

A Study on ATM Services and Customer Satisfaction of Commercial Bank in Itahari, Sunsari Nepal

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Abstract

Article History

Submitted:

16 January 2024

Reviewed:

5 February 2024

Accepted:

8 May 2024

QR Code:

Publisher

Research and
Innovation Committee
(RIC), Vishwa Adarsha
College, Itahari,
Sunsari, Koshi
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The analysis of the changing behavior of customers is crucial, and more significant to understanding behavioral finance. The objective of the study was to assess the satisfaction status of customers using ATM services. The study followed an analytical research design using a quantitative research approach. Among the ATM subscribers in Itahari, Sunsari, 140 respondents were chosen conveniently. A structured questionnaire with a five-point Likert scale was designed to collect primary data. Mean and standard deviations were used to assess the status of customer satisfaction with ATM Services, while correlation and linear regression were used to examine their associations. The results revealed that the customers are moderately satisfied with the use of ATM services. In addition, this study suggested that ATM services have a significant effect on customer satisfaction. Among the factors, the transaction fee is found a key factor influencing customer satisfaction, followed by customer support and transaction speed. This study supports the bank managers to top-up customers' satisfaction by implementing the findings.

Keywords: ATM services, customer satisfaction, transaction fee, customer support, transaction speed

Introduction

Technology is revolutionizing banking and financial services with out-of-the-box thinking innovations (Shingh & Komal, 2009). The first Automatic Teller Machine (ATM) was used in 1959 in the Kingsdale Shopping Center in Upper Arlington, Ohio as an automated deposit tool (Baroleh & Tumiwa, 2016). Odusina (2014) claimed that globalization compelled commercial banks to entertain the utilization of ATM services to be fast, cheap, and efficient for maximizing customer satisfaction and competing in the market. ATM is significant for information and communication technology which is enhancing quality service among the banking institutions across the world. These ATM systems are changing the landscape of the banking industry in serving customers' preferences and inculcating customer happiness (Odusina, 2014). Indeed, ATM usage is gaining popularity among several customers due to its ease of use and expediency. Ingabire and Niyonsenga (2017) agree that the ATM system has brought a huge transformation in the way of service delivery in the banking sector, thus most banks have preferred to install it for their business operations, the ATM card replaces activities that were previously performed by employees, such as cheque payments, checking account inquiries, utility payments, fund transfers, and the need for customers to physically visit the bank. It also addresses limitations in banking service hours and reduces the need for paper-based verification (Singh & Komal, 2009).

In today's banking world, the use of ATMs is crucial. The practice of ATM withdrawals has transformed the Nepalese financial industry as well. Nepal has seen a rapid increase in banking activities with the growing adoption of ICT in its banks. Nepalese commercial banks are increasingly focusing on technology-based products. Since banking is a service-based industry, Nepalese banks, and financial institutions are also offering various services, with ATM service being one of the most significant ones that adds value for customers. According to Joseph and Stone (2003), before adopting this service, banks consider factors such as safe and convenient locations, an adequate number of ATMs, a user-friendly system, and ATM functionality. Customers also prefer 24-hour service, accuracy, and well-located ATM locations as part of ATM services (Shamsuddoha & Chowdhury, 2005). Similarly, Huff and Malcolm (1985) observed

that many organizations invest resources in information technology to achieve benefits such as improved customer service, increased efficiency or productivity, and competitiveness in the market.

Similarly, Dilijonas et al. (2009) emphasized that adequate numbers of ATMs, convenient and secure locations, a user-friendly system, speed, minimal errors, high uptime, cash availability, cost, and service coverage are essential aspects of ATM service quality. Customers prioritize an ATM delivery system that meets their needs and enhances operational performance, which is crucial for the banking industry to meet today's banking needs (Yavas et al., 2004). Aldlaigan and Buttle (2002) highlighted that the service delivery location model is a crucial dimension of customers' perception of ATM adoption.

Many research studies on ATM services and customer satisfaction with few influencing factors regard ATM services in developed economies; however, no sufficient studies were found in third-world countries like Nepal. It is urgent to understand and analyze the customer satisfaction caused by ATMs in Itahari, Nepal. Based on these observations, this research primarily focuses on customer satisfaction with ATM services provided by Nepalese commercial banks. Specifically, this paper examines customer satisfaction with ATM services based on nine key dimensions: transaction speed, accessibility and availability, user-friendly interface, reliability and uptime, transaction accuracy, transaction fee, customer support, maintenance and cleanliness, and privacy of ATMs.

Literature Review

This research is based on the SERVQUAL Model by Parasuraman et al. (1985), supported by the assimilation theory of Anderson (1973), and Coase's Transaction cost theory (1937). The SERVQUAL model is a fundamental tool for testing, evaluating, and managing service quality across different service industries and cultural contexts (Buttle, 1996). Anderson's assimilation theory suggests that consumers compare their satisfaction with their internal expectations. Transaction cost theory posits that engaging in transactions incurs costs such as negotiating contracts, monitoring performance, and

resolving conflicts, and different ways of managing transactions have different costs (Coase, 1937). Therefore, a comparative analysis of the transaction costs (or their indicators) of these different methods helps determine the most efficient way to conduct a transaction (Williamson, 1985).

The best practices of ATMs are crucial for customers as they provide a convenient way to withdraw cash from banks. Technological innovations have significantly changed the banking landscape, prompting banks to prioritize this transformation. Adopting best practices for ATMs has greatly improved service quality and provided customers with alternative options. Khan (2010) highlighted that investing in ATMs can lead to cost reductions, improved customer satisfaction, and increased competition, which are all reasons for banks to install and expand their ATM networks.

Customer satisfaction is a key concept in marketing. John (2016) defines it as the ability of a product or service to meet or exceed the needs and expected outcomes of customers. Customers also consider quality, as perceived by consumers rather than producers, to be essential for satisfaction. Gümüş et al. (2015) suggest that customer satisfaction determines how successful an institution will be in delivering a product or service to the target customer.

Most customers often compare the services they expect from organizations with what they receive, or they compare the required service quality with the dimensions of service quality (Nshimiyimana, 2020). Therefore, it is essential to understand what a financial institution provides to its clients (Octaviani et al., 2019) through ATM. In every sector, including banking, banks must enhance service features to improve customer satisfaction and remain competitive in the world of ATMs (Alexis & Chen, 2019).

Rogers et al. (1997) analyzed the significance of individualized service at ATMs to satisfy the customers needing personalized communication. To maximize customer happiness, banks might practice technology to provide individualized services at ATMs, such as providing personalized information or providing customized transaction services.

Kumbhar (2011) indicated that the effectiveness of ATM services was a crucial service quality dimension and had a significant impact on overall customer satisfaction with ATM services provided by Indian banks. The study also found that cost-effectiveness, ease of use, security, and responsiveness in ATM services were important factors influencing customer satisfaction.

Sanda and Arhin (2011) conducted a research study on the quality of ATM services in the Bank of Ghana. The study aimed to analyze customer behavior regarding the use of ATMs as a banking tool and how this behavior influences bank employees in terms of reducing workload and improving work performance. The research found that customers perceive ATMs as convenient, reliable, accurate, and suitable for their transactions. The study suggested that using ATMs can improve customer service quality and reduce the workload of tellers. This reduction in workload could allow tellers to interact more with customers, enhancing their efficiency and effectiveness in delivering customer service.

Poudel (2011) conducted a study on electronic payment systems and tele-banking services in Nepal. The study found that there has been a small shift away from cash towards electronic payments, leading to a decrease in the total volume of cash transactions. The findings also showed that tele-banking could improve customer relationships and loyalty, which could increase market share. However, to fully realize these benefits, challenges such as unreliable telecommunication services, frequent power outages, high costs, concerns about fraud, and lack of necessary facilities and support need to be addressed.

Banstola (2012) conducted a study on the potential and challenges of E-banking in Nepal. The objective was to analyze the opportunities and challenges of E-banking in Nepal. The study sampled five banks and used simple random sampling to collect data via self-administered questionnaires from four major cities in Nepal (Pokhara-37, Kathmandu-20, Butwal-33, Biratnagar-10), totaling 100 respondents. The findings indicated that some banks were experiencing regular backup issues with website information and E-banking systems. The analysis of costs in most Nepalese banks appeared to be inaccurate or irrelevant due to limited business volume or insufficient tools. There was no significant correlation found between the use of E-banking and the

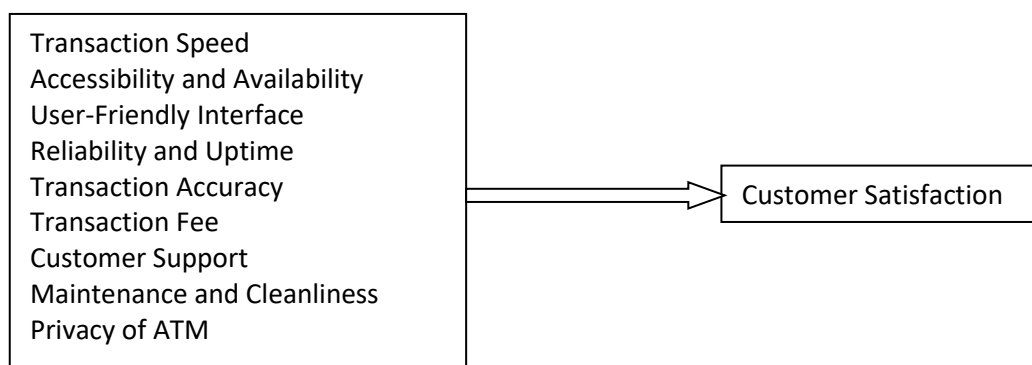
gender, marital status, or salary of customers. However, the use of E-banking was significantly associated with age and academic qualification. The study also revealed that the most significant factors influencing customers to use E-banking facilities were reliability and ease of use.

Banstola (2014) identified nine key components of ATM services, with ATM services being the independent variable. The research framework considered customer satisfaction as a function of these nine factors: Transaction Speed, Accessibility and Availability, User-Friendly Interface, Reliability and Uptime, Transaction Accuracy, Transaction Fee, Customer Support, Maintenance and Cleanliness, and Privacy of ATM, specifically in Nepalese commercial banks. This study aimed to analyze how these factors affect customer satisfaction.

Sothan et al. (2023) studied the impact of ATM service quality on customer satisfaction in Commercial Banks in Cambodia's Siem Reap province. They collected data from four Commercial Banks in the province using convenience sampling, with 236 respondents. A five-point Likert scale questionnaire was used. Structural equation modeling was used to analyze the data. The study found that the quality of ATM services significantly and positively affected customer satisfaction. Additionally, the different aspects of ATM service quality were positively linked to customer satisfaction. The study suggests that commercial banks should improve their services to enhance customer satisfaction. Customers who use ATM services may be more inclined to continue using services from banks that cooperate well in the future.

Figure 1

Conceptual Framework



Methodology

This study combines descriptive, analytical, and cross-sectional research design. Descriptive design is used to comprehensively investigate ATM service satisfaction, gather relevant and factual data regarding the factors that influenced customer satisfaction with ATM services and their impact on customers, and describe the relationship between ATM services and customer satisfaction and their constructs.

The population of the study comprises all ATM subscribers of Nepalese Commercial Banks in Itahari sub-metropolitan city, Sunsari, Nepal. The sample frame includes ten banks with a minimum of 10 years of experience, including three government banks (Nepal Bank Ltd, Rastriya Banijya Bank, and Agriculture Development Bank), four joint venture banks (Nabil, Everest, Nepal Investment, and SBI), and three private banks (NIC, NMB, and Kumari).

Two hundred questionnaires were distributed, however, only 140 were returned in the useable form, comprising responses from 77 male and 63 female respondents, resulting in a response rate of 70%. The data were managed and analyzed using the SPSS software package. A structured questionnaire was developed and used for data collection through convenience sampling, using a five-point Likert scale. Primary data were collected from the questionnaires, while secondary data were gathered from various sources such as bank websites, annual reports, journal articles, and dissertations. Statistical tools such as frequency, mean, and standard deviations were used to assess ATM service satisfaction. Pearson correlation matrix and linear regression analysis were employed to test the relationships and significance levels between variables. Cronbach's alpha was used to test the reliability of constructs. The questionnaire was distributed to 20 wards of the Itahari sub-metropolitan city, with 10 respondents from each ward. In this article, the questionnaires have been modified from the work of (Parasuraman et. al., 2005), which consists total of 50 items including an independent variable (ATM services) with 9 constructs (36 items), a dependent variable (customer satisfaction) with 9 items, and 5 demographic items.

Findings

Based on the data collected, the following conclusions have been made.

Reliability of the Constructs

All constructs are reliable and acceptable because all the values of Cronbach's Alpha are greater than 0.7000.

Table 1

Reliability of the Constructs in Aggregate

Cronbach's Alpha	No. of constructs
0.815	10

Table 2 shows the results of reliability measurement scales used for measuring the independent and dependent variables.

Table 2

Reliability of the Constructs

Constructs	No. of Items	Cronbach's Alpha
Transaction Speed	4	0.778
Accessibility and Availability	4	0.783
User-Friendly Interface	4	0.780
Reliability and Uptime	4	0.776
Transaction Accuracy	4	0.771
Transaction Fee	4	0.885
Customer Support	4	0.778
Maintenance and Cleanliness	4	0.786
Privacy of ATM	4	0.731
Customer Satisfaction	9	0.813

Table 3 compares the data results from the questionnaires in the selected banks based on gender, marital status, age, educational level, and income level, using both the number of respondents and percentages.

Table 3*Demographic Characteristics of Respondents*

Respondent Character	No. of Respondent	Percentage
Gender		
Male	77	55
Female	63	45
Total	140	100
Marital Status		
Married	82	58.57
Unmarried	58	41.43
Total	140	100
Age		
15-24	15	10.71
25-34	33	23.57
35-44	47	33.57
45-54	27	19.29
55 and above	18	12.86
Total	140	100
Education		
Master	34	24.29
Bachelor	44	31.43
Intermediate	38	27.14
SLC and below	24	17.14
Total	140	100
Annual Income		
Below Rs. 2,50,000	23	16.43
2,51,000-5,00,000	74	52.86
5,01,000-7,50,000	31	22.14
7,51,000 and above	12	8.57
Total	140	100

Table 4 shows a descriptive analysis to understand the factors influencing customer satisfaction with ATM services during the study period. The descriptive statistics used in the analysis included mean and standard deviation values for various variables. These variables included Transaction Speed, Accessibility and Availability of a user-friendly interface, Reliability and uptime, Transaction accuracy, Transaction Fee, Customer support, and Maintenance and Cleanliness. The overall mean value for Customer Satisfaction was 2.93. This result implies that customers are moderately happy regarding the ATM services provided by Nepalese commercial banks in the Itahari sub-metropolitan city of Sunsari.

Table 4

Descriptive Analysis of satisfaction among customers regarding ATM services

Constructs	N	Minimum	Maximum	Mean	Standard Deviation
Transaction Speed	140	1	5	3.59	1.1
Accessibility and Availability	140	1	5	2.45	0.81
User-Friendly Interface	140	1	5	2.41	1.15
Reliability and Update	140	1	5	2.73	.91
Transaction Accuracy	140	1	5	3.27	0.97
Transaction Fee	140	1	5	3.67	0.97
Customer Support	140	1	5	3.59	0.99
Maintenance and Cleanliness	140	1	5	3.51	0.93
Privacy of ATM	140	1	5	1.92	0.97
Customer Satisfaction	140	1	5	2.93	0.94

Table 5 results that there is a significantly positive correlation between ATM Services and the Customer Satisfaction scale ($r= 0.556$, $p< 0.05$) in Nepalese commercial banks of Itahari, Sunsari.

Table 5

Correlation between ATM Services and Customer Satisfaction

Pearson's Correlation	N for ATM Services	N for Customer Satisfaction	Sig. (at the 2-tailed)
0.556**	140	140	0.000

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

Table 6

Regression between ATM Services and Customer Satisfaction

Model	R	R Square	Adj. R Square	Std. Error of the estimate
1	0.556	0.309	0.307	9.7324

Predictors: (Constant), Transaction Speed, Accessibility and Availability, User-Friendly-Interface, Reliability and Update, Transaction Accuracy, Transaction Fee, Customer Support, Maintenance and Cleanliness and Privacy of ATM

Table 6 shows that the regression model effectively predicts the outcome variable. The value of $P<0.05$ indicates that the model can predict the outcome variable with statistical significance.

Table 7

ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	16577.229	1	16577.229	175.014	0.000
Residual	37035.198	391	94.719		
Total	53612.427	392			

Dependent variable Customer Satisfaction b. Predictors (Constant), Transaction Speed, Accessibility and Availability, User-Friendly-Interface, Reliability and Update, Transaction Accuracy, Transaction Fee, Customer Support, Maintenance and Cleanliness and Privacy of ATM

Table 8, coefficients, provides information on the overall predictor variable. This is combined with transaction speed, accessibility and availability, user-friendly interface, reliability and update, transaction accuracy, transaction fee, customer support, maintenance and cleanliness and privacy of ATMs contribute significantly to the model.

Table 8

Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients Beta	t	Sig.
	B	Std. Error			
Constant	44.383	4.417		10.049	0.00
Transaction Speed	1.04	0.15	0.363	6.928	0.00
Accessibility and Availability	0.026	0.201	0.008	0.13	0.897
User-Friendly Interface	0.299	0.203	0.095	1.474	0.141
Reliability and Uptime	0.699	0.214	0.212	3.267	0.001
Transaction Accuracy	0.513	0.312	0.573	2.670	0.00
Transaction Fee	0.631	0.679	0.095	1.527	0.152
Customer Support	1.02	0.875	0.328	3.479	0.043
Maintenance and Cleanliness	0.793	0.942	7.531	2.879	0.952
Privacy of ATM	1.07	0.671	0.687	2.369	0.00

a). Dependent variable Organizational Performance

Discussion

The findings of this study demonstrate that ATM services have a positive and significant impact on customer satisfaction. Specifically, factors such as transaction speed, transaction accuracy, privacy of ATM, customer support, and reliability and uptime were found to be positively and significantly related to customer satisfaction in Nepalese Commercial Banks in Itahari, Sunsari. Accessibility and availability, user-friendly interfaces, transaction fees, maintenance, and cleanliness were found to be insignificant because the performances of these dimensions of ATM services in the Nepalese banking industry are not in satisfactory level such as transaction fees are high, and other remaining three dimensions are poor i.e. low. This study also confirms that the nine dimensions of ATM services are effective tools for assessing the quality of ATM services provided by Commercial Banks in Itahari sub-metropolitan city, Sunsari. Therefore, bank managers could utilize these tools to evaluate the quality of their banks' ATM services. Banks need to focus on the delivery of services to maintain and enhance customer satisfaction. Among the nine dimensions of ATM service delivery, customer satisfaction is a key factor for designing and implementing strategies to engage and satisfy customers.

Elifneh et al. (2020) studied the impact of ATM services on customer satisfaction in Ethiopian Leading Banks. The research found that all factors related to ATM service quality are crucial for customer satisfaction. The results showed a strong, positive, and statistically significant association between each factor of ATM service quality and customer satisfaction. John (2016) analyzed the dimensions of ATM service quality and customer satisfaction in Nigeria, finding that all factors except "Reliability" did not have a significant influence. Therefore, service quality is linked to customer satisfaction, and higher service quality leads to higher satisfaction levels. Phan and Nham and Al-Azzam (2015) found that higher levels of ATM service delivery in terms of "tangibles," "reliability," "responsiveness," "assurance," and "empathy" led to increased customer satisfaction. These identified constructs will help bank managers understand which dimensions customers find most influential in their ATM service experience. The dimensions of ATM services examined in the study highlight the need for improvement in ATM services offered by banking systems to provide value-added services to customers (Aslam et al., 2019). Similarly, customers are satisfied with the ease of cash withdrawal through ATM services but are unhappy with low network service, such as network outages at ATM locations, and are dissatisfied with the

available network at ATM centers (Lwin, 2019). Additionally, recent research findings align with Indrayani et al. (2019), indicating that customers are satisfied with conducting transactions via ATMs; therefore, improving the quality of ATM services will increase satisfaction levels (Octaviani et al., 2019). These findings align with studies by McAndrews (2011), Jegede (2014), and Humphrey (2016), which found that ATM services have become more cost-effective for customers, leading to increased utilization.

Conclusion and Future Research

This research examines the current state of ATM services and customer satisfaction in Nepalese commercial banks in Itahari. The study concluded that customers are moderately satisfied with the current ATM services provided by Nepalese commercial banks in Itahari. The findings show a positive and significant relationship between ATM services and customer satisfaction. It can be concluded that customers with adequate ATM services experience higher satisfaction compared to those with inadequate ATM services. Most of the aspects of ATM services are positively and significantly related to customer satisfaction. Additionally, this research highlights that ATM services have a significant impact on customer satisfaction, with transaction fees being the key factor influencing customer satisfaction, followed by customer support and transaction speed. Therefore, service providers should enhance their services to improve customer satisfaction levels. ATM services are a crucial part of the banking sector and require continued research to improve their quality and customer satisfaction levels.

This study suggests that commercial banks should improve their services to enhance customer satisfaction levels. Customers who use ATM services from commercial banks may be more inclined to continue using services from banks that cooperate well in the future. Banks can benefit from this study by using it to improve the quality of their ATM services and contribute to future research projects.

There is also a necessity to carry out future research regarding expanding factors such as choice of ATM, usage of service post-purchase behavior and so on that have an impact on ATM services and customer satisfaction. Further research may also be carried out in development and micro finances to see the customer satisfaction level via ATM services. Moreover, future research could explore the impact of mobile banking services on customer satisfaction, considering various influencing factors such as new features to mobile banking apps and services, security and trust, etc. This article is based on a

limited sample size which may not be reliable for wider areas. So, future researchers may explore new research frameworks with large sample sizes.

Similarly, the future paper might be accomplished with various models e.g., the GAP model (Parasuraman et al., 1985) and IT-based model (Zhu et al., 2002) of service quality instead of the SERVQUAL model to assess the suitability of both models in defining service quality in the commercial bank setting and recommend the most preferable. This article focuses solely on the study of ATM services and customer satisfaction in commercial banks in Itahari.

Acknowledgment

The researcher expresses heartfelt gratitude to the anonymous reviewers for their insightful feedback. Sincere thanks are extended to all contributors and supporters for their invaluable assistance in the completion of this research.

Declaration of Conflicting Interests

The researcher declares no possible conflicts of interest concerning this research paper, authorship, and publication.

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