

Effect of Mobile Banking on Customer Satisfaction in Commercial Banks in Nepal

Binod Ghimire*
Abishek Dhakal**

ABSTRACT

Customer satisfaction is an emotion a person experiences when comparing the perceived overall performance of a product to their expectations. The main purpose of this study is to analyze the effect of convenience, cost, privacy, security and responsiveness of mobile banking in customer satisfaction in Commercial Banks in Nepal. This research adopts a quantitative design wherein primary data were collected through a survey in the form of structured questionnaire distributed among 201 respondents having access of mobile banking services offered by Commercial Banks in Nepal. Pearson Correlation Matrix suggested by Levin et al., (2014) was used for statistical analysis; the results derived from the research showed Convenience, Cost, Security, and Responsiveness are significant drivers of Customer Satisfaction of Commercial Banks in Nepal. This research will be useful to higher management of the banks in developing effective strategies for mobile banking services as well as to retain their customers. Furthermore, Nepal Rastra Bank (Central Bank of Nepal) might be enthusiastic to identify the prevailing problems and technical as well as non-technical barriers concerned with the adoption of the mobile banking on customer satisfaction which will facilitate them to take necessary steps to eradicate barriers and to implement effective policies accordingly.

Keywords: Customer satisfaction, Convenience, Cost, Privacy, Security, Responsiveness

* Assistant Professor, Tribhuvan University, bin.ghimire1@ncc.tu.edu.np

** Corresponding Author, Banker of Commercial Bank of Nepal, abishek766@gmail.com

1. INTRODUCTION

Customer satisfaction is the overall consumer notion towards a service provider or customers' evaluation of a service or product in terms of whether that product or service has satisfied their desires and expectancies (Zeithaml and Bitner, 2003). Kotler and Armstrong (2012) defined satisfaction as an individual's feeling of delight or dissatisfaction as a result of contrasting the perceived overall performance of a product with respect to customer's expectations.

A bank or other financial institution that offers mobile banking allows its customers to conduct financial transactions remotely using a mobile device such as a Smartphone or tablet. Mobile banking has made revolution in the financial sector in recent times due to rapid growth of smart phone users and development of information communication technology. Commercial banks aimed to create new applications that were modern, convenient, and responded quickly to a variety of services. These would assist the bank in growing their customer base, increasing loyalty, and increasing market share (Riquelme & Rios, 2010). The competition within the banking sector has expanded over the several years and banks are introducing creative tools and methods to achieve Customer Satisfaction and retention in order to stay competitive and E-Banking is one instrument to do so (Toor et al, 2016). Saleem and Rashid (2011) in a study factors affecting adoption of mobile banking in Pakistan: Empirical Evidence concluded mobile banking adoption requires technologically efficient as well as cheap, reliable and secure technology development.

In the context of Nepal, commercial banks are vigorously adapting mobile banking services as a competitive tool and as a step towards innovative services. On the other hand, Nepal being a developing country with lower financial literacy and inadequate regulations and technological infrastructure, there are various challenges and ambiguities about the application of Mobile banking. Mobile banking being one of the most desirable and affordable services to the financial consumers as a result of lower costs and availability of telecommunication services in every nook and corners of the country. It is critical in terms of meeting client expectations. Banks can retain consumers by providing high-quality services that help them reach their goals. Like the rest of the globe, Nepalese customers are quickly adopting digital banking, and there is no doubt that the automation of banking procedures has opened up new prospects for the banking sector. As Digital banking is the way of improving service quality for banking sector, every Nepalese commercial bank are offering refined means of digital banking to their customer among whom mobile banking offers the widest range of service and participation of financial customer, therefore very important to analyze Mobile Banking and its relevant variables, like service quality and Customer Satisfaction. However, as a recent development in Nepalese society, mobile banking has invited a lot of questions and dilemmas regarding its adoption which has invited a paradigm shift from physical banking with direct human interactions to screen interactions. Commercial banks are investing huge amount of their capital in development and betterment of mobile banking, it is very much

necessary to analyze the different dimension on customer satisfaction in contrast to their time and capital investment as potential users might not be using the service which could be a result of customer's satisfaction that plays a crucial role in the evolution of mobile banking in Nepal. Customers using Mobile Banking are having some difficulties because Nepal has a low level of technological advancement and limited resources for providing uninterrupted service both of which are important in terms of customer satisfaction and have a direct impact on the banking industry's performance. Mobile banking is primarily used by urban residents, while the majority customers from rural resident are afraid of using modern sophisticated technology and prefer a more conventional approach to banking.

Financial sector has made optimum utilization of features of banking in the world by incorporating the services in mobile technology. Besides the technological capability to transmit financial information in an efficient, secure and cost effective manner enabled by development of mobile based applications for banking, mobile banking has not been able to perform as exceptional as it is capable of. There are numerous factors that could be having impact on the feasibility of mobile banking in Nepal. In this perspective, the key purpose of this research study is to identify the level of Customer Satisfaction regarding Mobile Banking services of Commercial Banks in Nepal. The specific purpose is to analyze the effect of convenience, cost, privacy security and responsiveness of mobile banking on customer satisfaction.

2. LITERATURE REVIEW

Commercial institutions are directing their strategies to enhance customer retention and satisfaction by increasing the quality of service, as it provides banks with a strategic edge by lowering operating Costs and delivering the highest possible Customer Satisfaction (Mchomba, 2018). The resultant feeling is satisfaction when consumer expectations are met and the resulting feeling is dissatisfaction when consumer expectations do not meet. Mobile banking is functioning as an everyday tool. Mobile banking services can now reach out to the unbanked population. This is an excellent opportunity for banks (Ivatury & Pickens, 2006).

The use of mobile banking in developed countries came into practice a long time ago. The developing countries like Nepal actively started its mobile banking lately in 2012. The first mobile banking in Nepal was launched by Laxmi Bank Limited. After the initiation of mobile banking in the country by Laxmi Bank Limited with the platform Hello Paisa, other financial institution such as Siddhartha bank, Bank of Kathmandu, also started mobile payment system under the same platform (Sherpa, 2015).

The Customer Satisfaction with the different dimensions and effect of demographic factors such as gender, marital status, age of respondents, monthly income and their educational qualifications and dimensions of reliability of service quality, ease of use, Responsiveness and trust are positively and significantly related (Allada & Dubey, 2014). A Study on Sri Lankan State Commercial Bank states bank's should customize their product and services according

to customer requirements and consider usefulness, ease of use, relative advantage and risk level to make the service successful. An early application of the notion of convenience can be found in term of “Convenience goods”, where convenience relates to savings in time and effort by consumers in the purchase of a product (Yale & Venkatesh, 1986). Convenience is the condition of having the option to accomplish something effectively with little effort and no hindrances. All the banking transaction can be performed from the place a customer wants to, either that can be home or office that comforts them. Security refers to safety that have a key role in making clients feel secure in making their transactions and maintaining physical security, confidentiality, and financial security (Nochai & Nochai, 2013).

Privacy is a degree to which clients trust that the website is protected from disruption and that personal information is ensured (Hussien & El Aziz, 2013). Privacy is the big challenge that banks are facing every day now. Privacy involves providing protection for the personal data, not exchanging details and keeping credit card information private. Responsiveness is the service’s response time, and a desire to help and support clients to offer timely service such as dealing with clients requests, concerns, grievances and issues (Shrestha, 2018). Monetary policy has emphasized to promote financial technology and digital transactions in Nepal with a separate heading for payment system from point number 144 till 157 of monetary policy 2022/23, major provisions mentioned in are development of necessary infrastructure and increase public awareness to celebrate fiscal year 2022/23 as Digital payment transaction year, Minimizing cash transaction and encourage digital transactions, Establishment of National Payment Switch, Refinance facility to Payment system providers, Payment system operators and telecommunication service providers for expansion digital payment system, enhance digital payment transaction limit and policy intervention in digital payment tariffs, necessary adjustments to be made for collection of taxes using digital payment system.

2.1. Research Gap

The literature review indicates that several researches have been conducted on mobile banking effects on Customer Satisfaction in developed countries like in Jordan (Altobishi et al., 2018) by taking the factors (Convenience, Cost, Privacy, ease of use, personalization and customization), Hammoud et al. (2018) by focusing on the attributes (efficiency, reliability, Responsiveness and communication, ease of use, and Security and Privacy, Toor et al., (2016) by considering the attributes (Responsiveness, tangibles, assurance, reliability and empathy), Addai et al., (2015) by considering the factors such as availability, reliability and convenience.

The literature review suggests that there exists a gap in the analysis of new technology adoption in the area of mobile banking by the financial customers. As customers are yet novice to the new technology so there is a lot more for banks to exploit before offering the advance features of this technology. Many other variables affect Customer Satisfaction such as Convenience, efficiency, reliability, Cost, Privacy, ease of use, personalization and

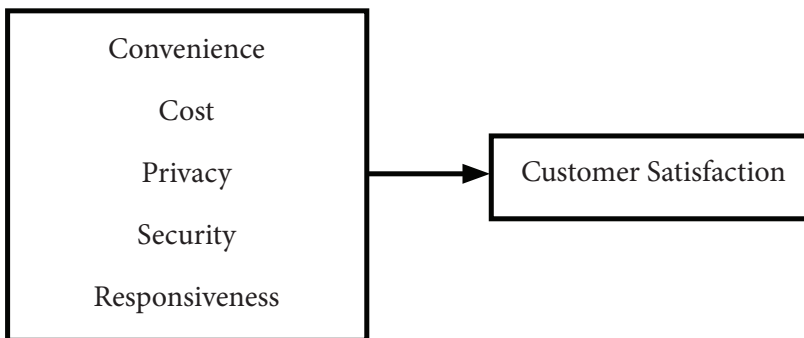
customization, communication, Security, availability, empathy, tangibles, assurance etc. However, despite abundant research studies in the international Mobile Banking sector, it was found that there was little evidence that was based on Mobile Banking Convenience, Cost, Security, Privacy and Responsiveness on Customer Satisfaction in Nepal was addressed. Therefore, this study bridges the gap by investigating the factors affecting Customer Satisfaction in Mobile Banking under Convenience, Cost, Security, Privacy and Responsiveness as it influences Customer Satisfaction in Mobile Banking. This research therefore seeks to fill the research gap related to Mobile Banking effect on Customer Satisfaction in Commercial Banks in Nepal.

2.2. Conceptual Framework

This study concentrated on the various factors that influence the role or impact of mobile banking on customer satisfaction in Commercial Banks in Nepal. Figure 1 depicts the conceptual framework derived from the conceptualization of the study variables.

Figure 1

Conceptual framework



This research was conducted to test the role or impact of mobile banking on customer satisfaction in Commercial Banks in Nepal. Hence, in order to test the impact and relationship of mobile banking on customer Satisfaction in Nepalese Commercial Bank, Customer Satisfaction is placed as the dependent variable for this study.

3. METHEDODOLOGY

In order to satisfy the purpose of the study, quantitative methodology and qualitative methodology has been used in the research. This study is mainly based on primary data and use of some secondary source of data. Primary data has been collected through a structured close-ended questionnaire using 7-point rating scale with 41 questions and distributed among 201 respondents. Secondary source of data have been used to know about regulatory provisions and examine status of mobile banking in commercial banks in Nepal. The secondary data is obtained from various published sources; monthly statistics published by NRB, website of Commercial Banks Ltd, website of central bank of Nepal, research papers and journals.

3.1. Data Analysis

Quantitative and qualitative analyses have been employed in the study. For the relevant description of a distribution measurement using statistics, descriptive statistics is used in qualitative analysis. To allow for extensive analysis, the data from the questionnaire is coded and entered into the Statistical Package for Social Sciences (SPSS) version 25.0. In addition, conclusions have been drawn from the analyzed data that aided in addressing the research questions.

3.2. Respondent's Profile

From 201 questionnaires distributed to the people using Mobile banking services, the entire questionnaire is used for analysis. The following tables show the profile of the respondents by age, gender, marital status, education level, profession of respondents, and level of income.

Table 1

Respondent's Profile by Age

Age	Frequency	Percentage
Below 20 Years	31	15.42%
20 Years to 30 Years	123	61.19%
30 Years to 40 Years	29	14.43%
40 Years to 50 Years	8	3.98%
Above 50 Years	10	4.98%
Total	201	100%

Table 1 show the age classification of the respondents whereby the majority of respondents, i.e., 61.19 percent lies in the age group "20 years to 30 years". Similarly, the age group "Below 20 years" and "30 years to 40 years" constitutes 15.42 percent and 14.43 of the total respondents respectively. Besides the age group "40 years to 50 years" and "Above 50 years" constitutes 3.98 percent and 4.98 percent of the total respondents respectively.

3.3. Reliability Analysis

Cronbach's Alpha (α) has been considered to check the reliability of the variables and data collected. Cronbach's alpha is a measure of internal consistency, or show how closely related a group of items is. It is regarded as scale reliability metric. George and Mallery (2002) have stated the standard for measuring the reliability of the variables as Excellent for $\alpha > 0.9$, Acceptable for $\alpha > 0.7$, Questionable for $\alpha > 0.6$, Poor for $\alpha > 0.5$ and Unacceptable for $\alpha < 0.5$. All the questions related to the five variables related to the research survey used for collecting the data have been tested for the reliability using Cronbach's alpha. Questions with alpha value less than 0.5 have been excluded from the analysis.

Table 2*Reliability Analysis*

Code	Variables	Cronbach's Alpha	No of questions
C	Convenience	0.843	5
Co	Cost	0.731	3
P	Privacy	0.759	3
S	Security	0.727	5
R	Responsiveness	0.851	5
CS	Customer Satisfaction	0.911	5

The Cronbach's Alpha for Convenience is 0.843, Cost is 0.731, Privacy is 0.759, Security is 0.727, Responsiveness is 0.851, and Customer Satisfaction is 0.911. The applied measurement scales exhibited high levels of reliability i.e. the above data are reliable. The applied measurement scales exhibited satisfactory levels of reliability as values of α are above 0.70. All the scales are acceptable Thus, none of the scale items were eliminated from the factors.

3.4. Descriptive Analysis

Mean, Standard deviation and Pearson's correlation coefficient has been calculated for descriptive analysis of the collected data. Correlations Analysis between variables has been studied to find relations among them. Pearson's correlations analysis is carried out for variables having simple multi option answers. Correlation matrix is computed to assess the extent or degree of relationship in between the research variables. A positive correlation indicates that the relationship's direction is positive, with one increasing in response to the other's increase. Meanwhile, a negative correlation reveals an inverse of the above; an increase in one when the other decreases. $r < 0.30$ is weakly correlate, $0.30 < r < 0.60$ is moderately correlate and $r > 0.60$ is strongly correlate (Levin et al., 2014).

Table 3*Summary of Descriptive Analysis*

Code	Variables	Mean	Standard Deviation
C	Convenience	5.772	1.407
Co	Cost	5.28	1.649
P	Privacy	5.413	1.472
S	Security	5.152	1.654
R	Responsiveness	5.188	1.528
CS	Customer Satisfaction	5.845	1.318

Table 3 articulates the mean value depicting the overall customer's satisfaction. Accordingly, 5.772 (Convenience), 5.280 (Cost), 5.413 (Privacy), 5.152 (Security), 5.188 (Responsiveness) are the mean value of the independent variables where it demonstrates that all the mean value provides satisfactory results. Customer Satisfaction on Mobile Banking is above satisfactory level since the mean value is 5.844. Customers are fairly satisfied with all variables as the mean values are having small variation between all independent variables. Similarly, the overall standard deviation of Convenience is 1.407, Cost is 1.649 Privacy is 1.472, Security is 1.654, Responsiveness is 1.528, and Customer Satisfaction is 1.318. This indicates that the standard deviation for all variables also provides overall a good variance analysis as well.

3.5. Correlation Analysis

Correlations Analysis between variables has been studied to find relations among them. Pearson's correlations analysis is carried out for variables having simple multi option answers.

Table 4

Correlation Analysis

Variables	C	Co	P	S	R	CS
C	1					
Co	.670**	1				
P	.626**	.622**	1			
S	.624**	.665**	.680**	1		
R	.626**	.668**	.735**	.810**	1	
CS	.750**	.696**	.673**	.651**	.722**	1

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

Note: CS: Customer Satisfaction (Dependent Variable), C: Convenience, Co: Cost, P: Privacy, S: Security, R: Responsiveness

Table 4

demonstrates the Pearson correlation coefficients between the studied variables. The dimension having correlation more than 0.6 is strongly correlated whereas having less than 0.6 is moderately correlated. The table shows that there is strong correlation between Convenience and Customer Satisfaction, Cost and Customer Satisfaction, Privacy and Customer Satisfaction, security and Customer Satisfaction and Responsiveness and Customer Satisfaction as their correlation coefficient is 0.750, 0.696, 0.673, 0.651 and 0.722 which is more than 0.6 respectively.

4. DISCUSSION

This study is concentrated to analyze the role of different independent factors (i.e. convenience, cost, privacy, security and responsiveness on customer satisfaction in commercial banks of Nepal. The result of responses from questionnaire survey derives the findings that penetration of mobile banking usage has been in growing stage from one

to three years. This shows commercial banks have widened reach of mobile banking and retained customers in the usage of mobile banking as largest proportion of respondents have been using mobile banking services from one to three years.

The Cronbach's Alpha for dependent and independent variables measurement scales exhibited high levels of reliability i.e., the above data is acceptable. The applied measurement scales exhibited satisfactory levels of reliability as all values are above 0.70. Therefore, result of this study provides higher level of reliability. The result of this study convenience, cost, privacy, security and responsiveness having significant effect on customer satisfaction match with the findings of banks should customize their product and services according to customer requirements and consider usefulness, ease of use, relative advantage and risk level to make the service useful.

Convenience has the strongest correlation with customer satisfaction from among the independent variable, this result complies with the result on (Abbas et al., 2018) which states social influence, trust, relative advantage, cost and risk perception are the key factors effecting mobile banking services where as ubiquitous financial service may not be the reason behind mobile banking in usage in Pakistan. The effect of responsiveness on the usage of mobile banking has the second significant correlation with the customer satisfaction on mobile banking; this relationship was observed having comparative less correlation to in previous studies than the findings of this study. Hossain and Hossain (2015) showed distinct results for the relationship between service quality/customer satisfaction). The effect of after sales service or the confidence of customer on after sales service of mobile banking by the commercial banks in Commercial Banks in Nepal is observed to be very high. The least positive correlation from among the dependent and independent variables in this study has been observed as the effect of security in customer satisfaction. Mobile Banking adoption requires technologically efficient as well as cheap, reliable and secure technology development.

Furthermore, from the studies conducted previously and the secondary data collected, sufficient policies and procedures, product papers has been found applied on mobile banking services by the commercial banks. However, comparatively weak customers' confidence and trust is found amount the respondents of questionnaire survey. The gap between this might be a result of insufficient level of financial literacy on the mobile banking customers and increase adverse issues regarding fraud and hacking in the present scenario.

5. CONCLUSION

The results derived from the research showed that the Convenience, Cost, Security, Privacy and Responsiveness is significant drivers of Customer Satisfaction of Commercial Banks in Nepal. Thus, it is deemed important to put an emphasis on creating convenient, cost-effective, secured and responsive Mobile Banking services. Every year, the number of people who use mobile banking grows in numerous ways, especially in urban regions where technology

is rapidly evolving. Even though the advantages of Mobile banking are certain, there are some concerns and inconveniences where banks need to take necessary steps to minimize these concerns in order to enhance customer satisfaction. Hence, banks should nurture close and maintain a long relationship with their customers in a way it enhances customer trust towards the bank. So it can be concluded that to increase the number of users actively participating in Mobile Banking, the service providers should focus on the Convenience as well as Security as the users are more concerned about their Convenience and Security while using Mobile Banking services. It is necessary to make Mobile Banking services more convenient and secured and service provider must update the Security features timely and effectively.

This research will guide banks and financial institutions to make various decisions regarding improving the Customer Satisfaction of the Mobile Banking customers. Banks and financial institutions can draw various laws, policies which would help in improving Customer Satisfaction, which would assist in improving the customer's loyalty towards the banks and financial institutions. This would further foster the use of Mobile Banking among customers and the digitization would be successfully implemented. This study will assist the commercial banks as well as other financial institutions to foster their mobile banking services by adopting necessary policy reforms that will strengthen customer satisfaction. Law makers and regulators can identify the area to emphasize for making substantial increase in the financial participation and consumer protection.

Further research can be conducted by considering additional variable such as efficiency, reliability, ease of use, personalization and customization, communication, availability, empathy, tangibles, assurance, etc. which might have the impact on Customer Satisfaction. The study can be done by using different data collection methods such as interview and can be applied in different types of statistical analysis. Also, the research can be carried out with increased sample size to generalize the results of the study. Moreover, in the context of Nepal, there has not been much research conducted in this area. Hence, more in-depth study should be conducted related to this topic.

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