Evaluating Customer Satisfaction with Mobile Banking Services: A User-Centric Study

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Abstract

The rapid growth of smartphones and wider internet access has boosted mobile banking usage across various user groups. Yet, it is still unclear which service features customers value most and how these shape their satisfaction. This study examines the determinants of customer satisfaction with mobile banking in Kathmandu Valley, Nepal. As mobile banking becomes central to digital finance, identifying the drivers of satisfaction is crucial for banks aiming to improve services and retain users. The research emphasizes six independent variables—Usefulness of Mobile Banking (UOM), Ease of Use (EOU), Cost of Use (COU), Trust on Mobile Banking (TOM), Security Factor (SF), and Time Factor (TF) and their relationship with the dependent variable, Customer Satisfaction (CS). Data were collected from 205 mobile banking users through a structured questionnaire covering demographics and perceptions, measured on a 5-point Likert scale. Using SPSS, the study applied descriptive statistics, correlation, and multiple regression analysis. Findings revealed that trust, security, cost, and time factors significantly affect satisfaction, whereas usefulness and ease of use, though positively correlated, did not emerge as significant predictors in the regression model.

Keywords: Customer satisfaction, Usefulness of mobile banking, Ease of use, Cost of use, Trust on mobile banking, Security factor, Time factor

1. Introduction

A bank is an institution that handles money transfers and undertakes financial deals. With the help of Android phones and other technological advances, people can easily access banking services. Companies that offer banking services make this possible with Mobile Banking. This service lets customers check mini-account statements, ask about balances, move funds, make commercial payments, and recharge their mobile accounts.

Over time, Mobile Banking has evolved to include more services, such as paying school fees and power bills, booking tickets online, and requesting a check book or a card. People's daily lives have become quite easier and more convenient due to these different services. More flexible, convenient, and economical connections between consumers and financial institutions are made possible by mobile banking than in the past (Kunwar & Thakur, 2019). According to Menard et al., (2017) argue, the technology revolution has facilitated web-enabled financial services delivery systems. Banks compete for customers not only in physical locations but also online and on mobile devices that support the web. Customers have found mobile banking to be more convenient, and banks have been able to save money as a result. However, the strategy of creating internet banking involves substantial security risks. It is reasonable to anticipate that elderly users will be particularly inhibited by the inherent security issues connected with new technology and behaviors. Pokhrel (2020) on the subject of mobile and Internet banking, it was shown that younger clients have a greater interest in mobile and online banking than older customers do. The implementation of mobile and online banking has become an essential service for all financial institutions, and as a result, the banking industry has undergone a substantial transformation as a result of this. It is becoming increasingly necessary for financial institutions to evaluate their utilization of technology (Jaiswal,2008). According to the Nepal Telecommunications Authority, there are 31.45% more mobile phone users in the nation than there are people living there (NTA, 2022). In the realm of electronic commerce, and specifically in the financial sector, this has created new opportunities. Customers benefit greatly from the ease with which mobile banking allows them to observe and complete transactions in real time. Every day, the number of people using mobile devices is growing faster than the number of people owning desktop computers, which they may use to access online banking services. Mobile technology is now viewed as a necessity rather than a means of communication, which is said to have an impact on how mobile banking is used in poor nations (Mousumi & Jamil, 2010). The SMS support feature found on the majority of mobile phones allows banks to reach a wide range of customers. In addition, SMS is among the least expensive options when compared to other data providers. An evident factor in banks' use of this technology is the cost-effectiveness and ease of information delivery through SMS. The sizable consumer base in Nepal can be served by SMS in addition to other delivery methods like mobile internet.

2.Objectives of the Study

The main objective of this study is to assess customer satisfaction with mobile banking services from a user-centered perspective.

3. Literature Review

There were 7.4 billion mobile phone users around the world in 2024, and that number is expected to rise to 7.49 billion by 2025. The world's mobile phone users are expected to reach 7.85 billion in 2029 (Federica and

Laricchia, 2022). Asongu and odhiambo (2019), mobile banking plays a crucial role in improving access to financial services, where regular Internet and banking services are too expensive or don't exist at all. Most people agree that having easy access to financial services is a good thing. People can get credit and safely manage their money, financial institutions can get more customers and handle more transactions, and governments can better track how funds are spent in their country because credit helps people with lower incomes. Checking your balance, making payments, applying for credit, and doing other banking tasks can all be done through a mobile device like a cell phone or Personal Digital Assistant (PDA). Mobile banking, which is also known as M-banking or SMS-banking. SMS was the first way that mobile banking was used (Sadiku et al., 2017). Because of their busy lives and, more lately, the COVID pandemic, many people have to use mobile banking. Customers can easily, quickly, and without any problems use banking services that are available 24 hours a day, seven days a week (Vaidya & Wallstreetmojo, 2021). And at the same time, banks save money on running costs by using less time and resources.

Web-based technologies (WBT) facilitated the deployment of web and mobile applications for banks on Android and Apple platforms. Consequently, banks began integrating sophisticated features onto their applications to entice customers (Vaidya & Wallstreetmojo, 2021). The improved functionality of applications with convenient accessibility served as an attraction for customers. Consequently, throughout the years, these mobile banking applications have become the global standard (Regmi, 2015). Mobile banking is a system of payment where the people involved in financial institution can make various financial transactions offered by respective financial institution. The mobile banking service can be accessed via browser-enabled mobile phones or through user- friendly mobile banking applications available in various app stores. There is evidence that mobile apps can help with a lot of different kinds of growth. Gu and Suh (2009) stated that mobile technology would help communities in rural areas the most because it solves many problems that these communities face more directly, such as "information acquisition" and "commodity purchase." Also, in developing countries, even though mainstream banks have worked to improve their services, the growth of telecommunications infrastructure, especially the use of cell phones, has opened the door to financial inclusion (Carlsson et al., 2006).

Bakri (2020) highlighted that mobile banking, as a key financial innovation, is rapidly growing in Malaysia with emphasis on customer perception and acceptance. The study examined factors such as perceived usefulness, ease of use, security, and cost affecting adoption. Using a sample of 384 clients with correlation and regression analysis, the findings revealed significant positive relationships between these factors and customer acceptance. The researcher recommended expanding future studies to other regions for more comprehensive insights. Karjaluoto et al. (2002) revealed that prior computer experience and attitudes toward technology strongly shape perceptions and use of online banking. The study found that positive personal banking experiences also encouraged continued use of familiar channels. Chavda (2022) highlighted that mobile banking provides

innovative services to both new and existing clients, making it a rapidly growing financial channel. Services such as transaction confirmations and system alerts enhance convenience and accessibility through mobile apps. Mobile banking saves time, offers incentives, and has vast growth potential in India's expanding telecom sector. Chawla (2021) examined how mobile banking transforms value delivery in the banking sector and reduces service access costs. Using a survey of 367 participants, consumers were segmented into three clusters—Active Users, Traditional Followers, and Laggards based on mobile banking usage. The study found significant differences across clusters in factors such as ease of use, convenience, efficiency, trust, lifestyle compatibility, attitude, and intention toward mobile banking.

4. Research Methodology

This study employed causal and descriptive research design. Descriptive research was used to examine the various aspects of mobile banking services, while causal research aimed to explore the relationship between the independent variable (mobile banking services) and the dependent variable (customer satisfaction). The research focused on understanding how mobile banking services influence customer satisfaction in Nepalese commercial banks. Nepal has a total of 20 commercial banks, and their customers constituted the population of this study. A total of 250 questionnaires were distributed, of which 205 responses (82%) were valid and included in the analysis. Respondents were selected using a convenience sampling technique, a non-probabilistic method, and questionnaires were distributed personally across the Kathmandu Valley to capture responses from diverse groups. Participants provided consent before completing the survey upon entering bank premises. A 5-point Likert scale was employed to measure perceptions and responses, and quantitative analysis was applied to determine the extent and proportion of responses. Data were collected through a questionnaire based on customer satisfaction. Both descriptive and inferential statistical techniques were employed for data analysis. Frequency distributions were generated and illustrated through tables, while descriptive statistics, including mean, standard deviation, minimum, and maximum values, were calculated for all perception-based items under each variable. Pearson's correlation coefficient was used to assess the strength and direction of relationships between independent variables and customer satisfaction, Finally, multiple linear regression analysis was conducted to evaluate the predictive power of independent variables and identify which factors significantly influence customer satisfaction.

The model included six independent variables and one dependent variable, structured as follows:

Model:

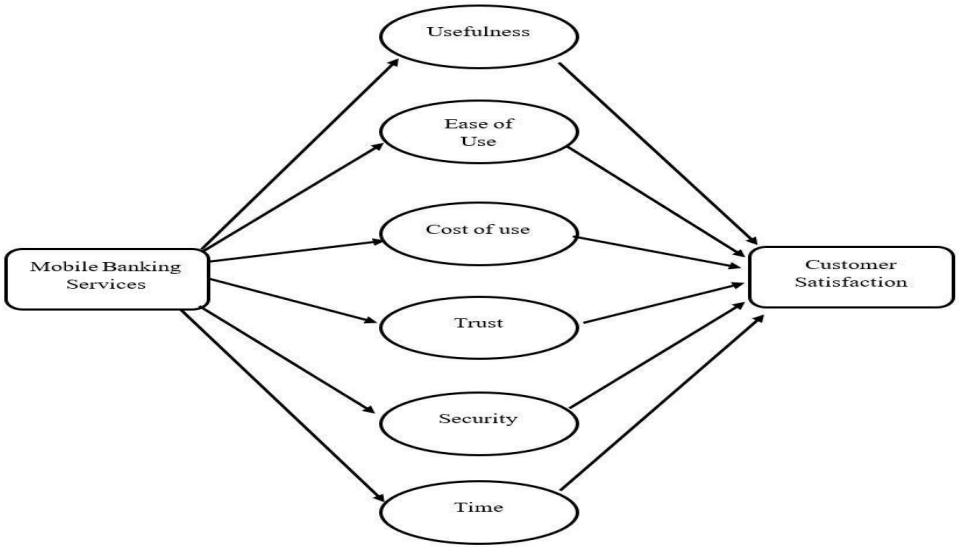
$$CS = \beta 0 + \beta 1(UOM) + \beta 2(EOU) + \beta 3(COU) + \beta 4(TOM) + \beta 5(SF) + \beta 6(TF) + e$$

Where,

CS = Customer Satisfaction (dependent variable)
UOM = Usefulness of Mobile Banking
EOU = Ease of Use

COU = Cost of Use
TOM = Trust on Mobile Banking
SF = Security Factor
TF = Time Factor
β_0 = Intercept
β_1 to β_6 = Coefficients of independent variables
e = Error term

Conceptual Framework



(Source: Saleem & Rashid ,2011)

Figure 1: Conceptual Framework

Research Hypothesis

Hypotheses 1 (H1): The usefulness of mobile banking services will have a positive impact on customer satisfaction.

Hypotheses 2 (H2): The ease of used services will have a positive impact on customer satisfaction.

Hypotheses 3 (H3): The cost of use of services will have a positive impact on customer satisfaction.

Hypotheses 4 (H4): The trust of mobile banking services will have a positive impact on customer satisfaction.

Hypotheses 5 (H5): The security factor of mobile banking services will have a positive impact on customer satisfaction.

Hypotheses 6 (H6): The time factor of mobile banking services will have a positive impact on customer satisfaction.

5. Results and Discussion

Demographic Information

Table 1 shows the demographic profile of the respondents. This survey was conducted among a total of 205 respondents of Kathmandu Valley. Out of this, 97 were female, making up 47.3 percent, and 108 were male, representing 52.7 percent of the total sample. This shows a fairly balanced gender distribution with a slightly higher number of males. Looking at the age distribution, the majority of respondents were between 20 and 30 years, accounting for 43.9 percent. This indicates that almost half of the participants were young adults. The second-largest group was those above 40 years, making up 24.4 percent of the total respondents. Meanwhile, 23.9 percent belonged to the 30–40 years' age range. A smaller proportion, 7.3 percent, were below 20 years, while only 0.5 percent were specifically recorded as below 20 years separately. In terms of education, a significant portion of the respondents had attained a Bachelor's degree, which was 40.5 percent of the total. The next major group had completed +2 or Intermediate level, representing 25.9 percent. Another 22.9 percent had only SLC/SEE level education or were literate. A smaller group, 10.7 percent, had completed a Master's degree or higher qualification. When examining their professions, the largest group was employees, making up 27.3 percent. Close behind were self-employed individuals, who represented 26.8 percent of the total. Students also accounted for a noticeable portion at 18.5 percent. Other professions combined made up 15.1 percent, while housewives formed 12.2 percent of the sample.

Table 1: Demographic Profile of the Respondents

Gender	Frequency	Percent
Female	97	47.3
Male	108	52.7
Total	205	100.0
Age Group		
20-30 Years	90	43.9
30-40 Years	49	23.9
Above 40 Years	50	24.4
Below 20	15	7.3
Below 20 Years	1	.5
Total	205	100.0
Education		
+2/Intermediate	53	25.9
Bachelor	83	40.5
Masters and above	22	10.7
SLC/SEE or Literate	47	22.9
Total	205	100.0
Profession		

Employee	56	27.3
Housewife	25	12.2
Others	31	15.1
Self-Employed	55	26.8
Student	38	18.5
Total	205	100.0

(Source: Questionnaire survey, 2025)

Table 2 presents descriptive statistics on different factors related to mobile banking. The results show usefulness of mobile banking has a mean score of 3.75, ranging from 1.25 to 5.00, with a standard deviation of 0.73, indicating that most respondents find mobile banking fairly useful with moderate variation in opinions. The ease of use has a mean of 3.69, ranging between 1.00 and 5.00, with a higher standard deviation of 0.89, suggesting slightly more diverse views on how easy mobile banking is to use. The cost of use records a mean of 3.72, with responses spanning from 1.00 to 5.00 and a deviation of 0.98, showing mixed perceptions about affordability. Regarding trust in mobile banking, the mean score is 3.72, with responses ranging between 1.40 and 5.00, and a deviation of 0.89, reflecting moderate confidence levels. The security factor stands out with the highest mean of 3.93 and a deviation of 0.93, indicating that users generally perceive mobile banking as secure, though with some differing opinions. The time factor has the lowest mean of 3.35, with the widest deviation (1.11), highlighting that experiences with time efficiency vary greatly among users. Finally, customer satisfaction has a mean of 3.57, ranging from 1.20 to 5.00, with a deviation of 0.82, suggesting an overall positive but varied satisfaction level with mobile banking services.

Table 2: Descriptive Statistics (N = 205)

	Minimum	Maximum	Mean	Std. Deviation
Usefulness of Mobile Banking	1.00	5.00	3.7524	.73389
Ease of Use	1.00	5.00	3.6992	.89481
Cost of Use	1.00	5.00	3.7187	.98269
Trust on Mobile Banking	1.00	5.00	3.7200	.89192
Security Factor	1.00	5.00	3.9301	.93759
Time Factor	1.00	5.00	3.3480	1.11452
Customer Satisfaction	1.00	5.00	3.5707	.82348

Source: SPSS Data Output

Correlation Matrix

Table 3 represents the correlation matrix between independent and dependent variables. The correlation matrix shows the relationship between customer satisfaction (CS) and various factors of mobile banking. Customer satisfaction is found to have a positive and significant correlation with all the factors considered in the study.

Specifically, CS has a moderate correlation with trust on mobile banking ($r = .499$, $p < 0.01$), indicating that trust is one of the strongest contributors to satisfaction. Similarly, CS is positively correlated with the security factor ($r = .361$, $p < 0.01$) and the time factor ($r = .359$, $p < 0.01$), suggesting that customers who feel secure and save time while using mobile banking tend to be more satisfied. In addition, CS shows positive links with cost of use ($r = .351$, $p < 0.01$) and ease of use ($r = .232$, $p < 0.01$), implying that affordability and user-friendliness also play an important role. The usefulness of mobile banking has the weakest but still significant correlation with CS ($r = .159$, $p < 0.05$). Looking at inter-factor relationships, cost of use (COU) shows strong associations with usefulness of mobile banking ($r = .439$, $p < 0.01$) and trust of mobile banking ($r = .413$, $p < 0.01$), indicating that perceptions of cost are closely tied to how useful and trustworthy customers find mobile banking. Ease of use (EOU) is also positively related to usefulness ($r = .351$, $p < 0.01$) and trust ($r = .360$, $p < 0.01$). The time factor (TF) is positively correlated with most other variables such as usefulness, ease of use, cost, and trust, though its correlation with security is weak and insignificant ($r = .112$). Overall, the results suggest that trust, security factor, time factor, and cost of use are the most influential factors in shaping customer satisfaction, while usefulness and ease of use also contribute to a lesser extent.

Table 3: Correlation Matrix

	CS	UOM	EOU	COU	TOM	SF	TF
Customer Satisfaction (CS)	1						
Usefulness of Mobile Banking (UOM)	.159*	1					
Ease of Use (EOU)	.351**	.232**	1				
Cost of Use (COU)	.439**	.248**	.373**	1			
Trust on Mobile Banking (TOM)	.499**	.167*	.360**	.413**	1		
Security Factor (SF)	.361**	.133	.172*	.171*	.211**	1	
Time Factor (TF)	.359**	.189**	.286**	.291**	.256**	.112	1

**. Correlation is significant at the 0.05 level (2-tailed).*
***. Correlation is significant at the 0.01 level (2-tailed).*

Regression Analysis

The multiple linear regression analysis in Table 3 examines the effect of different mobile banking factors on customer satisfaction. The model explains about 64% of the variance in customer satisfaction ($R^2 = .640$, Adjusted $R^2 = .391$), indicating a good overall fit. Among the predictors, trust on mobile banking ($\beta = .294$, $p < .001$) emerged as the strongest and most significant factor influencing customer satisfaction. This result is in line with Chawla (2021), who highlighted trust as a cornerstone in determining user attitudes toward mobile banking. Alafeef et al. (2012) also recognized trust as pivotal in increasing mobile banking adoption rates, especially in developing countries where skepticism towards digital services remains high. Similarly, security

factor (β = .233, p < .001), cost of use (β = .201, p = .002), and time factor (β = .180, p = .003), all of which significantly contribute to customer satisfaction. Security factor is consistent with prior studies. Bakri (2020) found that security significantly influenced acceptance of mobile banking in Malaysia. Ilham et al. (2022) provided further validation by discussing the legal obligations of banks to ensure financial security and consumer protection. As shown in this study, users are more satisfied when they perceive mobile banking to be safe and reliable, which is crucial in emerging markets with higher concerns about cybersecurity. Similarly, the cost of use is aligned with the results of both Bakri (2020) and Chavda (2022), who asserted that affordability enhances mobile banking adoption and user satisfaction. The study also found that time-saving benefits of mobile banking positively impact customer satisfaction, this finding is similar to Chavda (2022), who emphasized mobile banking's convenience and efficiency in offering immediate financial services. Karjaluoto et al. (2002) also suggested that time efficiency influences consumer preference for digital banking over traditional methods. However, the study found no significant impact of perceived usefulness on customer satisfaction (β = –.025, p = .665), which diverges from the results of Bakri (2020), who highlighted a strong influence of perceived usefulness on customer acceptance in Malaysia. Similarly, Chawla (2021) emphasized convenience and utility as crucial drivers in mobile banking adoption. Likewise, the study found no significant impact of ease of use on customer satisfaction (β = .084, p = .178) which diverges from the results of Bakri (2020) also identified ease of use as an influential factor in Malaysia, and Chawla (2021) confirmed that this variable significantly differed among distinct user clusters. Overall, the results indicate that customer satisfaction with mobile banking is largely shaped by trust, security, affordability, and time efficiency, while ease of use and usefulness play less critical roles.

Table 3: Summary of Coefficient based on Multiple Linear Regression Analysis

Model	B	Std. Error	Beta	t	Sig.
(Constant)	.503	.323		1.557	.121
Usefulness of Mobile Banking	-.028	.065	-.025	-.434	.665
Ease of Use	.077	.057	.084	1.353	.178
Cost of Use	.168	.053	.201	3.145	.002
Trust on Mobile Banking	.272	.058	.294	4.691	.000
Security Factor	.205	.050	.233	4.130	.000
Time Factor	.133	.044	.180	3.056	.003

*Note: R^2 = .640, Adjusted R^2 = .391, *p < .05.*
Dependent Variable = Customer Satisfaction

Hypothesis Testing

Table 4: *Acceptance or Rejection of Hypotheses Based on Multiple Regression Models*

Hypothesis	Determinants	Statistical Significance/ Insignificance	Results
H1	UOM	Insignificant	Rejected
H2	EOM	Insignificant	Rejected
H3	COU	Significant	Accepted
H4	TOM	Significant	Accepted
H5	SF	Significant	Accepted
H6	TF	Significant	Accepted

8. Conclusion

This study explored the factors influencing customer satisfaction with mobile banking in Kathmandu Valley, focusing on usefulness, ease of use, cost, trust, security, and time. The findings showed that trust, security, cost, and time have a significant positive impact on satisfaction, highlighting the importance customers place on reliability, safety, affordability, and time-saving benefits. While usefulness and ease of use were positively related, they did not significantly predict satisfaction, suggesting that functional concerns matter less once users are accustomed to mobile banking. Overall, the study emphasizes that both technical aspects and customer confidence—such as security, trust, and fair pricing are crucial for improving satisfaction in Nepal's growing digital banking sector.

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