



# Determinants of Customers' Adoption of Mobile Banking in Nepalese Commercial Banks

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## Abstract

**Purpose:** This paper assesses the determinants of customers' adoption of mobile banking in Nepal, employing the Unified Theory of Acceptance and Use of Technology (UTAUT) framework.

**Design/methodology/approach:** The philosophy of positivism guided this study, adopted a quantitative approach, and applied deductive reasoning. The research utilized an explanatory research design to investigate the relationships of cause and effect between the variables. A survey was carried out among 193 participants from Nepalese commercial banks to collect data. The study's population encompasses a diverse array of customers utilizing mobile banking services across commercial banks, with the sample comprising students and teachers associated with KUSOM. The study employed purposive sampling to ensure a robust and diverse sample, drawing from the most accessible segment of the population.

**Findings:** This study has identified several factors that significantly influence customer adoption behaviors, including perceived usefulness, perceived ease of use, perceived risk, service quality, trust, awareness, and perceived cost. The result exhibited that perceived usefulness, ease of use, service quality, trust, and perceived cost positively and significantly affect the adoption of mobile banking. In contrast, perceived risk and perceived cost demonstrate negative impacts, while awareness shows insignificant impact on adoption of mobile banking.

**Conclusion:** The study reveals that Nepal's mobile banking adoption faces challenges like distrust, perceived risks, and insufficient awareness, despite its potential for convenience and efficiency, emphasizing the need for enhanced communication, security, and user guidance.

**Implications:** This research provides actionable insights for banking institutions aiming to improve their mobile banking services and better serve the evolving needs of their customers in Nepal.

**JEL Classification:** G21, O33, D83, M15

## Introduction

The emergence of mobile banking has transformed the financial services industry, providing unprecedented convenience and accessibility to consumers around the globe. As defined by Tiwari and Buse (2019), mobile banking encompasses the delivery of banking and financial services via mobile devices. This includes a comprehensive range of services, from basic account management to the provision of customized financial information. This technological innovation has changed the way individuals interact with their banks, breaking down geographical barriers and enabling round-the-clock access to banking services (Obaid, 2021).



The development of mobile services traces back to the early 2000s, marking a significant milestone in the evolution of electronic banking. Dasgupta et al. (2011) noted that mobile banking was among the first commercial mobile services to utilize SMS and WAP technologies. This early adoption laid the foundation for the rapid growth and diversification of mobile banking services we see today. The proliferation of 4G smartphones has further accelerated this trend, creating new avenues for wireless service delivery and opening up unprecedented commercial opportunities for financial institutions (Cruz et al., 2010).

Despite the prevalent use of mobile phones, the adoption of mobile banking services has not proportionately increased, particularly in developing countries. This disparity highlights a crucial challenge for banks and financial services providers: the necessity to effectively bridge the gap between the prevalent usage of mobile phones and the adoption of mobile banking solutions. Huili and Chunfang (2011) point out that the ubiquity of mobile phones offers commercial banks a unique opportunity to extend their services to underserved populations in remote villages with limited access to internet-connected computers.

The scope of mobile banking services has expanded significantly since its inception. According to Adewoye (2013), modern mobile banking solutions encompass a wide range of functionalities, including account inquiries, fund transfers, bill payments, personalized alerts, and even real-time stock quotes. This comprehensive suite of services empowers customers with the ability to handle their finances "anywhere, anytime, anyhow," freeing them from the constraints of traditional banking hours and physical branch locations (Banstola, 2007).

In the context of Nepal, the adoption of mobile banking forms part of a larger digital transformation occurring within the financial sector. Tiwari and Buse (2019) explore the timeline of electronic banking in Nepal, highlighting that even though Nepal Bank Limited was established in 1937, it took almost 65 years for internet banking to be introduced in the nation. The launch of the first ATM by Himalayan Bank in 1995, along with the introduction of phone banking in 1997, laid the groundwork for more sophisticated digital services. The launch of internet banking by Kumari Bank in 2002, quickly followed by mobile SMS banking, marked a significant milestone in Nepal's journey towards digital financial services.

However, as Ashta and Arvind (2017) observe, many clients in Nepal continue to prefer conventional banking methods over mobile banking, despite its apparent convenience. This reluctance emphasizes the multifaceted challenges that banks face in facilitating the widespread adoption of mobile banking services. Naruetharadhol et al. (2021) identify trust deficiency, negative client dispositions, and perceived risk as primary obstacles. Many customers express concerns about the irreversibility of transactions, the potential for errors, and the fear of electronic bank fraud.

Furthermore, the inadequate understanding of how to effectively utilize mobile banking services constitutes a significant barrier. Anus et al. (2011) emphasize the importance of addressing customer comfort and service reliability to overcome these challenges. They suggest that telecommunication providers and financial institutions should focus on aspects that affect the adoption of mobile banking, prioritizing customer education and service quality.

The possible result of extensive mobile banking usage in Nepal are profound. Okiro and Ndungu (2013) noted that mobile devices and the internet are influencing the efficacy of financial institutions, enabling the delivery of expeditious, effective, and accessible financial services. For urban customers, it offers unparalleled convenience and

time savings (Elbadrawy & Aziz, 2011; Akhaldi & Kharma, 2019). For individuals in rural areas, this offers a chance to obtain vital financial services that were formerly inaccessible because of geographic barriers.

However, the adoption of mobile banking also brings new challenges. Alsheikh and Bojei (2012) highlighted the increasing prevalence of hacking and identity theft in the digital domain as a significant concern for potential users. The fear of unauthorized access to bank accounts through lost or stolen phones represents a major barrier to adoption for many individuals. To address these challenges, banks should emphasize on enhancing the security and reliability of their mobile banking services.

Safeena et al. (2011) highlighted key quality dimensions in internet-based electronic banking, which include accuracy, security, network speed, user friendliness, user engagement, and convenience. By prioritizing these factors, banks can build trust and encourage wider adoption of mobile banking services (Laforet & Li, 2005). The success of mobile banking in Nepal will ultimately depend on the ability of financial institutions to balance technological innovation with customer education and trust-building initiatives. Ali et al. (2023) argued that adoption will not occur until consumers recognize the service as beneficial. Therefore, banks must not only invest in robust and secure mobile banking infrastructure but also develop effective strategies to educate their customers about the benefits and safety measures of mobile banking (Majumdar & Pujari, 2022).

Davis (1989), Venkatesh et al. (2003), Singhal and Padhmanabhan (2008), and Kim et al. (2009) highlighted various determinants influencing customer intentions to adopt mobile banking services. However, findings are inconsistent due to differences in banking history, development stages, and geographic contexts (Chitungo & Munongo, 2013). Consequently, results from other countries may not apply to Nepal, where research on mobile banking adoption is limited (Banstola, 2007; Khatri & Upadhaya, 2020), often using small sample sizes.

As Nepal's banking sector continues to evolve, the focus on customer retention and satisfaction becomes increasingly crucial. Mobile banking represents a key differentiator in a competitive market, offering banks a way to enhance customer loyalty and reduce operational costs. However, to fully realize these benefits, banks must prioritize the development of high-quality, value-added services that meet the evolving needs of their customers.

The primary purpose of this study is to examine the relationship between the adoption of mobile banking and various independent variables, including perceived usefulness, ease of use, risk, service quality, trust, awareness, and cost. Furthermore, the study seeks to investigate the demographic characteristics of mobile banking users and to identify factors that may assist commercial banks in enhancing their services, thereby potentially transforming the banking sector in Nepal.

## Literature Review

### **Unified Theory of Acceptance and Use of Technology (UTAUT)**

The Unified Theory of Acceptance and Use of Technology (UTAUT) is a comprehensive framework that is intended to clarify the factors that influence the decisions of individuals to implement and use new technology. Venkatesh et al. (2003), developed the Unified Theory of Adoption and Use of Technology (UTAUT). This theory integrates eight pre-existing models and theories that are relevant to the adoption of

technology, such as the Technology Acceptance Model (TAM), the Theory of Planned Behavior (TPB), and the Motivational Model.

Social influence, effort expectancy, performance expectation, and facilitating factors are the four fundamental constructs identified by the theory. Mobile banking adoption behavior is influenced by factors such as perceived usefulness, perceived ease, perceived risk, service quality, trust, awareness, and perceived cost. The Unified Theory of Acceptance and Use of Technology (UTAUT) is closely associated with these factors. Performance Expectancy is linked to perceived usefulness, which improves financial management. On the other hand, perceived ease of use is related to effort expectancy, which influences the user's decision to utilize the technology. Trust and service quality are connected to facilitating conditions, offering assurance and dependable support. Perceived risk may act as an obstacle to acceptance, affecting social influence and the overall perception of the technology. This model is the most widely used, robust, validated, and reliable tool for studying technological adoption. UTAUT has been validated in diverse geographical settings to elucidate drivers of technology adoption and solidify its generalizability potential (Mensah & Khan, 2024).

### Perceived Usefulness (PU)

Perceived usefulness denotes the degree to which a person believes that using particular technology will enhance their work performance (Davis, 1989). Individuals contemplating adoption evaluate the consequences of their actions based on the continuous apparent advantages gained from the innovation. Studies on the adoption of information systems suggest that a system that does not aid individuals in performing their tasks is unlikely to be embraced favorably. Perceived usefulness is referred to as performance expectation (Singh & Srivastava, 2020). Similarly, perceived usefulness has shown a positive and statistically significant relationship with the desire to use mobile banking services (Priya et al., 2018). Perceived usefulness is seen as a crucial element in significantly increasing customers' inclination to embrace innovation.

### Perceived Ease of Use (PEOU)

Perceived ease of use refers to the degree to which an individual believes that using a certain technology requires little effort (Davis, 1989). Factors contributing to the idea of perceived ease of use include problems and expected effort (Venkatesh et al., 2019). The perception of usability might affect performance; hence, the first perceived utility or its lack may lead to discontent, obstructing the adoption of new technologies (Davis, 1989; Yuliana & Aprianingsih, 2022). The influence of perceived ease of use on a customer's willingness to use a new invention, either way via perceived usefulness, is well established in academic literature (Makanyeza, 2017). Mobile phones with diminutive displays and compact keypads may obstruct information visibility and induce typing mistakes during transactions, so diminishing the entire mobile banking experience.

### Perceived Risk (PR)

The uncertainty that surrounds the outcomes of implementing technological advancements is referred to as perceived risk. Sathye (1999) contended that the implementation of electronic banking necessitates that users evaluate concerns regarding password security, data encrypt, cybercrime, and the safeguarding of private information. The perceived risks related to possible information loss in the course of mobile banking activities are a significant concern for customers using mobile phone services (Luarn & Lin, 2005). The expansion of mobile banking is thought to be negatively influenced by the perception of risk. The findings indicated that the propensity to embrace Islamic mobile banking services was mostly affected by

perceived effectiveness and risk. The desire to adopt was favorably affected by perceived effectiveness, but perceived risk had a negative impact (Thaker et al., 2019).

### Service Quality(SQ)

Many research studies have analyzed the importance of service quality in the banking sector. Quality of service is defined in the literature as the difference between customer experiences and expectations, as well as the distinction between consumer perceptions and anticipated outcomes (Parasuraman et al., 1988). Service quality is acknowledged for its potential to yield competitive advantages, including enhanced customer loyalty and increased organizational profitability. The quality of service is essential for achieving customer satisfaction. The non-physical characteristics of services, combined with differences in customer attributes, complicate the assessment and quantification of service quality. SERVQUAL (Parasuraman et al., 1988) serves as the primary method for assessing service quality, focusing on the difference between customer expectations and perceptions.

### Trust(T)

Customer trust is seen as a crucial factor for the success of mobile banking. The majority of research has focused on the conceptual framework, the development of trust mechanisms, and the ramifications of trust in mobile commerce and mobile transactions (m-commerce). Kim et al. (2009) evaluated the impact of starting trust on mobile banking usage, defining trust as a psychological anticipation that a dependable entity will avoid self-serving actions. Trust is described as a sense of assurance and a desire to rely on a person or organization. Kim et al. (2009) distinguish between starting belief and trust cultivated via experience or knowledge. In this study, "trust" refers to the security of mobile payments when required, the confidentiality of personal information (including the sharing of credit card details during mobile service usage), the reliability of results following the use of a mobile service, and the integrity of the terms of service related to mobile services.

### Perceived Cost (PC)

The perceived cost denotes the transaction charges associated with mobile banking operations, including airtime and banking fees. Cost is regarded as the degree to which an individual perceives that operating mobile banking incurs charges (Islam et al., 2019). These expenditures may include transactional costs, such as banking fees, mobile availability rates for communication traffic involves short message services or data, and the costs connected with mobile devices. Cruz et al. (2010) found that the costs related to subscriptions and services for mobile offerings, particularly banking and shopping promotions, have a significant impact on consumer acceptance. The research indicated that pricing may adversely affect the adoption of mobile banking services. However, this research focused on the rural unbanked population, which characterized has limited discretionary income. As a result, this viewpoint requires validation to determine if existing literature supports the notion that perceived costs of mobile banking services could hinder their use in rural areas.

### Awareness(A)

The degree of consumer awareness concerning mobile banking influences its acceptance, as individuals engage in a sequence of knowledge acquisition, persuasion, decision-making, and formation before adopting a product or service. Customer awareness is a critical determinant in the adoption of new services or products (Amirah, 2023). The extent of customer comprehension of mobile banking is recognized as a significant determinant influencing its adoption. Safeena et al. (2020) indicate that for many users, engagement

with mobile banking services is a novel experience, and insufficient understanding of mobile banking notably contributes to reluctance in utilizing these services. The survey indicated that customers were not well-informed about the opportunities, advantages, and disadvantages linked to Internet banking.

## Mobile Banking Adoption

Adoption refers to the adoption and sustained application of a certain product, service, or notion (Safeena et al., 2020). Sathye (1999) asserts that consumers experience a progression of information gathering, persuasion, decision-making, and validation before adopting a product. The acceptance or non-acceptance of an innovation starts while a customer becomes aware of the product or service. Saxena et al. (2023) investigated the factors affecting mobile banking adoption in India. They proposed a model that integrates the unified theory of acceptance and use of technology with technical preparedness. This research will aid e-banking distributors in urban India in improving mobile banking acceptance by enabling the creation of new services or the alteration of existing ones.

## Research Hypotheses

The following hypothesis is proposed by the study, which is based on an extensive review:

$H_1$ : There is a significant impact of perceived usefulness on the adoption of mobile banking.

$H_2$ : There is a significant impact of perceived ease of use on the adoption of mobile banking.

$H_3$ : There is a significant impact of perceived risk on the adoption of mobile banking.

$H_4$ : There is a significant impact of service quality on the adoption of mobile banking.

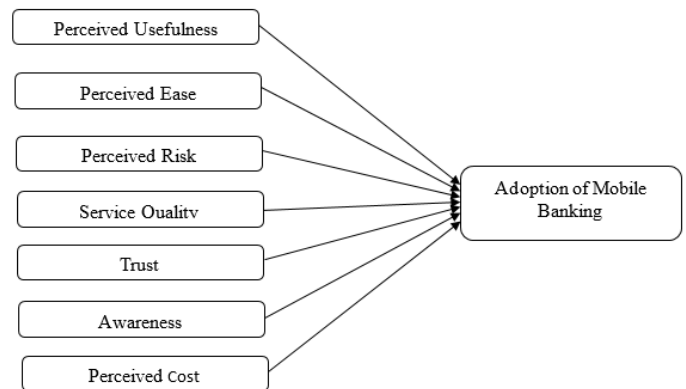
$H_5$ : There is a significant impact of trust on the adoption of mobile banking.

$H_6$ : There is a significant impact of awareness on the adoption of mobile banking.

$H_7$ : There is a significant impact of perceived cost on the adoption of mobile banking.

## Research Framework

This study is theoretically based on previous research examining the elements that affect consumers' adoption of mobile banking in Nepal. Safeena et al. (2020) highlighted essential factors, such as perceived usefulness, perceived ease of use, awareness, perceived risk, and subjective norms, as crucial predictors of consumers' intentions to use mobile banking. This research identifies their perceived usefulness, perceived ease of use, perceived risk, service quality, perceived cost, trust, and awareness as significant contributing factors. Chitungo and Munongo (2013) used a similar approach, emphasizing the importance of perceived usefulness, perceived ease of use, relative benefits, personal innovation, and societal innovation expectations in mobile banking usage. Additionally, Saleem and Rashid (2011) identified other aspects, including organizational, technical, strategic, and functional components that influence the customer adoption. A conceptual framework has been developed to analyze the adoption of mobile banking services by consumers in Nepalese commercial banks, grounded upon this study and related assumptions.



**Figure 1: Conceptual framework**

Note. Adopted from (Saleem & Rashid 2011; Chitungo & Munongo 2013; Safeena et al. 2020)

## Methods

The philosophy of positivism guided this study, utilized a quantitative approach, and adopted deductive reasoning. The study utilized the explanatory research design to evaluate cause-and-effect relationships among these variables, building on previous work in the field of customer behavior and mobile banking adoption (Luarn & Lin, 2005; Kim et al., 2009; Saleem & Rashid, 2011; Chitungo & Munongo, 2013; Safeena et al., 2020). The researchers have developed a modified model to measure mobile banking adoption based on these factors.

The study's population consists of individuals utilizing mobile banking services offered by commercial banks, while the sample comprises students and teachers associated with KUSOM who engage with facilities of mobile banking provided by banks in Nepal. Following Qamar and Qureshi (2022), 250 questionnaires were distributed, yielding 193 valid respondents. The study employed purposive sampling, as recommended by Kim et al. (2009), to guarantee a more reliable and inclusive sample. This non-probability sampling method involves drawing the sample from the most accessible part of the population purposively on the basis of availability.

A set of questionnaires has been developed to gather data on customer usage of mobile banking. The surveys include many demographic variables such as age, gender, marital status, education, employment, and income level. The survey was carried out among customers of various banks, which were classified as public banks, joint venture banks, and government-owned banks based on the findings of the survey.

## Model Specification

Following deepening model has been used for this study.

$$MB = \beta_0 + \beta_1 PU + \beta_2 PE + \beta_3 PR + \beta_4 SQ + \beta_5 T + \beta_6 A + \beta_7 PC + \epsilon$$

Where,  $\beta_0$  = Intercept

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$  &  $\beta_7$  are the beta coefficient (sensitivity) of variables and MB = Mobile Banking, PU = Perceived Usefulness, PE = Perceived Ease, PR = Perceived, T = Trust, A = Awareness, PC = Perceived Cost,  $\epsilon$  = Error Term

## Reliability

Cronbach's alpha is used to evaluate reliability, ensuring accurate results with minimum bias. Cronbach's alpha varies from 0 to 1, with values over 0.9 being excellent or very consistent, those between 0.7 and 0.9 regarded as satisfactory, and those below 0.5 categorized as unsuitable (Davis, 1989).

**Table 1: Test of Reliability**

Variables	Cronbach's Alpha	Tolerance	VIF
Perceived Usefulness	0.789	0.532	2.098
Perceived Ease	0.732	0.614	1.973
Perceived Risk	0.823	0.597	1.431
Service Quality	0.791	0.479	1.671
Trust	0.812	0.764	1.792
Awareness	0.773	0.491	1.501
Perceived Cost	0.863	0.598	1.63

Table 1 demonstrates that the Cronbach's alpha values for the dimensions of perceived usefulness, perceived ease, perceived risk, service quality, trust, awareness, and perceived cost are 0.789, 0.732, 0.823, 0.791, 0.812, 0.773, and 0.863, respectively. The reliability study demonstrates that all variables exhibit Cronbach's alpha values above the necessary threshold of 0.7, regarded sufficient for validating the questionnaire. To evaluate multicollinearity, tolerance and variance inflation factors were utilized. The tolerance values for all variables exceed 0.1, and all variance inflation factors remain below 10, confirming that both metrics are within an acceptable range.

## Results and Analysis

### Descriptive Statistics

The demographic information of the 193 survey respondents indicates various factors affecting mobile banking use. Females slightly exceed men in number (51.8% compared to 48.2%). The majority of respondents is 21-40 years old (68.9% combined), indicating that younger, more technologically proficient persons are more likely to use mobile banking. Singles (54.4%) slightly outnumber married respondents (45.6%).

Education levels are predominantly higher, with 65.8% holding bachelors or master's degrees, indicating a correlation between education and mobile banking usage. Occupation-wise, service providers (21.8%) and business owners (21.2%) form the largest groups, followed closely by unemployed individuals (20.7%). Income distribution is relatively balanced, with the largest group (27.5%) earning between Rs. 30,000-50,000 monthly. These demographics suggest that mobile banking adoption is influenced by determinants such as age, education, occupation, and income level, with younger, more educated, and professionally active individuals showing greater interest in the service.

**Table 2: Demographic Information of the Participants**

Demographic variable	Classification	Frequency	Percentage
Gender	Male	93	48.2
	Female	100	51.8
	Total	193	100
Age	Below 20 years	Nil	Nil
	21-30 years	63	32.6
	31-40 years	70	36.3
	41-50 years	60	31.1
	51 and above	Nil	Nil
	Total	193	100
Marital status	Single	105	54.4
	Married	88	45.6
	Total	193	100
Qualification	SLC	3	1.6
	Intermediate	46	23.8
	Bachelor	63	32.6
	Master	64	33.2
	PhD	17	8.8
	Total	193	100
Income	Below 15000	48	24.9
	15000-30000	40	20.7
	30000-50000	53	27.5
	Above 50000	52	26.9
	Total	193	100
Occupation	Business	41	21.2
	Student	37	19.2
	Service	42	21.8
	Housewives	33	17.1
	Unemployed	40	20.7
	Total	193	100

### Correlation Analysis

The correlation analysis of the variables under scrutiny is presented in table 3. This study assists in identifying the associations among the variables examined. Specifically, the correlation analysis investigates the various elements that affect customers' adoption of mobile banking in Nepal's commercial banking sector.

**Table 3: Correlation Analysis**

Variables	PU	PE	PR	SQ	T	A	PC
PU	1						
PE	.6734** (0.0021)	1					
PR	-.4591** (0.00130)	.3986** (0.0128)	1				
SQ	.3476** (0.0097)	.7623** (0.0001)	.2560** (0.0007)	1			
T	.6720** (0.0234)	.5478** (0.0029)	-.6731** (0.0001)	.4103** (0.0008)	1		
A	.561** (0.0849)	.2967** (0.0401)	.3890** (0.0007)	.5920** (0.0657)	.3591** (0.0086)	1	
PC	.6102** (0.0189)	.1850** (0.0027)	.7902** (0.0000)	.6754** (0.0000)	.6109** (0.0045)	.4109** (0.0000)	1

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

However some of the variables showed the high degree of association like SQ & PE, PC & PR where there correlation coefficient is more than 0.7 and some variables showed low degree of association PC & PE, A & PE, SQ & PR, A & T, SQ & PR, PE & PR because their correlation coefficient value is less than 0.4 and some variables showed the negative relation PR & PU, T & SQ. From these correlation coefficient values, there is no serious issue of high collinearity in the data set and best fitted for running regression.

### Regression Analysis

The multiple regression analysis reveals substantial correlations between several parameters and the adoption of mobile banking. Perceived usefulness (PU) has a significant positive impact, with each one-unit increase in PU leading to a 6.89 unit rise in adoption ( $p < 0.05$ ).

**Table 4: Model Summary**

Mode	R	R Square	Adj. R Square	Std Error of the Estimate
1	0.7609	0.6792	0.6504	4.271

Note. Compiled by the Authors Using SPSS Package

**Table 5: Coefficients**

Model	Unstandardized Coefficient		Standardized Coefficient	T-Value	Sig.
	B	Std. Error			
C	120.95**	45.296		2.6702	0.0392
PU	6.8952**	2.313	5.6781	2.981	0.031
PE	1.4561**	0.5942	1.5121	2.4502	0.0342
PR	-2.0456**	0.6602	-2.321	-3.0981	0.0023
SQ	3.791**	0.9705	3.5102	3.9061	0.0002
T	1.7032**	0.4255	1.862	4.0023	0.0003
A	2.0341**	1.4122	1.9761	1.4403	0.3215
PC	-4.8902**	1.6149	4.3201	-3.0281	0.0123

Note(s). Dependent Variable: Adoption of mobile banking;

\*\* Regression is significant at the 5%.

Likewise, perceived ease of use (PE) also shows a positive effect, with a 1.45 unit increase in adoption for each unit increase in PE ( $p < 0.05$ ). Service quality (SQ) exhibits a substantial positive influence, with each unit increase leading to a 3.79 unit increase in adoption ( $p < 0.05$ ). Trust (T) similarly shows a positive impact, with each unit increase resulting in a 1.70 unit increase in adoption ( $p < 0.05$ ).

In contrast, perceived risk (PR) and perceived cost (PC) demonstrate negative impacts on mobile banking adoption. Each unit increase in perceived risk leads to a 2.04 unit decrease in adoption ( $p < 0.01$ ), while each unit increase in PC results in a 4.89 unit decrease ( $p < 0.05$ ). Interestingly, awareness (A) shows no significant effect on mobile banking adoption ( $p > 0.05$ ).

**Table 6: ANOVA**

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	728049.26	7	104007.038	12.021	0.0000
Residual	1600640.35	185	8652.11		
Total	53649514.82	192			

Note. Compiled by the Authors Using SPSS Package

The overall model demonstrates a good fit for predicting mobile banking adoption, with an F-statistic of 12.021 ( $p < 0.05$ ). The R-square value of 0.6729 indicates that the independent variables collectively explain 67.29% of the variance in mobile banking adoption. This signifies that the model encompasses a significant portion of the elements influencing customers' choices to embrace mobile banking services.

Table 7 illustrates that mobile banking signifies a transformative phase in the banking sector, as financial institutions allocate considerable resources to deliver this service to clients while minimizing operational costs. The study identifies key elements that significantly affect customer intention to adopt and use mobile banking services in Nepal.

**Table 7: Results of Hypothesis Testing based on Regression Analysis**

Hypothesis	5% Sig.
H <sub>1</sub> : There is significant impact of perceived usefulness on the adoption of mobile banking.	Accepted
H <sub>2</sub> : There is significant impact of perceived ease of use on the adoption of mobile banking.	Accepted
H <sub>3</sub> : There is significant impact of perceived risk on the adoption of mobile banking.	Accepted
H <sub>4</sub> : There is significant impact of service quality on the adoption of mobile banking.	Accepted
H <sub>5</sub> : There is significant impact of trust on the adoption of mobile banking.	Accepted
H <sub>6</sub> : There is significant impact of awareness on the adoption of mobile banking.	Rejected
H <sub>7</sub> : There is significant impact of perceived cost on the adoption of mobile banking.	Accepted

The study framework identifies perceived usefulness, perceived ease of use, perceived risk, service quality, trust, perceived cost, and awareness as major variables positively influencing consumers' choices to use mobile services in Nepal. The analysis suggests that risk of perception and perceived cost negatively impact the decision-making process for customers contemplating the adoption and use of the service, representing significant challenges to the low level consumer acceptance of mobile banking services in Nepal.

## Discussions

The study on mobile banking adoption in Nepal investigates key factors influencing user acceptance and offers actionable recommendations for financial institutions. It establishes that perceived usefulness (PU) and perceived ease of use (PEOU) are essential for users' intentions to adopt mobile banking, consistent with prior research indicating that users prefer technologies that are beneficial and user-friendly (Davis, 1989; Singh & Srivastava, 2020). The findings suggest that banks should improve their mobile applications' functionality to better meet users' financial needs and enhance the user interface to lower barriers to entry. Additionally, perceived risk (PR), particularly concerning security and privacy, is identified as a major barrier, echoing the work of Luarn and Lin (2005), who highlight the importance of trust. To mitigate these risks, banks should focus on transparent communication about security measures and provide reliable services. The study also emphasizes that high service quality (SQ) boosts customer satisfaction and loyalty, supporting the views of Parasuraman et al. (1988) regarding the need to meet customer expectations. Furthermore, a lack of awareness among potential users about mobile banking benefits significantly hinders adoption, suggesting that educational initiatives are necessary (Safeena et al., 2020). Lastly, perceived cost (PC) remains a crucial factor, as high fees can deter low-income users, necessitating competitive pricing models to enhance accessibility and encourage adoption (Cruz et al., 2010).

## Conclusion and Implications

The research uncovers a multifaceted environment for the adoption of mobile banking in Nepal. Despite heightened demand for financial services in urban and rural regions, mobile banking has not completely penetrated the market. This delay is attributed to several variables, including distrust, adverse customer perceptions, and perceived financial risks. Despite the flexibility, speed, and convenience provided by mobile banking, several clients continue to exhibit hesitation towards its adoption. The study defines critical determinants affecting mobile banking adoption: perceived usefulness, ease of use, risk, service quality, trust, cost, and awareness. In addition, security concerns, network challenges, and insufficient guidance are primary barriers to widespread adoption. The banks'

insufficient communication on the advantages and appropriate utilization of mobile banking services hinders its expansion.

The study concludes that customer experience, rather than mere satisfaction, is crucial for customer retention in mobile banking. Demographic factors play a significant role, with profession influencing perceived usefulness, gender affecting ease of use perceptions, and age correlating with increased risk perception. Service quality and trust vary depending on the type of bank, with joint venture banks generally inspiring more trust. However, perceived cost negatively influences adoption, as banks often charge high transaction fees. To increase mobile banking adoption and retain current users, banks must address these challenges, particularly by improving awareness and addressing security concerns. The shift towards mobile banking has made bank-customer relationships more complex and less personal, necessitating new strategies for maintaining customer engagement and understanding customer needs in this evolving digital landscape.

## Limitations and Future Research

This study presents several limitations that should be acknowledged. The participants consisted only of students and teachers from KUSOM who use mobile banking services provided by Nepalese commercial banks, potentially limiting the representativeness of the broader population of mobile banking users in Nepal. The use of purposive sampling, while practical, limits the generalizability of the findings to broader contexts. The study relied on self-reported data, which may be subject to social desirability bias. The cross-sectional design of the study limits the capacity to examine how factors influencing mobile banking adoption may change over time. In conclusion, while the study examined various important factors, it may have neglected additional variables that could affect mobile banking adoption in Nepal.

Future studies could tackle these shortcomings and build on the existing results in various manners. A broader and more inclusive sample from different areas of Nepal could yield a deeper understanding of mobile banking uptake among diverse demographic segments. Long-term studies could shed light on how the factors influencing adoption shift over time, especially as mobile banking technology and user experiences evolve. Researchers could also explore additional variables such as cultural factors, technological infrastructure, and government policies that may influence mobile banking adoption in Nepal. Qualitative research methods, such as in-depth interviews or focus groups, could provide richer insights into the motivations and barriers to mobile banking adoption. Finally, comparative studies between Nepal and other developing countries could highlight unique factors affecting e-banking usage in the Nepalese circumstances and inform more targeted strategies for increasing adoption rates.

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Authors declares no conflict of interest.


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