

Factors Influencing the Growing Demand of Cardless ATM Cash Withdrawal

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Abstract

This study investigates the factors influencing the rising adoption of cardless ATM cash withdrawals in Nepal, focusing on perceived ease of use, customer trust, perceived usefulness, perceived security, and amount of information. Using a mixed-method approach with 107 respondents, data were analyzed via SPSS, revealing that perceived security and amount of information significantly drive demand, while traditional factors like ease of use and trust showed weaker impacts. These insights challenge conventional assumptions and offer actionable strategies for financial institutions to enhance user adoption through targeted security measures and educational campaigns.

Keywords: Cardless ATM; Perceived Security; Financial Technology; Nepal; Consumer Behavior.

Introduction

The digital transformation of banking has introduced innovations like cardless ATM cash withdrawals, enabling users to access funds via mobile apps without physical cards. In Nepal, this technology gained traction post-COVID-19, with institutions like Sunrise Bank pioneering its adoption. Despite its convenience, uptake depends on multifaceted factors beyond mere accessibility. This study explores how psychological and informational variables shape demand, addressing gaps in localized research and providing insights for stakeholders in Nepal's evolving financial landscape. When a customer initiates a withdrawal from a cardless ATM, the mobile application generates a numeric authentication code. Upon correctly inputting the PIN and

password, the ATM verifies the details and completes the transaction by dispensing cash, eliminating the need for a physical card (Nambiar & Bolar, 2022).

To use cardless withdrawal through mobile banking, customers must select the 'Cardless Withdraw' option in their bank's mobile app (Nambiar & Bolar, 2022). They then specify the desired withdrawal amount in multiples of Rs 500 and proceed by selecting the withdrawal option, triggering an OTP code sent to their registered mobile number. At the ATM, the user begins the transaction by pressing the cardless withdrawal button (Nambiar & Bolar, 2022). After selecting a language, they enter their registered mobile number and the same withdrawal amount previously specified in the app. Upon inputting the received OTP, the ATM processes the transaction and dispenses cash, eliminating the need for a physical card. This method minimizes the risk of fraud unless the account holder is directly involved (Nambiar & Bolar, 2022).

Corporate Social Responsibility (CSR) has emerged as a significant strategic tool for businesses worldwide, including banking institutions, to foster goodwill, enhance brand reputation, and build stronger relationships with stakeholders. Despite the growing emphasis on CSR initiatives within the banking industry, there is a notable gap in research exploring the specific impact of CSR practices on customer loyalty in this sector (Smith 2018). By uncovering the intricacies of how CSR initiatives influence customer loyalty in the banking sector, this research aims to provide valuable insights for banks to tailor their CSR strategies effectively, enhance customer relationships, and drive sustainable business growth (Aguinis & Glavas, 2012).

"Perceived ease of use" is a concept often cited in technology adoption literature, particularly in the Technology Acceptance Model (TAM). It refers to the degree to which an individual believes that using a particular system would be free from effort. This concept is crucial because it influences whether individuals will be willing to adopt and use a new technology or system (Davis, 1989).

Trust simply means a firm belief in the reliability, truth or ability of someone or something. The more the customer trusts on technology, the higher the chances of its usages. Trust is instrumental in generating goodness or profit (Nambiar&Bolar, 2022). Reichheld and Schefter (2000) found that trust is an antecedent for technology adoption in internet-based services.

Security is a major barrier to adopting technological innovation, with numerous studies emphasizing that internet-based firms must prioritize assuring customers of their security measures (Mattila & Mattila, 2005). The account from which the cash is withdrawn holds the life saving of a person, which holds all the blood and sweat. Hence, unless customers feel secure about a technology they won't use it.

It simply means the amount of knowledge or tentative idea that one has regarding a topic or an issue. Numerous past studies have provided evidence of a significant relationship between new technological information and usage intentions (Phothikitti, 2020). Additionally, Pikkarainen et al. (2004) discovered that customers' knowledge positively influences their acceptance of online banking.

Cardless cash withdrawal is a growing trend in the banking industry. It allows consumers to withdraw money from an ATM using their mobile phones instead of a physical debit or credit

card. This feature enhances convenience, reduces the chances of card skimming, and aids in situations where a user might have forgotten their card or had it stolen. Demand is increasing because customers prefer that thing. According to Howard and Sheth (1969), Customer preference reflects a tendency to select particular options, and individuals who believe that products or services are tailored to meet their specific needs are more likely to engage with them (Moon & Lee, 2014).

Research suggests that perceived usefulness represents an individual's belief that utilizing technology will enhance their ability to accomplish a specific task (Phothikitti, 2020). This simply shows one's desire to accept and learn about it. With proper utilization of available information, we can increase the willingness to do something. When a person thinks of accepting or trying the new technology, he/she is intending to use it which eventually increases the demand of such technology.

As per (Davies, 1989) the relationship between independent variables such as Perceived ease of use, Customer Trust, Perceived security, Amount of information with Intention to use being mediating variable and growing demand of cardless ATM cash withdrawal dependent variable. Perceived Ease of Use is the extent to which potential users believe that using cardless ATM withdrawals would be free of effort. Customer Trust is the confidence customers have in the financial institution's ability to securely and effectively facilitate cardless transactions. Perceived Security shows the user's belief regarding the safety and confidentiality of cardless ATM transactions. Amount of Information is the adequacy and clarity of information available to users about how cardless ATM withdrawals operate. Pikkarainen et al. (2004) found that customer's knowledge has a positive impact on online banking acceptance. While these variables are pivotal, the actual usage and growing demand for cardless ATM withdrawals may be significantly mediated by the "intention to use." This entails a user's proactive intention to employ cardless methods over traditional card-based withdrawals. However, there has not been sufficient research regarding impact of different factors on growing demand of cardless ATM cash withdrawals. This study holds significant implications for various stakeholders involved in the financial landscape of Nepal, as well as for academic research in the field of financial technology adoption. By delving into the challenges and concerns surrounding the growing demand for cardless ATM cash withdrawals, the study identifies areas for improvement and potential obstacles to adoption. Analyzing the role of perceived ease of use in driving demand provides valuable insights into user preferences and expectations.

The key research questions essential for achieving the study's objectives are as follows:

- How aware are the Nepalese citizens on the cardless ATM cash withdrawal option?
- What are the primary reasons Nepalese citizens prefer cardless ATM cash withdrawal over traditional methods?
- How do convenience, security, and speed factor into the preference for cardless withdrawals?
- How is the adoption rate of cardless ATM cash withdrawals in Nepal compare to other South

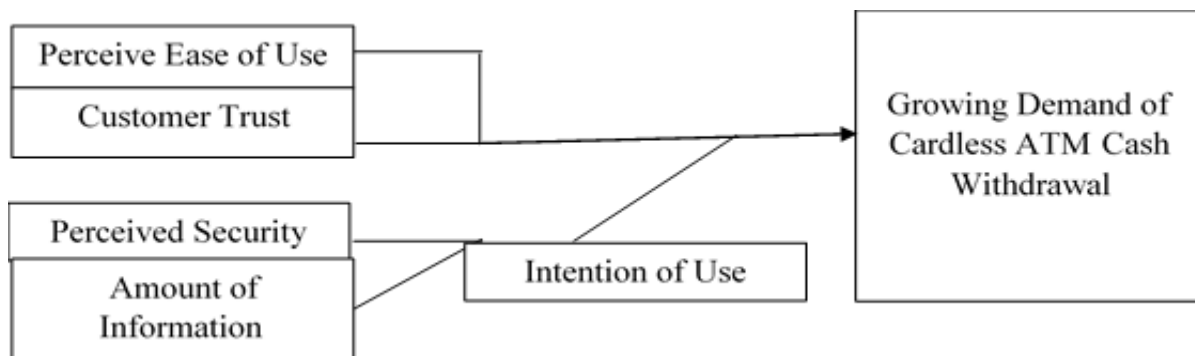
Asian countries?

- What concerns do users have regarding the security and reliability of cardless ATM cash withdrawals?
- How might the increasing adoption of cardless ATM withdrawals influence the development of other digital banking services in Nepal?

The general purpose of the study is to examine and analyze the impact of different factors on growing demand of cardless ATM cash withdrawals.

The specific purposes of the study are as follows:

- To analyze the status of growing demand of cardless ATM cash withdrawal in Nepalese economy.
- To analyze the challenges and concerns regarding the growing demand for cardless ATM cash withdrawal.
- To examine the impact of Perceived ease of use on growing demand of cardless ATM cash withdrawal.
- To find out whether or not the Customer trust has a significant positive influence on the growing demand of cardless ATM cash withdrawal.
- To measure the effect of Intention to use on the relationship between perceived security and growing demand for cardless ATM cash withdrawal.
- To study the nature of relationship between amount of information and growing demand of cardless ATM cash withdrawals.



Source: [Nambiar and Bolar (2022); Oloveze et al. (2020); Phothikitti (2020)]

Figure 1. Conceptual frame

There is relation between Growing Demand of Cardless ATM Cash Withdrawal and their variables (i.e., Perceive Ease of Use, Customer Trust, Perceived Security and Amount of Information) Nambiar and Bolar (2022); Oloveze et al. (2020); Phothikitti (2020). So, this research assumes the following alternative hypotheses (HA):

H1: Perceived ease of use has a significant positive influence on the growing demand of cardless ATM cash withdrawal.

H2: Customer trust has a significant positive influence on the growing demand of cardless ATM cash withdrawal.

H3: Intention to use has a significant moderating effect on the relationship between perceived security and growing demand for cardless ATM cash withdrawal.

H4: The amount of information positively impacts the growing demand of cardless ATM cash withdrawals.

Material and Methods

This study aimed to evaluate the influence of various factors on the increasing demand for cardless ATM cash withdrawals. To achieve this objective, a descriptive and explanatory research design was employed. A thorough review of existing literature led to the development of research constructs, aligning with a positivist methodological approach. Consequently, the study is categorized as "quantitative research." Three key reasons justify the use of a quantitative approach. First, hypothesis formulation in initial research should maintain simplicity (Creswell, 2009), and this study strongly validated the proposed hypotheses (H1-H4). Second, the study utilized a representative sample to ensure reliable findings. Finally, statistical analyses and tests were conducted on the collected data. The research relied on a structured questionnaire survey for gathering quantitative data.

The study examines investment tendencies across diverse population segments in Kathmandu Valley, selecting a sample of 106 participants. The sample consists of individuals aged 20 to 60 years from within the valley. To gather data, the research employed primary sources, utilizing a cross-sectional approach. A structured questionnaire was developed, comprising 23 closed-ended questions. The questionnaire incorporated a 5-point rating scale, a widely used method for assessing agreement or disagreement with given statements. Responses ranged from "Strongly Disagree" (1) to "Strongly Agree" (5) on an ordinal scale, allowing for an evaluation of behavioral characteristics.

A self-administered questionnaire was used to gather data from 106 individuals with varying ages, genders, occupations, and educational backgrounds. A Google form was created to collect study replies, and the link was distributed to respondents via the internet as a survey tool.

Basic demographic data and additional data related to individual investing choices were presented using a frequency analysis. To ensure internal consistency, a reliability analysis was performed on the study's questionnaires. The constructs were highlighted and summarized using descriptive statistics. To examine the link between the independent and dependent variables, a correlation analysis was performed. To examine the hypotheses put forth and highlight the influence of cause variables on result variables, multiple regression analysis was used. SPSS 25 was used to analyze the data and evaluate the hypotheses.

The study highlights that the majority of the respondents are male, consisting of 56.6% of the total respondents followed by female with 38.7% and others. Majority of the respondents were students comprising 43.4% of total respondents followed by 24.5% of the respondents who are employed and so on. Large number of respondents are between the age group of 21-30 comprising 67% of total respondents followed by the age group upto 20 years with 16% and so on.

Results and Discussion

A statistic called Cronbach's alpha is used to assess a set of scale or test items' internal consistency or dependability. One method to measure the degree of that consistency is Cronbach's alpha. The consistency with which a measurement captures a subject is known as its dependability (Mukaka, 2012).

Table 1: Descriptive Analysis

Code	Variables	Mean	Std. Deviation
GD	Growing Demand	4.08	1.002
PEoU	Perceives Ease of Use	4.06	1.05
CT	Customer Trust	3.42	1.233
PS	Perceived Security	4.14	.97
AoI	Amount of Information	4.03	1.046

[Source: Calculation Based on SPSS]

Table 1 expressed descriptive analysis where Growing Demand is 4.08, Perceive Ease of Use is 4.06, Customer Trust is 3.42, Perceived Security is 4.14 and Amount of Information is 4.03. This indicates that Perceived Security has the highest mean of 4.14, whereas Customer Trust has the lowest mean of 3.42. Similarly, standard deviation of Growing Demand is 1.002, Perceive Ease of Use is 1.05, Customer Trust is 1.233, Perceived Security is 0.97 and Amount of Information is 1.046. This indicates that perceived security has the lowest standard deviation of 0.97, which explains that the value in the perceived security are near from the mean.

Relationships between variables were found using correlation analysis. Pearson's correlation study was used for variables with simple multiple-choice answers. A correlation matrix was developed in order to assess the degree or strength of the relationship between the research variables. The link is directed when there is a positive correlation, meaning that as one rises, and the other rises as well. A negative correlation, or a rise in one when the other falls, is the opposite of the previously described (Sharma & Chaudhary, 2018). R 0.30 indicates weak correlation, r 0.60 indicates moderate connection, and r 0.90 indicates strong correlation.

Table 2: Correlation Matrix

Construct	Correlation	Growing Demand
Growing Demand	Pearson Correlation	1
Perceives Ease of Use	Pearson Correlation	.527**
Customer Trust	Pearson Correlation	.501**
Perceived Security	Pearson Correlation	.772**
Amount of Information	Pearson Correlation	.978**

[Source: Calculation Based on SPSS]

Table 2 demonstrates the Pearson's correlation coefficients between the studied variables. The table shows that there was a moderate correlation between Perceive Ease of Use, Customer Trust, Perceived Security and Amount of Information with Growing Demand, as their correlations were 0.527, 0.501, 0.772 and 0.978.

Before the regression analysis can be performed, its premise must be satisfied. The four techniques employed to evaluate the regression assumption were the normality test, linear test, multicollinearity test, and error independence test. Understanding how any one of the independent variables affects the typical value of the dependent variable while holding the other independent variables constant is made possible using regression analysis (Sharma & Chaudhary, 2018). Table 3 displays the results of regression analysis.

Table 3: Coefficients

Independent variables	Coefficients value of beta	Sig.
	-0.57	0.000
(Constant)		
	-0.11	0.206
Perceives Ease of Use		
	0.067	0.256
Customer Trust		
Perceived Security	0.271	0.032
Amount of Information	0.964	0.001
Result variable Growing Demand R = 0.981; R ² = 0.963; Adj. R ² = 0.961; S. E. = 0.20793; F-Value = 514.509; p-value of F test = 0.000. Sig. at 5% level		

[Source: Calculation Based on SPSS]

Table 3 indicates that the p-value is 0.000, which is equal to the alpha level. Additionally, the F-statistic is significant, with a value of 514.509. This suggests that the model provides a strong explanation of the relationship between the dependent and predictor variables. The R-squared value is 0.963, meaning that 96.3% of the variation in Perceived Ease of Use, Customer Trust, Perceived Security, and Amount of Information is accounted for by the model.

Form Table 3, p-value of Perceived Security and Amount of Information are significant at 5% level of significance. So, H3 and H4 are accepted. Of Perceived Security and Amount of Information influence Growing Demand. P-value of Perceive Ease of Use and Customer Trust are not significant at 5% level of significance. So, H1 and H2 are not accepted. Perceive Ease of Use and Customer Trust do not influence the Growing Demand.

Conclusion

This research concluded that while factors like perceived ease of use, usefulness, and trust may influence consumer attitudes towards cardless ATM cash withdrawals, they might not be the primary drivers of the growing demand. Instead, the availability and dissemination of information along with security regarding cardless ATM transactions seem to be a more significant factor in predicting consumer behavior in this context. PEOU has insignificant impact on growing demand

for Cardless ATM cash withdrawals, as per this research. It is inconsistent with the research conducted by Phothikitti (2020) to examine the factors influencing intentions to use Cardless Automatic Teller Machine in Thailand. In the research conducted by Phothikitti (2020), Perceived Ease of Use has significant impact on growing demand. As per this research, CT has positive but insignificant impact on growing demand. It is consistent with the research conducted by Nambiar and Bolar (2022) to examine the factors influencing customer preference of cardless technology over the card for cash withdrawals in India. In the research conducted by Nambiar and Bolar (2022), CT has insignificant impact on customer preference. According to this research PS has positive and significant impact on growing demand. This result is inconsistent with the research of Nambiar and Bolar (2022) to examine the factors influencing customer preference of cardless technology over the card for cash withdrawal in India. In the research conducted by Nambiar and Bolar (2022), PS has insignificant impact on customer preference for growing demand of cardless ATM cash withdrawals. As per this research, AoI has positive and significant influence on growing demand for Cardless ATM cash withdrawals. The results are consistent with the research conducted by Phothikitti (2020) to examine the factors influencing intentions to use Cardless Automatic Teller Machine in Thailand.

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