Impact of Mobile Banking on Customer Satisfaction of Nepalese Commercial Banks

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Abstract

The aim of this research is to explore how mobile banking affects customer satisfaction in Nepalese commercial. The study employed a descriptive and causal comparative research design. Key independent variables identified include convenience, security, and fees and charges, while customer satisfaction serves as the dependent variable. The analysis encompasses customers from all 20 commercial banks operating in five different major cities of Nepal as population. To achieve the study's objectives, judgmental sampling from a non-probability sampling method was applied, and purposive sampling was used to select participants for the questionnaires. A total of 125 customers were chosen as samples from 6 different commercial banks. Multiple linear model was applied to analyze the data. The study found that customers are highly satisfied with the mobile banking services provided by commercial banks in Nepal. Majority of customers responded positively to each independent variable.

Keywords: mobile banking service, customer satisfaction, convenience, security, fees and charges

Introduction

Over recent years, the global landscape of wireless communication systems has undergone remarkable transformations. This evolution has opened up numerous opportunities for businesses, while consumers increasingly rely on mobile devices for their everyday tasks (Zhou et al., 2016). A notable trend is the rising acceptance and use of mobile payment services worldwide. The adoption of mobile payment technology has surged threefold in recent years. However, despite this growth potential, there has been limited research on the factors that affect the intention to utilize mobile payment services in emerging markets. Online banking and mobile applications from financial institutions enable users to access their accounts anytime and from anywhere, among other benefits. This level of accessibility offers a distinct advantage over traditional banking methods. Nevertheless, it is crucial to note that the number of clients engaging with online banking has not risen as significantly as anticipated. Factors such as a lack of differentiation among banks, distrust in the system, impersonal service, and concerns about security have led many customers to hesitate in using these tools (Mallat & Tuunainen, 2008).

In today's cashless society, most individuals prefer not to spend their precious time at a bank branch for transactions. Young customers especially believe they should have access to the latest technology in their banking experiences. Research shows that 68% of customers leave a bank due to poor customer

service, while 19% switch because they are unhappy with the products offered. Additionally, it has been discovered that attracting a new customer costs 5 to 6 times more than retaining an existing one. In response to these challenges, some banks in Sri Lanka have begun offering mobile banking services. Several products have been launched by Sri Lankan banks to promote mobile banking. The key benefit of this service is that customers can perform transactions or pay bills at any time of day, thus saving their valuable time. This system is also cost-effective, as it provides services at a significantly lower cost than traditional banking procedures. However, the effectiveness of mobile banking in Sri Lanka is still a concern. Therefore, customer satisfaction and the adoption of mobile banking services remain critical topics within the banking sector (Kahandawa & Wijayanayake, 2014).

The mobile banking sector in Nepal has witnessed remarkable growth, with an increase of 312,000 users within a month, bringing the total to 24.96 million by the end of Shrawan 2081 (mid-August 2024). This rise resulted in mobile banking transactions amounting to NPR 377.63 billion during that period. According to the Payment System Oversight Report 2023/24 by Nepal Rastra Bank, there has been a 15.4% rise in mobile banking users, totaling 24.65 million, along with a 117.03% increase in QR code-based transactions compared to the previous fiscal year. Despite these advancements, mobile wallets are confronted with challenges as banks enhance their digital offerings, providing similar features through their own applications, which has led to a decrease in wallet usage. Overall, the digital payment landscape in Nepal is swiftly changing, with mobile banking being a crucial element of this evolution.

Review of Literatures

Ghimere and Dhakal (2023) identified that factors such as Convenience, Cost, Security, Privacy, and Responsiveness are essential for customer satisfaction in commercial banks in Nepal. To boost user engagement, banks ought to develop Mobile Banking services that are easy to use, affordable, secure, and responsive. The increasing number of mobile banking users, especially in urban locations, makes it crucial to tackle any issues and inconveniences they face. To build customer trust, banks should cultivate long-lasting relationships and emphasize convenience and safety. It's also important to regularly update security features to enhance user satisfaction with Mobile Banking services.

Manjula (2019) emphasized that mobile banking has proven to be a transformative force in the financial sector, significantly impacting the world by enhancing convenience, accessibility, speed, security, and cost-effectiveness. Besides it, financial management tools, eco-friendliness, and economic growth play important roles in it. It allows customers the freedom to perform transactions of money through banks from anywhere at any time, thereby promoting greater financial inclusion, especially for customers in remote areas (Kanungo & Gupta, 2022). Son et al. (2020) stated that digital channels have lowered costs and facilitated time and money savings for both customers and banks. The advent of information technology in the financial sector has introduced a new era for banking services in the current century of the 21st (Jahan et al., 2022). Tam & Oliveira (2017) mentioned that advances in technological aspects have enabled the financial industry to provide customers with immediate alternatives to their issues by means of self-service technologies. Consequently, the banking sector has evolved to deliver swift and effective customer support via recent technology-driven services related to finances, online and mobile banking, and ATMs.

In Nepal, the adoption of mobile payment services has surged over the past few years. Several key factors contribute to the rising popularity of mobile payments in the Nepal; for instance, widespread internet availability, easy access to mobile data, a robust wireless network, a readiness to embrace new technologies, and various financial inclusion programs (Sinha et al., 2019). Research has also highlighted additional advantages linked to digital payment services, such as cashbacks, rewards, and discounts for using mobile payments and other online platforms. These four features significantly boost users' willingness to engage with and adopt mobile payment services (Pal et al., 2020).

Mobile banking is mainly used as a digital channel, considered fast and trustful. This tool has improved the efficiency of banking sectors, accelerating retail banking performances. Today's customers are satisfied with the convenience and speed of mobile banking services. The major principle of marketing is to ensure customers' satisfaction, and no business can succeed in lack of it (Jayanada, 2022). Customers' satisfaction is greatly affected by factors such as convenience, privacy, security, fees associated with mobile banking in Surkhet. The findings suggest that banks offering mobile banking services have a favorable effect on customer usage of these services. Customer satisfaction has attracted significant attention from both organizations and researchers. Recently, companies have been required to provide additional services beyond their basic offerings (Chapai, 2019).

In Nepal, internet and mobile banking, ATMs, and other digital options are the online services provided by the banks; however, the customer remains reluctant to these technologies. This hesitation may stem from several factors, including a lack of awareness, security concerns, and insufficient trust. To enhance the customer experience, Nepalese banks should focus on understanding customer behavior, as well as prioritizing their preferences and psychology when developing mobile banking services. This approach could lead to increased customer satisfaction and loyalty, ultimately fostering market growth. The study seeks to explore customers' overall understanding of mobile banking services, identify the factors influencing their satisfaction, examine the challenges they encounter, and propose managerial solutions to address these issues (Sherpa, 2015).

Objectives of the Study

Numerous studies indicate a lack of practical insight into the connection between customer satisfaction and mobile banking services. Therefore, the primary aim of this research is to evaluate how customer awareness and comprehension of mobile banking services impact their satisfaction levels within Nepalese commercial banks. Additionally, it will examine the relationship between convenience, security, service fees, and customer satisfaction regarding mobile banking in these banks. By utilizing the findings of this study, industry stakeholders can effectively direct their focus towards the features of their offerings, thereby enhancing their chances of achieving optimal returns on investment. The research will address the following questions:

1. In what ways does customer awareness and understanding of mobile banking services affect their satisfaction levels in Nepalese commercial banks?
2. How do factors such as convenience, security, and service charges impact customer satisfaction in mobile banking within Nepalese commercial banks?

Research Methodology

The study employed a descriptive causal-comparative research design. The target population consists of clients from all the commercial banks operating in different cities of Nepal. A judgmental

sampling from a non-probability sampling method was applied, and purposive sampling was used to select participants from six of the twenty commercial banks operating in five major cities of Nepal, naming Dharan, Kathmandu, Butwal, Pokhara, and Nepalgunj for the questionnaires and to analyze the data. This research focuses on the influence of mobile banking on customer satisfaction within Nepalese commercial banks. It investigates how various independent variables affect customer satisfaction. The banks included in the sample are NIC Asia Bank Limited, Sanima Bank Limited, Rashtriya Banijya Bank Limited, NMB Bank Limited, Machhapuchchhre Bank Limited, and Siddhartha Bank Limited. Customers from these banks served as the respondents for the research. In total of the thousands of respondents due to the expensive and time-consuming issues. A smaller, well-selected sample of 125 participants completed the questionnaire. The data was analyzed utilizing a multiple linear regression model.

Model Specification

The model suggests that customers' satisfaction is primarily influenced by these three factors: convenience, security, and fees and charges of the bank.

$$\hat{Y} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_i$$

Where,

$\hat{Y}$ = Customers' Satisfaction

X_1 = Convenience (Independent variable)

X_2 = Security (Independent variable)

X_3 = Fees and Charges (Independent variable)

α = Constant

β_1, β_2, and β_3 are regression coefficients of factor 1, factor 2, and factor 3, respectively. e_i = Error Term

Conceptual Framework

The framework outlines the relationship between customers' satisfaction with convenience, security, fees and charges. This model form the basis for the research description and derived from review of literature.

Figure 1: *Conceptual Model*
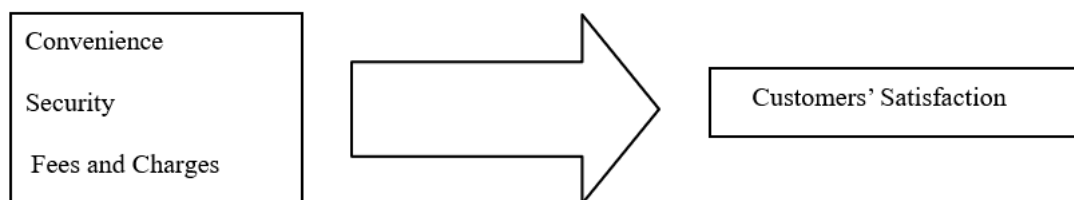
Source: Ghimere & Dhakal, 2023

Convenience

The framework highlights the connection between customers and the concept of convenience, which refers to how well mobile meets users' needs, such as being easy to use and functional (Kabir, 2013). Convenience plays a vital role in shaping customers' satisfaction with services like mobile

banking. Venter et al. (2019) stated that when customers view these as convenient, they tend to have a higher satisfaction level with the overall experience. Furthermore, mobile banking services that provide user-friendly interfaces, fast transaction processing, and around-the-clock availability fulfill customers' expectations of convenience and improve their satisfaction.

H1: Convenience of using mobile banking influences customers' satisfaction

Security

Security is a crucial concern for customers engaging in virtual transactions and safeguarding and protection of the data (Ghosh & Barua, 2014). In terms of security, because of the risks of fraud and hacking, both information and financial aspects are closely intertwined (Kabir, 2013). Research by Raza et al. (2017) reveals that customers who view their banking transactions as secure tend to be more satisfied with the services provided. Furthermore, Ahanthem (2022) notes that the reliability and security of a mobile banking app significantly impact customers' satisfaction.

H2: Security of using mobile banking influences customers' satisfaction

Fees and Charges

The fees and charges of internet access have a major impact on how often people use the internet, with perceived expenses being a crucial element (Venkatesh & Brown, 2001). In nations with developing economies, the initial setup and ongoing expenses tend to be higher compared to those in developed nations. The monthly charge of internet access also plays a vital role. Individuals from lower socioeconomic backgrounds are less inclined to use the internet and often hesitate to pay for subscriptions, which can deter non-users from accessing mobile banking services. Consequently, financial factors, such as the price of a web-enabled mobile device and subscription fees, affect customers' willingness to engage with mobile banking (Martins et al., 2014).

H3: Affordable fees and charges of using mobile banking influences customers' satisfaction

Customers' Satisfaction

Customer satisfaction refers to the feelings or reactions of consumers when they purchase and use a product, shaped by their experiences expectations (Chiu et al., 2007). It reflects a favorable attitude towards the service provider and is linked to consumer well-being. Customer satisfaction is a mental response arising from the comparison between products and the needs, demands, and social expectations of customers (Vinita & Kaura, 2013). In the realm of mobile banking, various service aspects play a crucial role in influencing customer satisfaction, making it an important metric for assessing the effectiveness of retail banking services.

Demographic Presentation of the Data

Respondents profile based on gender

Table 1: *Profile of Respondents based on Gender*

Gender	Frequency	Percentage
Male	72	57.6
Female	53	42.4
Total	125	100

Source: Field Survey, 2024

Table 1, illustrates the gender distribution of the respondents. To determine their gender, the researcher asked participants to mark their response with a tick. The findings reveal that 57.6% identified as male and 42.4% as female, indicating a male majority. As a result, the data is more relevant for insights regarding males.

Respondents profile based on Marital Status

Table 2: *Profile of Respondents based on Marital Status*

Marital Status	Frequency	Percentage
Married	81	64.8
Unmarried	44	35.2
Total	125	100

Source: Field Survey, 2024

Table 2, presents the respondents' profiles categorized by marital status. The researcher aimed to identify respondents' marital situations by having them select an option with a tick. The results show that 64.8% of participants were married, while 35.2% were unmarried. Although there was a fair representation of unmarried individuals, the majority being married means the conclusions can be primarily generalizable to married respondents.

Age wise profile of Respondents

Table 3: *Profile of Respondents based on Age group*

Age group (in years)	Frequency	Percent
Less than 25	26	20.80
26-35	34	27.20
36-45	65	52
Total	125	100

Source: Field Survey, 2024

Table 3, three outlines the respondents according to their age brackets. To ascertain the age group, respondents were prompted to indicate their range with a tick. The study indicates that 20.8% were under 25 years old, 27.2% fell in the 26 to 35 age range, and 52% were aged between 36 and 45 years. The dominant age group was the 36 to 45-year-olds, although there was adequate representation of those under 35, making the findings particularly relevant for the 36 to 45 age category.

Respondents profile on the bases of educational qualification

Table 4: *Profile of Respondents base on educational qualification*

Qualifications	Frequency	Percent
Below SLC	2	1.6
SLC	21	16.8
Intermediate	63	50.4
Bachelor and above	39	31.2
Total	125	100

Source: Field Survey, 2024

Table 4 details the profiles of respondents based on their educational achievements. The researcher sought to determine the level of education by asking participants to mark their qualifications with a tick. The results revealed that 1.6% had education below SLC, 16.8% completed SLC, 50.4% reached the intermediate level, and 31.2% had acquired a bachelor's degree or higher. The majority had completed their intermediate education, showing sufficient representation from other education levels, yet the insights are primarily significant for those who completed intermediate.

Reliability of the data

The reliability of the data is assessed through Cronbach Alpha and its result is presented as:

Table 5: *Reliability Statistics*

Variables used	Cronbach's Alpha	N
Convenience	.865	5
Security	.892	5
Fees and Charges	.871	5
Customers' Satisfaction	.869	3

Source: Field Survey, 2024

In table 5 the data's reliability is evaluated through Cronbach's Alpha. The Alpha coefficients for the data are 0.865, 0.892, 0.871, and 0.869 for convenience, security, fees and charges, and customer satisfaction, respectively. As noted by Sekaran (2000), a Cronbach's Alpha coefficient below 0.6 is deemed poor, while a coefficient between 0.6 and 0.8 is seen as acceptable, and one above 0.8 is classified as good. In this case, the Alpha values for each variable fall between 0.8 and 0.900, indicating good reliability. Consequently, the tools utilized in this research are regarded as trustworthy for further exploration.

Analysis of data

The Spearman's correlation analysis is used to determine the relationship between dependent and independent variables. SPSS version 29 was used to conduct the analysis, which yielded the following results.

Table 6: *Correlation Analysis*

	Convenience	Security	Fees and charges	Customers' Satisfaction
Convenience	1			
Security	0.777	1		
Fees and charges	0.807	0.754	1	
Customers' Satisfaction	0.836	0.847	0.911	1

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

Source: Field Survey, 2024

Table 6 demonstrates the correlation of customers' satisfaction with convenience, security, and fees and charges, which are 0.836, 0.847, and 0.911, respectively. The correlation matrix indicates that these variables show a statistically significant relationship at the 0.05 level, with p-values below 0.01. The correlation coefficient is greater than 0.7 for each variable with customers' satisfaction with a p-value of 0.00, which indicates a strong positive relationship between both dependent (customers' satisfaction) and independent (convenience, security, and fees and charges) variables.

Model Summary of Regression Analysis

The analysis of below model Summary gives various results of correlation coefficients after considering a set of data.

Customers' Satisfaction with Convenience, Security, and Fees and Charges

Table 7: *Regression Analysis*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.945[a]	.894	.879	.2114

Predictors: (Constant), Convenience, Security, and Fees and Charges
Source: Field Survey, 2024

The model summary presents the R-square, or the coefficient of determination, which aids in understanding variability. Table 7 presents that the R-square value is 0.945, suggesting that 94.5% of the variation in customer satisfaction related to convenience, security, and fees and charges is explained. However, 5.5% remains unexplained in this analysis. This indicates that the study did not consider all independent variables affecting customer satisfaction.

Table 8: *Analysis of Variance*

Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	7.882	3	2.627	58.930	.000[b]
Residual	.936	21	.045		
Total	8.818	24			

Dependent Variable: Customers' Satisfaction
Predictors: (Constant), Convenience, Security, and Fees and Charges
Source: Research data, 2024

Based on table 8, the p-value is 0.000, which is less than the alpha level of 0.05. Thus, the model predicts the link between customers' satisfaction, convenience, security, and fees and charges

Table 9: *Impact of convenience, security, and fees and charges on customers' satisfaction*

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	-.099	.372		-.265	<.001
Convenience	.136	.134	.136	1.018	<.001
Security	.359	.136	.318	2.641	<.001
Fees and Charges	.562	.128	.561	4.384	<.001

a. Dependent Variable: Customers' Satisfaction
Source: Research data, 2024

Regression line

$\hat{Y} = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e_i$

Customers' Satisfaction = -0.099 + 0.136 Convenience + 0.359 Security + 0.562 Fees and Charges + e_i

In regression analysis, beta coefficients illustrate the importance of independent variables in accounting for the variance in the dependent variable. Table 9 shows a positive relationship between customer satisfaction and the independent variables. This means that enhancements in convenience, security, and fees and charges result in increased customer satisfaction, assuming that all other variables are held constant.

Conclusion

This research was conducted to determine how mobile banking affects customers' satisfaction among Nepalese commercial banks operating in different cities of Nepal. Research reveals that most customers of these banks are well-acquainted with mobile banking services and report a high level of satisfaction. A significant number of respondents demonstrate a clear understanding of the key concepts involved in this study. The results indicate that aspects such as convenience, security, and fees associated with mobile banking are generally perceived as satisfactory by both the banks and their clients. The study concludes that the convenience offered by mobile banking has a notably positive correlation with customer satisfaction; similarly, the security features also show a favorable relationship, while reasonable service charges contribute positively to overall satisfaction. Furthermore, it appears that most customers prefer to utilize mobile banking for their financial transactions instead of traditional methods. Consequently, commercial banks should enhance the mobile banking applications by incorporating additional features to attract more users and deliver efficient services.

Implications

The research indicates that Nepalese financial institutions should prioritize enhancing mobile banking services to maintain high customer satisfaction. This can be achieved by improving security features, ensuring low and transparent service fees, and increasing the convenience of mobile banking apps. Banks should incorporate innovative features and ensure seamless user experiences to attract more customers, particularly given the growing preference for mobile banking over traditional methods. Continued efforts to educate customers on mobile banking's benefits and functionalities will further solidify satisfaction and loyalty, positioning banks as leaders in the digital financial sector.

Further investigation can be pursued by examining additional variables such as customer support, transaction speed, app reliability, notifications and alerts, and service accessibility, all of which could influence customer satisfaction. The research can be performed using various data collection methods, including secondary data sources, and can apply different types of statistical analyses. Additionally, conducting the study with a larger sample size would help in generalizing the findings by gathering data from various banks and regions. Furthermore, in the context of Nepal, limited research has been undertaken in this field. Therefore, a more comprehensive study on this subject is warranted.

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Part 2