggests that the alternative hypothesis is rejected and the null hypothesis is accepted. This shows there is no significance relation of this variable with Customer Satisfaction.

#### 4.4 Major Findings

This study mainly focused on analyzing the impact of card less cash withdrawal from ATM on customer satisfaction. This study used different independent variables like: Accessibility, Reliability, Security and privacy, and convenience and dependent variable like Customer satisfactions. The result acknowledged is based on the primary data which are collected from 408 respondents through questionnaires. Multiple regression analysis, correlation analysis, and descriptive statistics were implemented to get to at the outcome.

- This study consisted of 408 participants belonging to different background. A convenience sample of people from the Kathmandu valley with varying genders, ages, and employment backgrounds was used in the survey.

- The study revealed that maximum user of card less service are male and regarding the age group maximum user belongs to are group between 31 to 40.
- With the help of different studies we analyzed four different dimensions of mobile banking card less service.
- Security and convenience are to major factor of card less service which help to boost the customer satisfaction
- Similarly, among the different dimension privacy and accessibility can play vital role in customer satisfaction.
- Regarding the accessibility customer are more satisfied with speed of OTP whole doing card less cash withdrawal.
- Further customer shows dis-satisfaction regarding location of ATM booth at suitable place
- Customers accept Card less withdrawal as more reliable and easy service than ATM service.
- Considering the security and privacy, we came to know that customer feel secure and privacy towards card less as it ask for password before conducting any transaction either that is of small amount of large amount.
- Customer satisfaction is significantly and positively influenced by every single of the four card-less service parameters.

#### **4.5 Discussion**

This study deals with customer satisfaction towards Card less cash withdrawal from ATM Customer. Its main objective is to know the customer satisfaction towards card less cash withdrawal from atm.. The correlation between dependent variable customer satisfaction and independent variables such as reliability, variability, security and convenience is analyzed. The study used descriptive and inferential analysis for data analysis. The study demonstrates that customer satisfaction and card-less cash withdrawals from ATMs exhibit an advantageous and notable link with each other. Thus, this finding is consistent with the findings Asfour & Haddad (2014), Sherpa (2015), Mwatsika (2016).

It is revealed that there is significant and positive relationship between card less cash withdrawal (mobile banking) and customer satisfaction This study finding is related to Nambiar & Bolar(2022) and concluded that it also prevents critical payment data from

being inserted into physical transaction points and ensures that customer data are never stored on the mobile facilities the customer is transacting. Further, the study showed that card less service is safe and Convenient Cash Withdrawal This finding is identical to the findings of Pote (2023). The study showed that majority of customer accept card less as ease mobile banking service and concluded that improvement of latest versions to accommodate several bank accounts for a single customer during the registration stage.

## **CHAPTER-V**

### **SUMMARY AND CONCLUSION**

This is the last chapter of study which presents an overview of the study in the summarized form along with its finding conclusion of the research work. This chapter mainly classified into three parts i.e summary, conclusion and implication. Furthermore, it includes recommendations regarding the customer satisfaction towards card less cash withdrawal from ATM. Finally, the chapter concludes with an evaluation of prospective paths for additional research in the same field.

#### **5.1 Summary**

The primary objective of the study is to determine how card less cash withdrawal from ATM and customer satisfaction are related, as well as which aspects of the service have an impact on consumer satisfaction. The study's precise goals were to determine which aspects of mobile banking card less cash service influence customer satisfaction and to investigate how these aspects of service quality affect customer satisfaction.

Various reviews were constructed in order to provide a conceptual framework and determine the specific goal of the research project. As part of the conceptual assessment, the characteristics of card less banking and its limitations were examined in relation to the bank's customer satisfaction model. The concepts have been clarified and several studies pertaining to mobile banking have been reviewed. Four key factors that influence card less cash services—accessibility, dependability, convenience, security, and privacy—were reviewed based on the literature review. After that, a theoretical model was created using the suggested variables and their apparent relationships.

The main objective of the study is to determine the customer satisfaction towards card less cash withdrawal from ATM and to identify the factors affecting in using card less withdrawal service.

Descriptive and causal-comparative research designs were used to carry out this investigation. Customer satisfaction is the dependent variable, and accessibility, reliability, privacy and safety, and convenience are the variables that are independent.

There are total 408 respondents in this study, representing a different range of age groups, professions, educational backgrounds, and monthly incomes. The data which was obtained was analyzed utilizing SPSS. The degree of customer satisfaction with card-less cash withdrawal was examined using non-parametric tests including step-wise regression and correlation.

Based on the analysis of data, the major findings of the study are summarized as here under:

The output's range is between -1 and 1, depending on the correlation. When the values are positive, it means that the variables are positively associated; when the values are negative, it means that the variables are adversely related. The results of the research reflect the extent of fulfillment users feel with card-less ATM cash withdrawals. The respondents' N is 408 and the significant level is between 0.01 and 0.05. The care elements are all positively correlated with customer satisfaction.

## **5.2 Conclusion**

The study aids in identifying the key characteristics of card-less services, which are crucial to client satisfaction. Evaluating the connection between such characteristics and consumer satisfaction is made easier by this research work. Examining the effect of the card-less service quality dimension on level of customer satisfaction is another benefit of this study. An online questionnaire was used to gather data for this study from participants who diversified in terms of gender, age, and education. Numerous aspects of mobile banking are crucial in determining how satisfied customers are.

With regard to the objectives as mentioned for this research following conclusion has been made

- From the related literature and studies we found that mobile banking Card less service have different and many dimensions.
- With the help of different studies we analyzed four different dimensions of mobile banking Card less service.
- Security and convenience are to major factor of mobile banking service which help to boost the customer satisfaction

- Similarly, among the different dimension privacy and security can play vital role in customer satisfaction.
- For overall satisfaction of customer banking application should be more secured and convenient for the users.
- The study revealed that maximum user of card less service are male and regarding the age group maximum user belongs to are group between 31 to 40.
- .Regarding the accessibility customer is more satisfied with speed of OTP while doing card less cash withdrawal.
- Further customer shows dis-satisfaction regarding location of ATM booth at suitable place
- Customers accept Card less withdrawal as more reliable and easy service than ATM service.
- Considering the security and privacy, we came to know that customer feel secure and privacy towards card less as it ask for password before conducting any transaction either that is of small amount of large amount.
- Similarly regarding convenience we found that the bank does not handle complain and solves quickly.
- Further, we found that customer accept card less service as easy service to use as it does not cost extra charge and other risk like misuse of card .
- And lastly the study concluded that all four factors have positive and has significant impact on customer satisfaction.

### **5.3 Implications**

On the basis of this study finding, the following recommendations are made:

- ATMs should be placed in several conveniently accessible areas for users to ensure prompt service and convenience, hence enhancing bank operations. In addition, it is necessary to guarantee continuous maintenance to guarantee the dependability of the services.
- Nepalese banks need to make sure that external risks, such as cybercrime, are not able to access their online banking services.
- The study found a positive correlation between card-less ATM cash withdrawals and consumer satisfaction. Therefore, in order to improve consumer satisfaction,

banks should concentrate on improving the quality of card-less services, such as prompt service and the availability of ATMs, reliability, privacy etc.

- The study revealed a correlation between customer satisfaction and the accessibility of card-less withdrawal. Therefore, banks that wish to increase consumer satisfaction should prioritize 24/7 service accessibility, convenient ATM locations, and speedy OPT processing of transactions.
- The study also observed that customer feels card less service more Convenience than other withdrawal method. Therefore, in order to make card less more easy and Convenience service provider should handles complain and solves quickly and cost effective too.
- The study showed a positive association between card-less cash withdrawal and transaction privacy. The service provider should validate and promptly reverse the disputed amount to the account in order to make the card less secure.
- Service provider need to study the impact of different user interface designs on customer satisfaction and ease of use.
- Examine the possible dangers and solutions for privacy violations and hacking of information related to cardless transactions.
- Analyze customer behavior and preferences related to cardless transactions to inform future product development.
- Analyze the existing regulatory framework for cardless cash withdrawal and identify areas for improvement.
- Determine the performance of measures to safeguard consumers for cardless decisions to buy.
- Develop standardized protocols to ensure interoperability between different cardless cash withdrawal systems.
- Create a comprehensive recognition of fraud techniques which can identify and block card-less transactions that are illegal.

In terms of data, models, and methods, there is still enough room left for further research.

Below is a list of some of the study's potential future scopes:

1. This study has taken only few technologies and digital services provided by the financial sectors. For future studies, researchers may include other variables that affect the customer satisfaction.

2. This outcome generally is generated by Nepal's commercial banks. Thus, the future study may include other financial sectors such as, development bank, finance companies and micro- finance companies.
3. The sample size and time period taken for the study is limited; so future study can be conducted by taking larger sample size and longer study period.
4. For further researchers it is suggested to test the relationship with large sample size and better sampling techniques to generalize the conclusion.

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# Appendix I

## Impact of Digital Transformation in the Performance of Nepalese Commercial Banks Graduate Research Questionnaire

Dear respondents,

I am Mr. Umesh Kumar Shrestha, student of Shanker Dev Campus MBS (Marketing). I am conducting research entitled “**Customer satisfaction towards Card less cash Withdrawal from ATM**”. The information provided by you will be used for research purpose for MBS. I request you to spare just few minute to answer my questions. Your idea and information will be great importance for the research. I do assure you that your information will be kept confidential and used for academic purpose only.

Umesh Kumar Shrestha

Shanker Dev Campus, Kathmandu

**Instruction: Please tick (√) as appropriate. Section A: Demographic data:**

**1. Name of the Bank & Branch:**

.....

**2. Gender:**

Male

Female

**3. Age Group:**

Age below 20

20-30

31-40

41-50

Above 50

**4. Qualification:**

Intermediate

Bachelor's Degree

Master's Degree  M.

Phil / Phd

Other

**5. Occupation:**

Student

Business

Service

Other

## Specific Questions

Please tick mark (✓) in one of the best option that matches your opinions.

*(Please put a tick mark (✓) in appropriate box in following statements indicating how strongly you agree or disagree to the statement representing 5 for strongly agree (SA), 4 for agree (A), 3 for neutral (N), 2 for disagree (D) and 1 for strongly disagree (SD)) The aggregate percentage of strongly agree and agree is calculated in order to assess the degree of total percentage on agree and the aggregate percentage of strongly disagree and disagree is calculated in order to assess the degree of total percentage on disagree.*

### Section B: Level of satisfaction with card less cash withdrawal service

#### A. Accessibility

S.N.	Accessibility of card less withdrawal	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Card less service of the bank use understandable language to all					
2	Card less service of the bank is properly designed					
3	Access the service anytime and anywhere I go.					
4	Speed to OTP of application is fast					
5	ATM booths are located in convenient place.					

#### B. Reliability

S.N.	Reliability on card less service	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Card less withdrawal is reliable than ATM service					
2	No dispute occurs while doing transaction					

3	Mobile banking application of the bank does not freeze during transaction					
4	Feel safe with accuracy of card less transaction					
5	The card less option provides an error free transaction					

### C. Convenience

S.N.	Convenience on card less service	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Language and contents used in application is easy to understand					
2	The card less service of banks is easy to use					
3	find card less banking cost effective as compare to cost of ATM					
4	The bank handles complain and solves quickly					
5	Card less service is convenient in comparison to ATM card					

### D. Convenience

S.N.	Privacy and Security of card less banking service	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	The transaction on card less application is confidential and secure					
2	Dispute amount immediately gets reverse to account					
3	The card less service of bank asks for password before conduction of					

	transaction.					
4	Alerts system of transaction is very fast					
5	The banks send message and mails during every card less transaction to alert or notify					

**E. Customer satisfaction**

S.N.	Customer satisfaction on card less service	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	Easy to access the mobile banking card less service of the bank satisfies the customer					
2	Reliability on card less service of the bank encourages using the service					
3	User-friendly characteristics of card less service of bank satisfies the customer					
4	Monthly available limit of card less transaction satisfies the customer					
5	Card less service is the cheapest way of making transactions.					

**Thank you for your valuable time!**

## APPENDIX II

ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	133.403	4	33.351	316.539	.000 <sup>b</sup>
	Residual	42.46	403	0.105		
	Total	175.863	407			

a Dependent Variable: Satisfaction

b Predictors: (Constant), Security, Accessibility, Reliability, Convenience

Coefficients<sup>a</sup>

Model	Sig.	Unstandardized Coefficients		Standardized Coefficients	t	
		B	Std. Error	Beta		
1	(Constant)	0.413	0.115	3.58	0.00	
	Accessibility	0.065	0.041	0.06	1.603	
	Reliability	0.042	0.037	0.048	1.145	
	Convenience	0.458	0.047	0.486	9.729	
	Security	0.337	0.049	0.337	6.928	
		0.00				
		0.11				

a Dependent Variable: Satisfaction

*Model Summary<sup>b</sup>*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.871 <sup>a</sup>	0.759	0.756	0.32459

a. Predictors: (Constant), Security, Accessibility, Reliability, Convenience

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ABSTRACT Kartikan (2012) defines CB as the process by which banked, underbanked, or unbanked clients use Automated Teller Machines (ATMs) to withdraw and/or transmit money via a wireless network. This study aims to investigate the impact of Card less cash Withdrawal from ATM. Although there are numerous financial instructions available in Nepal right now, only one service provider has been selected for research purposes. A small number of service providers have been specifically chosen due to their aggressive adoption of digital products, system upgrades, and large-scale sales of digital items to customers. Thus, techniques for deliberate sampling have been applied. In accordance with the nature of the research, only primary data were used for analysis. Primary data is obtained as well through a questionnaire. This study employs both a descriptive research design and a casual comparative research design. Multiple regression analysis, a coefficient correlation, and appropriate frequency tables were used to show the results and provide a clarification of the relationship between the variables. The results of the study showed that card-less cash withdrawals from ATMs had a considerable positive impact on