

# Impact of Cashless Transaction on Consumer Spending Habits and Consumer Satisfaction: A Case of Nepal

Shreya Karn and Sumit Pradhan\*

---

## Abstract

The study examines the impact of cashless transaction on consumer satisfaction and consumer spending habits in Nepal. Consumer satisfaction and consumer spending habits are dependent variables. The selected independent variables are ease of use, security, perceived usefulness, convenience, security, trust and fee charge. The primary source of data is used to assess the opinions of respondents regarding ease of use, security, perceived usefulness, convenience, security, trust, fee charge, consumer satisfaction and consumer spending habits. The study is based on primary data of 160 respondents. To achieve the purpose of the study, structured questionnaire is prepared. The correlation and multiple regression models are estimated to test the significance and importance of cashless transaction on consumer satisfaction and consumer spending habits.

The study showed that several factors positively impact consumer spending habits and satisfaction with cashless transactions in Nepal. The easier cashless transactions are to use, the more consumers spend and the more satisfied they are. Better security measures make consumers feel more confident, leading to increased spending and greater satisfaction. When consumers find cashless transactions useful, they tend to spend more and are more satisfied. The more convenient cashless transactions are, the more they influence consumers to spend and the higher their satisfaction. Higher levels of trust in cashless transaction systems encourage more spending and greater satisfaction. Additionally, lower or reasonable fees associated with cashless transactions lead to higher consumer spending and increased satisfaction. Overall, ease of use, security, perceived usefulness, convenience, trust, and reasonable fees all play a significant role in shaping consumer spending habits and satisfaction in Nepal's cashless transaction landscape.

**Keywords:** ease of use, security, perceived usefulness, convenience, security, trust, fee charge, consumer satisfaction, consumer spending habits

---

## 1. Introduction

A cashless transaction refers to any financial exchange that doesn't involve physical currency like coins or banknotes. Instead, it relies on electronic methods such as credit cards, debit cards, mobile wallets, online banking, or electronic funds transfers (EFT). Cashless economy does not mean a total elimination of cash as money will continue to be a means of exchange for goods and services in the foreseeable future. It is a financial environment that minimizes the use of physical cash by providing alternative channels for making payments (Ajayi, 2014). Similarly, the practice of making purchases without the use of actual cash is known as cashless transactions and it represents a means of advancing technology in the global economy. People who stop using money to exchange goods and services by sending electronic transfers or making non-electronic payments with checks are known as cashless paymenters (Benny *et al.*, 2023).

---

\* Ms. Karn is a Freelance Researcher, Kathmandu, Nepal and Mr. Pradhan is the Research Faculty, Uniglobe College (Pokhara University affiliate), Kathmandu, Nepal.

The idea behind a cashless economy is to promote transparency, reduce the burden of cash handling, and promote financial inclusion by making banking services accessible to the unbanked population (Gerrans *et al.*, 2022). Similarly, online payment services such as e-wallets as well as bank transfers, are becoming more popular as alternatives to the traditional means of making electronic payments, such as debit and credit cards, and direct bank deposits, as well as e-checks (Abubakar, 2013).

Hernandez *et al.* (2014) revealed that the preference of cash was to refrain from overspending and to keep an insight into the volume of spending. Digital payment is a way of payment which is made through digital modes. In digital payments, payer and payee both use digital modes to send and receive money. It is also called electronic payment. No hard cash (currency notes) is involved in the digital payments. All the transactions in digital payments are completed through online. It is an instant and convenient way to make payments (Franciska and Sahayaselvi, 2017). The rapid growth of cashless payments has aroused the interest of academia and businesses in the changes that have occurred in the global economy as a result of the progressive spread of cashless payments (Gorshkov, 2022). Moreover, Daniel and Sathye (1999) defined E-Banking as the automated delivery of new and traditional banking products and services directly to customers through electronic, interactive communication channels. Klyton *et al.* (2021) stated that money loaded in the e-wallet enables consumers to make payments by scanning the quick response (QR) code for their purchases made. E-wallets were also linked to the customers' credit cards and personal details to provide convenience for point of sales shopping (Kaur *et al.*, 2020). Similarly, the internet and mobile banking allowed cashless transactions to be conducted without the need to queue in the bank, almost 24/7 (Zhou *et al.*, 2021). Likewise, the increased usage of the internet and mobile banking was induced by the advancement of online businesses (Ho *et al.*, 2020). According to Dev *et al.* (2024), an E-payment is generally understood as an economic situation where the buying and selling of goods are handled without physical cash, often facilitated through E-payment or checks.

Ong and Chong (2023) discovered that charge cards, credit transfer and direct debit payments will significantly affect the usage of mobile banking applications in the short run. Furthermore, Brown *et al.* (2023) concluded that the present biased consumers spend more, the more often they use cashless payment instrument. Likewise, Dev *et al.* (2024) concluded that the spending of people increased due to UPI and people feel convenient using UPI. Similarly, Benny *et al.* (2023) concluded that most of the youth use cashless payment and it is easier, convenience and save their time. Likewise, Rafee *et al.* (2022) concluded that there is a negative correlation exists between income level to mode of payment while going out for shopping with family and friends, positive correlation growth in debt due to credit cards, Paytm pay later, amazon pay later etc. and no correlation between income level to overspending due to usage of credit cards pay later options.

Ahmad *et al.* (2021) concluded that the benefits perceived and the adoption of cashless transactions were linked positively and were of perceived importance and acceptance. Furthermore, Yang *et al.* (2021) concluded that Polish consumers were less willing to pay with cash during the pandemic than beforehand which is related with avoiding contact with cash, as well as easy documentation of transactions, increasing their transparency. Similarly, Mohd and Pal (2020) found that the respondents face many problems while making cashless transactions such as no security, poor network connectivity, less digital awareness, problems

of illiteracy, problems in making small payments, etc. Moreover, there is less awareness of the latest modes of digital payments. Hasan *et al.* (2020) found that the significant challenges that are faced by Indian consumers are education, unawareness, lack of infrastructure, security and privacy issues, behavioral constraints, extra charges. Moreover, Yuvraj and Eveline (2018) revealed that privacy and security, convenience were the factors which influences consumers towards cashless transactions and it was also found that consumers has enough awareness on the information security in cashless transactions. Likewise, Hjelm and Brzoka (2020) concluded that factors such as impulse buying and age are making a more significant impact on on-the-go consumption and the usage of contactless payment methods than factors such as city size or development of the technology.

Soodan and Pandey (2020) concluded that cashless transaction is increasing across the world as more and more customers find it convenient and easy to manage their money. Similarly, Kurniawan *et al.* (2019) concluded that digital payments affect public spending patterns and many people feel helped by the existence of this digital payment because with the existence of digital payments the public feels easier in making transactions. Likewise, Ohlan (2019) found that cardholders were more likely to make bigger purchases than non-card holders and mentioned that credit cards facilitate and induce purchases as compared to cash. Kumar (2020) concluded that with the increasing popularity of transactions through cards, cash is slowly but surely expected to die a natural death. Graziano *et al.* (2024) concluded that the fear of contracting COVID 19 and the level of financial literacy had a direct influence on the payment behavior of Italians. Similarly, Yuvaraj and Sheila (2018) concluded that privacy, security and convenience positively affect consumers towards cashless transactions. Moreover, Sultana (2015) study showed that majority of the customers make their purchases from departmental stores and majority of respondents feel cash payment to be easy and used more frequently. Educated and higher income people use plastic cards more often.

Malik *et al.* (2017) study revealed that the scope of cashless society is expanding in today's reality and digital payment is one the segments of cashless society whose degree is expanding progressively. Likewise, Podile and Rajesh (2017) revealed that some kind of negative perceptions like security problems, poor network coverage, and lack of merchant willingness, high transactional costs, lack of users' knowledge on technology, defunct POS machines, delayed reimbursement in case of failed transactions, procedures and financial limits are holding back many from adopting the new system. Convenience in use of cashless transactions and incentive system were the positive signs for the progress of cashless payments in India. Similarly, Trutsch (2014) showed that policy makers should pay attention on regular market monitoring to ensure balanced fee structures in the payment market, as more frequent transactions put higher burdens on shop owners. Moreover, Tee and Ong (2016) concluded that the vast development of cashless payment is fueled by the evolution in information technology and innovation in mobile devices. The study also showed that transformation of the current payment method to a total cashless one may not be possible in the near future, but continuous innovation in technologically aided payment system will certainly expand the society's accessibility to cashless payment.

Ajayi (2014) concluded that the cashless policy has positively affected the development of banks as it facilitates ease of operations and reduces queue and congestion in the banking hall among others. Similarly, Akinyemi *et al.* (2013) concluded that perceived

usefulness, perceived ease of use, perceived credibility, trust and system accessibility are significantly associated with intention. Likewise, Ming *et al.* (2013) concluded that occupation, qualifications to apply for credit card and management of income vs. expenses are not significantly related to credit card spending behavior among Malaysians. Singh and Rana (2017) stated that there is no significant variance in consumer perception based on the demographic factors such as gender, age, profession and annual income of the patients. However, education was found to significant influence for adoption of digital payment. The consumer perception of digital payment had a significant and positive impact on adoption of digital payment. Moreover, Khan (2011) concluded that the participants who used cashless payment tools tends to spent significantly higher than did the cash group and participants who prefer to use cash or debit card exhibited positive feeling to their preferred payment mode and Participants who used debit cards spent significantly higher than did the cash group. Likewise, Ahmed and Hamid (2009) concluded that there is a positive relationship between the income level of a person and his/her possession of the credit card. The study found that the bankers hold negative attitude towards the use of a credit card.

Singhal and Padhmanabhan (2008) concluded that utility request, security, utility transaction, ticket booking and fund transfer are major factors responsible for internet banking. Moreover, Stavins (2001) revealed that consumers use of payment instruments varies by demographic characteristics with younger, more educated consumer with higher incomes are most likely to use electronic payment. Likewise, Tiwari (2013) concluded that customers were satisfied with their basic Internet banking experience and due to lack of awareness, trust on technology and low computer literacy rate customer hesitates to adopt new technology.

In the context of Nepal, Gurung and pokharel (2023) concluded that customer acceptance of electronic payment systems is influenced positively by factors such as accessibility, knowledge, ease of use, security, fee charged, and time-saving and ease of use followed by security is the most significant factor that explains the changes in user acceptance of the electronic payment system of Nepalese commercial bank. Acharya *et al.* (2024) concluded that there is a critical positive relation between attitude, perceived behavior control, and usage intention, whereas no significant relation among subjective norms, trust, and usage intention for digital transactions Similarly, Poudel *et al.* (2023) concluded that the use of digital payment system can be increased by providing secure digital payment system, enhancing access to resources that support digital payments, and raising awareness about the benefits of digital payments. Likewise, Karki (2023) concluded that individuals' awareness of a cashless economy remains consistent, regardless of the payment method they use. Moreover, Joshi (2015) found ATM service quality has positive impact on the customer satisfaction. Some variables have very high customer satisfaction whereas some variables have the lower customer satisfaction level. The factors which have lower customer satisfaction level are the major concern area for the banks and there is need to pay more attention. Similarly, Khanal (2023) concluded that the convenience and privacy/security have significant positive effect on customer awareness of Nepalese commercial banks. Likewise, Pradhan (2019) concluded that still a lot of customers especially adult citizen of SBI bank are not aware about the e-banking services.

The above discussion shows that empirical evidences vary greatly across the studies on the factors influencing cashless transaction on consumer satisfaction and consumer

spending behavior. Though there are above mentioned empirical evidences in the context of other countries and in Nepal, no such findings using more recent data exist in the context of Nepal. Therefore, in order to support one view or the other, this study has been conducted.

The major objective of the study is to examine the factors influencing cashless transaction on consumer satisfaction and consumer spending behavior in Nepal. Specifically, it examines the relationship of ease of use, security, perceived usefulness, convenience, security, trust and fee charge with factors influencing cashless transaction on consumer satisfaction and consumer spending behavior in Nepal.

The remainder of this study is organized as follows: section two describes the sample, data, and methodology. Section three presents the empirical results and final section draws the conclusion.

## 2. Methodological aspects

The study is based on primary data of 160 respondents. To achieve the purpose of the study, structured questionnaire is prepared. The respondents' views were collected on ease of use, security, perceived usefulness, convenience, security, trust, fee charge, consumer satisfaction and consumer spending behavior. This study is based on descriptive as well as causal comparative research designs.

### *The model*

The model estimated in this study assumes that consumer satisfaction and consumer spending behavior depends upon various factors associated with people of Nepal. The dependent variable selected for the study are consumer satisfaction and consumer spending. Similarly, the selected independent variables are ease of use, security, perceived usefulness, convenience, security, trust and fee charge. Therefore, the models take the following forms:

$$CSH = \beta_0 + \beta_1 P + \beta_2 E + \beta_3 PU + \beta_4 T + \beta_5 S + \beta_6 FC + \beta_7 + e$$

$$CS = \beta_0 + \beta_1 P + \beta_2 E + \beta_3 PU + \beta_4 T + \beta_5 S + \beta_6 FC + \beta_7 + e$$

Where,

P= Privacy

E= Ease of use

PU= perceived usefulness

T= Trust

S= Security

FC= Fee charge

C= Convenience

CSH= Consumer spending habits

CS= Consumer satisfaction

Privacy was measured using a 5-point Likert scale where respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "I am concerned about the privacy of my personal information when engaging in cashless transactions", "The level of privacy offered by cashless payment systems significantly influences my willingness to use them." and so on. The reliability of the items was measured by computing the Cronbach's alpha ( $\alpha = 0.760$ ).

Ease of use was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "Using cashless payment method is easy for me", "I think cashless payment systems are user-friendly." and so on. The reliability of the items was measured by computing the Cronbach's alpha ( $\alpha = 0.912$ ).

Perceived usefulness were measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "I believe that using cashless payment methods makes my life easier", "Cashless transactions are valuable to me because they save time and effort", and so on. The reliability of the items was measured by computing the Cronbach's alpha ( $\alpha = 0.937$ ).

Convenience was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "Cashless transactions offer me greater convenience compared to traditional payment methods", "The convenience of cashless transactions influences my choice of payment method" and so on. The reliability of the items was measured by computing the Cronbach's alpha ( $\alpha = 0.937$ ).

Security was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly agree. There are 5 items and sample items include "The level of security offered by cashless payment methods influences my decision to use them", "The security features of cashless payment systems play a significant role in building trust and confidence", and so on. The reliability of the items was measured by computing the Cronbach's alpha ( $\alpha = 0.918$ ).

Trust was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly Agree. There are 5 items and sample items include "I trust that my personal information is secure when using cashless payment methods", "I trust the institutions and companies behind the development and implementation of cashless payment technologies", and so on. The reliability of the items was measured by computing the Cronbach's alpha ( $\alpha = 0.925$ ).

Fee charge was measured using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly disagree and 5 for strongly Agree. There are 5 items and sample items include "The fees charged for cashless transactions influence my choice of payment method", "The amount of fees charged for cashless transactions affects my willingness to use them", and so on. The reliability of the items was measured by computing the Cronbach's alpha ( $\alpha = 0.918$ ).

The following section describes the independent variables used in this study along with the hypothesis formulation.

#### *Privacy*

Privacy in the context of cashless transactions refers to the protection and control of personal and financial information exchanged during digital payment processes. It involves safeguarding sensitive data such as credit card details, transaction history, and personal identifiers from unauthorized access, misuse, or disclosure. Aljawder and Abdulrazzaq (2019) stated that privacy of contactless payments have a positive impact on the perceived usefulness (PU). Adhikari (2023) concluded that there is a significant impact of Privacy and Security on customers' online transactions. Mukherjee & Nath (2003) concluded that the security concerns and guidelines for the user's dos and don'ts are among the critical factors that influence customers to use electronic payment. Kim & Prabhakar (2004) concluded that the concern for security, useableness, technical procedures are also important factors that influence the perception of customers towards the E payment system. Based on it, this study develops the following hypothesis:

H<sub>1</sub>: There is a positive relationship between privacy and customer spending behavior and customer satisfaction.

#### *Ease of use*

Ease of use in cashless transactions refers to the simplicity, convenience, and efficiency with which individuals can conduct financial transactions without the need for physical currency. Oktania & Indarwati (2022) revealed that perceived ease of use positively and significantly influences the intention to use. Syahril and Rikumahu (2019) discovered that perceived ease of use has a positive and significant relationship with e-money usage. Ozturk (2016) found that there are many reasons for users' intention to adopt cashless methods and the most important reason is the perceived ease of use (PEOU). Mun and Hwang (2003) found that there is a significant relationship between perceived ease of use and behavioral intention to use information system. Based on it, this study develops the following hypothesis:

H<sub>2</sub>: There is a positive relationship between Ease of use and customer spending behavior and customer satisfaction.

#### *Perceived usefulness*

Perceived usefulness refers to a degree to which an individual believes that using a particular information system will lengthen their productivity (Davis, 1989). Danuarta and Darma (2018) showed that perceived usefulness positively affected users' use of cashless payment system. Winarno *et al.* (2021) found results that perceived usefulness had a positive and significant effect on behavioral intention. Some of the common factors affecting customer satisfaction have been identified as perceived value, image, price, quality, reliability and comfort (Muluka, 2015). According to Venkatesh *et al.* (2003), extended TAM model, perceived usefulness found to be significant on behavioral intention and determine one of the strongest factors to predict intention to use particular system. Mun and Hwang (2003) found that there is a positive and significant relationship between perceived usefulness and



behavioral intention. Based on it, this study develops the following hypothesis:

H<sub>3</sub>: There is a positive relationship between perceived usefulness and customer spending behavior and customer satisfaction.

#### *Convenience*

Convenience is when a person believes that certain applications can be used simply and do not need to spend more effort. The convenience factor is the main factor that is the reason for people to switch from a cash payment system to a non-cash payment system (Adhi Prakosa, 2020). Marpaung *et al.* (2021) found that the perceived convenience variable has a positive and significant effect on Linkaja customer satisfaction. Sari (2021) found that E-wallets allow the facility to make transactions anywhere and anytime with no limitation of odd hours or holiday. Roy (2017) found that due to availability, convenience, easy accessibility and understanding e-payment services can be used by all types of customers even physically challenged. Latief & Dirwan (2020) stated that convenience has a significant effect on usage decisions. Based on it, this study develops the following hypothesis:

H<sub>4</sub>: There is a positive relationship between convenience and customer spending behavior and customer satisfaction.

#### *Trust*

Trust is the overall user perception of the service provided by the provider is good and trustworthy. Namahoot & Laohavichien (2018) found that trust has a positive effect on intention decisions. Hermawan & Paramita (2020) concluded that trust affects consumer preferences in using e-wallet. Similarly, Namahoot & Laohavichien (2018) found that trust has an effect on interest in using e-money. Oliveria *et al.* (2010) concluded that customer trust was the main important variable that positively and significantly affected all the other variables. Similarly, Kini and Choobineh (1998) concluded that trust acts as a key factor affecting users' intention to go for shopping online. Based on it, this study develops the following hypothesis:

H<sub>5</sub>: There is a positive relationship between trust and customer spending behavior and customer satisfaction.

#### *Fee charge*

Transaction fee refers to fair and reasonable amount that is charged by the payment service provider to transfer any amount to the receiver. Hodson *et al.* (2014) found that the service quality and price variables have a significant and jointly (simultaneously) influence on customer satisfaction. Soman (2001) concluded that the variable price has a positive and significant effect on consumer satisfaction. Fabris (2019) found that there is a significant effect of Price on consumer satisfaction at JNE. Faber & Bouwman (2003) concluded that consumers do not view payment as a service but rather as "a necessary evil." Therefore, rather than being order winners, low transaction fees, ease of use, and assured delivery are "dissatisfiers." This means that it's critical for mobile payment providers to market payments as an enabler of new value-adding services rather than as a standalone product. Khurana (2017) concluded that low transaction fee & MDR has positive and significant effect on effectiveness of PSPs. Based on it, this study develops the following hypothesis:



$H_6$ : There is a positive relationship between fee charge and customer spending behavior and customer satisfaction.

### Security

Security in cashless transaction include protection features such as data encryption, two-factor authentication, and other security measures that can protect sensitive user information from unauthorized access or leaks. A strong security system can help prevent fraudulent or fraudulent activities when using an E-Wallet. Doney and cannon (1997) stated that security has a significant positive effect on interest in using e-money and also added that if the security level is acceptable and meets user expectations, then the user is interested in applying the E-wallet. Security has positive influence on the intention to use internet banking in Gujarat (Patel & Patel, 2018). Good perceived security will increase behavioural intention to use the new technology such as study in mobile payment (Oliveira *et al.*, 2016). Madan and Yadav (2016) concluded that perceived security has a significant positive influence on behavioral intention to adopt e-wallet payment. The common man is very sensitive about household and official activities which calls for safety and privacy (Parasuraman *et al.*, 2005). Based on it, this study develops the following hypothesis:

$H_7$ : There is a positive relationship between security and customer spending behavior and customer satisfaction.

## 3. Results and discussion

### Correlation analysis

On analysis of data, correlation analysis has been undertaken first and for this purpose, Kendall's Tau correlation coefficients along with mean and standard deviation has been computed and the results are presented in Table 1.

Table 1

#### Kendall's Tau correlation coefficients matrix

This table presents Kendall's Tau coefficients between dependent variable and independent variables. The dependent variables are CSH (consumer spending habits) and CS (consumer satisfaction).The independent variables are C (convenience), P (privacy), EU (Ease of use), PU (perceived usefulness) S (security), T (trust) and FC (Fee charge).

Variables	Mean	SD	CS	CSH	C	P	EU	PU	S	T	FC
CS	1.796	0.636	1								
CSH	1.880	0.747	0.650**	1							
C	1.756	0.722	0.686**	0.523**	1						
P	1.871	0.605	0.557**	0.569**	0.525**	1					
EU	1.777	0.674	0.694**	0.601**	0.742**	0.635**	1				
PU	1.701	0.630	0.738**	0.564**	0.751**	0.608**	0.770**	1			
S	1.741	0.616	0.597**	0.562**	0.663**	0.574**	0.655**	0.683**	1		
T	1.896	0.681	0.636**	0.510**	0.549**	0.593**	0.603**	0.631**	0.508**	1	
FC	1.866	0.710	0.660**	0.683**	0.595**	0.581**	0.635**	0.638**	0.689**	0.554**	1

Notes: The asterisk signs (\*\*) and (\*) indicate that the results are significant at one percent and five percent levels, respectively.

Table 1 shows Kendall's Tau correlation coefficients between the variables. The study shows that convenience is positively correlated to consumer satisfaction. It means that increase in convenience leads to increase in consumer satisfaction. Likewise, privacy is positively correlated to consumer satisfaction. It implies that increase in privacy leads to increase in level of consumer satisfaction. Similarly, ease of use has a positive relationship with consumer satisfaction indicating that increase in ease of use lead to increase in consumer satisfaction. Furthermore, perceived usefulness has a positive relationship with consumer satisfaction. It implies that perceived usefulness leads to increase in consumer satisfaction. Likewise, security is positively correlated to the consumer satisfaction indicating that security leads to increase in level of consumer satisfaction. Similarly, fee charge has a positive relationship with consumer satisfaction indicating that increase in fee charge lead to increase in consumer satisfaction. Likewise, security is positively correlated to the consumer satisfaction indicating that security leads to increase in level of consumer satisfaction.

The study shows that convenience is positively correlated to consumer spending habits. It means that increase in convenience leads to increase in consumer spending habits. Likewise, privacy is positively correlated to consumer spending habits. It implies that increase in privacy leads to increase in level of consumer spending habits. Similarly, ease of use has a positive relationship with consumer spending habits indicating that increase in ease of use lead to increase in consumer spending habits. Furthermore, perceived usefulness has a positive relationship with consumer spending habits. It implies that perceived usefulness leads to increase in consumer spending habits. Likewise, security is positively correlated to the consumer spending habits indicating that security leads to increase in level of consumer spending habits. Similarly, fee charge has a positive relationship with consumer spending habits indicating that increase in fee charge lead to Increase in consumer spending habits. Likewise, security is positively correlated to the consumer spending habits indicating that security leads to increase in level of consumer spending habits.

### *Regression analysis*

Having indicated the Kendall's Tau correlation coefficients, the regression analysis has been carried out and the results are presented in Table 2. More specifically, it shows the regression results of are ease of use, security, perceived usefulness, convenience, security, trust and fee charge on consumer satisfaction and consumer spending habits.

Table 2

#### **Estimated regression results of convenience, privacy, ease of use, perceived usefulness, security, trust and fee charge on consumer spending habits**

Estimated regression result of are ease of use, security, perceived usefulness, convenience, security, trust and fee charge on consumer satisfaction and consumer spending habits. The results are based on 160 observations using linear regression model. The model is  $CSH = \beta_0 + \beta_1 P + \beta_2 E + \beta_3 PU + \beta_4 T + \beta_5 S + \beta_6 FC + \beta_7 + e$ , where the dependent variable is CSH (consumer spending habits). The independent variables are C (convenience), P (privacy), EU (Ease of use), PU (perceived usefulness) S (security), T (trust) and FC (Fee charge).

Model	Intercept	Regression coefficients of							Adj. R_bar2	SEE	F-value
		FC	T	C	P	PU	S	EU			
1	0.465 (4.016)**	0.758 (13.080)**							0.517	0.519	171.07
2	0.504 (3.823)**		0.726 (11.092)**						0.434	0.561	123.028
3	0.504 (3.823)**			0.604 (9.042)**					0.337	0.608	81.762
4	0.287 (2.053)**				0.851 (11.979)**				0.417	0.570	114.758
5	0.572 (4.390)**					0.769 (10.713)**			0.417	0.570	114.758
6	0.497 (3.702)**						0.794 (10.923)**		0.430	0.565	119.319
7	0.442 (3.866)**							0.809 (13.430)**	0.530	0.512	180.378
8	0.179 (1.485)	0.530 (7.626)**	0.375 (0.530)						0.585	0.481	112.850
9	0.172 (1.411)	0.509 (6.120)**	0.366 (4.840)**	0.037 (0.461)					0.582	0.482	74.927
10	0.172 (1.411)	0.424 (4.869)**	0.247 (2.886)**	0.020 (0.255)	0.284 (2.775)**				0.600	0.472	60.534
11	0.088 (0.694)	0.372 (3.696)**	0.179 (1.965)*	-0.066 (0.724)	-0.222 (2.064)**	-0.101 (0.766)	-0.028 (0.220)	0.382 (2.932)**	0.614	0.463	37.194

Notes:

- Figures in parenthesis are t-values
- The asterisk signs (\*\*) and (\*) indicate that the results are significant at 1 percent and 5 percent level respectively.
- Consumer spending habits is dependent variable.

The regression results show that beta coefficients for fee charge are positive with consumer spending habits. It indicates that fee charge has a positive impact on consumer spending habits. This finding is similar to the findings of Paudel (2022). Likewise, the beta coefficients for trust are positive with consumer spending habits. It indicates that trust has a positive impact on consumer spending habits. This finding is consistent with the findings of Laohavichien (2018). Moreover, the beta coefficient for convenience is positive with consumer spending habits. It indicates that convenience has a positive impact on consumer spending habits. This finding is similar to the findings of Mukerji & Roy (2019). Further, the beta coefficient for privacy is positive with consumer spending habits. It indicates that privacy has a positive impact on consumer spending habits. This finding is consistent with the findings of Aljawder and Abdulrazzaq (2019). Likewise, the beta coefficient for perceived usefulness is positive with consumer spending habits. It indicates that perceived usefulness has a positive impact on consumer spending habits. This finding is similar to the findings of Baker-Eveleth and Stone (2015). Moreover, the beta coefficient for security is positive with consumer spending habits. It indicates that security has a positive impact on consumer spending habits. This finding is similar to the findings of Prasetya and Shuhidan (2023). Likewise, the beta coefficient for ease of use is positive with consumer spending habits. It indicates that ease of use has a positive impact on consumer spending habits. This finding is similar to the findings of Rahmawati (2020).

Table 3. Shows the estimated regression results of convenience, privacy, ease of use, perceived usefulness, security, trust and fee charge on consumer satisfaction in Nepal.

Table 3

### Estimated regression results of convenience, privacy, ease of use, perceived usefulness, security, trust and fee charge on consumer satisfaction in Nepal

The results are based on 160 observations using linear regression model. The model is  $CS = \beta_0 + \beta_1 P + \beta_2 E + \beta_3 PU + \beta_4 T + \beta_5 S + \beta_6 FC + \beta_7 C + e$ , where the dependent variable is CS (consumer satisfaction). The independent variables are C (convenience), P (privacy), EU (Ease of use), PU (perceived usefulness) S (security), T (trust) and FC (Fee charge).

Model	Intercept	Regression coefficients of							Adj. R <sub>bar</sub> <sup>2</sup>	SEE	F-value
		FC	T	C	P	PU	S	EU			
1	0.499 (5.563)**	0.695 (15.467)**							0.600	0.402	239.22
2	0.443 (4.590)**		0.713 (14.870)**						0.581	0.412	221.12
3	0.634 (7.229)**			0.662 (14.321)**					0.562	0.421	205.07
4	0.458 (3.800)**				0.715 (11.679)**				0.460	0.467	136.40
5	0.307 (4.227)**					0.875 (21.873)**			0.460	0.467	136.40
6	0.494 (4.734)**						0.748 (13.253)**		0.523	0.439	175.64
7	0.400 (5.063)**							0.786 (18.922)**	0.523	0.439	175.64
8	0.127 (1.606)	0.293 (5.425)**	0.359 (7.332)**	0.251 (4.877)**					0.757	0.313	166.40
9	0.132 (1.567)	0.297 (5.123)**	0.297 (5.123)**	0.251 (4.86)**	-0.012 (-0.176)				0.756	0.314	124.03
10	0.129 (1.752)	0.244 (4.181)**	0.219 (4.147)**	0.073 (1.388)**	-0.059 (-0.940)	0.467 (6.132)**	-0.132 (-1.174)	0.120 (1.584)	0.821	0.269	105.32

Notes:

- Figures in parenthesis are t-values
- The asterisk signs (\*\*) and (\*) indicate that the results are significant at 1 percent and 5 percent level respectively.
- Consumer spending habits is dependent variable.

The regression results show that beta coefficients for fee charge are positive with consumer satisfaction. It indicates that fee charge has a positive impact on consumer satisfaction. This finding is similar to the findings of Handoko (2016). Likewise, the beta coefficients for trust is positive with consumer spending habits. It indicates that trust has a positive impact on consumer satisfaction. This finding is consistent with the findings of Rembulan & Firmansyah (2020). Moreover, the beta coefficient for convenience is positive with consumer satisfaction. It indicates that convenience has a positive impact on consumer satisfaction. This finding is similar to the findings of Meileny and Wijaksane (2020). Further, the beta coefficient for privacy is positive with consumer satisfaction. It indicates that privacy has a positive impact on consumer satisfaction. This finding is consistent with the findings of Dangol and Kautish (2019). Likewise, the beta coefficient for perceived usefulness is positive with consumer satisfaction. It indicates that perceived usefulness has a positive impact on consumer satisfaction. This finding is similar to the findings of Baker- Winarno *et al.* (2021). Moreover, the beta coefficient for security is positive with consumer satisfaction. It indicates that security has a positive impact on consumer satisfaction. This finding is similar to the findings of Utami and Kusumawati (2017). Likewise, the beta coefficient for ease of use is positive with consumer satisfaction. It indicates that ease of use has a positive impact on consumer satisfaction. This finding is similar to the findings of Panjaitan (2019).

#### 4. Summary and conclusion

Cashless transactions, involving credit/debit cards, digital wallets, online banking, and cryptocurrencies, offer convenience, speed, and security, increasingly influencing consumer spending by facilitating more frequent and higher-volume purchases. A cashless economy is characterized by electronic transactions rather than physical cash, with increased speed, ease, and safety. Studies have found that consumers prefer credit/debit cards and mobile wallets due to privacy, security, and convenience, and young adults' spending is influenced by ease, promotions, and perceived liquidity. Perceived benefits are positively linked to the adoption of cashless transactions, with factors like ease of use and social influence playing a significant role in e-wallet adoption. Similar factors influence digital payment adoption in Nepal.

The study attempts to examine the influence of cashless transaction on consumers' spending habits and consumer satisfaction. The study is based on primary data of 160 respondents.

The major conclusion of the study is that higher the security, privacy, ease of use, trust, convenience, perceived usefulness, fee charge, higher would be the consumer spending habits and consumer satisfaction regarding use of cashless transaction in Nepal. The study also concludes that perceived usefulness is the most significant factor followed by convenience, ease of use, trust, security, privacy and fee charge that explain the influence of cashless transactions on consumer spending habits and consumer satisfaction in Nepal.

#### References

- Abubakar, F. M., 2013. The moderating effect of technology awareness on the relationship between UTAUT constructs and behavioral intention. *Australian Journal of Business and Management Research* 3(2), 14-23.
- Acharya, P., O. Poudel, and D. R. Simkhada, 2024. What motivates people to use digital transactions? The Dynamics of Subjective Norms, Perceived Behavior Control, Trust and Attitude. *OCEM Journal of Management, Technology and Social Sciences* 3(1), 26-34.
- Adhi Prakosa, D. J. W., 2020. Analisis faktor-faktor yang mempengaruhi minat penggunaan ulang e-wallet pada generasi milenial di daerah istimewa yogyakarta. *Bulletin of the World Health Organization* 15(1), 50–53.
- Adhikari, T. 2023. Impact of transaction attributes on online transactions of customers and retailers of Nepal, *Doctoral dissertation, Kathmandu University* 410(1), 12-28.
- Adhikari, T., 2023. Impact of transaction attributes on online transactions of customers and retailers of Nepal. *Doctoral dissertation, Kathmandu University* 410(1), 12-28.
- Ahmad, K., A. Arifuzzaman, A. Al Mamun, and J. M. K. B. Oalid, 2021. Impact of consumer's security, benefits and usefulness towards cashless transaction within Malaysian university student. *International Journal of Research in Business and Social Science* 10(2), 238-250.
- Ajayi, L. B., 2014. Effect of cashless monetary policy on Nigerian banking industry: Issues, prospects and challenges. *International Journal of business and finance management research* 2(1), 23-34.
- Akinyemi, I. O., E. Asani, and A. A. Adigun, 2013. An investigation of users' acceptance and satisfac-

- tion of e-banking system as a panacea towards a cashless economy in Nigeria. *Journal of Emerging Trends in Computing and Information Sciences* 4(12), 954-963.
- Aljawder, M., & A. Abdulrazzaq, 2019. The effect of awareness, trust, and privacy and security on students' adoption of contactless payments: An empirical study. *International Journal of Computing and Digital Systems* 8(6), 1-8.
- Benny, C., D. K. S., Farzeen, A. Abdul Kalam, and A. TS, 2023. A study on cashless payment and its impact on buying behaviour of youngsters. *Economic and Social Development: Book of Proceedings* 2(1), 259-270.
- Brown, M., Y. Nacht, T. Nellen, and H. Stix, 2023. Cashless payments and consumer spending. *SNB working paper* 9(7), 89-96.
- Dangol, S., & S.Kautish, 2019. IT security related issues and challenges in electronic payment system in Nepal: A study from customer's perspective. *LBEF Research Journal of Science, Technology and Management* 1(2), 85-103.
- Daniel, E., 1999. Provision of electronic banking in the UK and the Republic of Ireland. *International Journal of Bank Marketing* 17(2), 72-82.
- Danuarta, G. L. D., and G. S. Darma, 2019. Determinants of using go-pay and its impact on net benefits. *International Journal of Innovative Science and Research Technology* 4(11), 173-182.
- Davis, F. D., 1989. Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly* 13(3), 319-339.
- Dev, H., R. Gupta, and D. Kumar, 2024. From cash to cashless: UPI's impact on spending behavior among Indian users. In *Extended Abstracts of the CHI Conference on Human Factors in Computing Systems* 1(1) 1-10.
- Doney, P., and J. Cannon, 1997. An examination of the nature of trust in buyer-seller relationships. *Journal of Marketing* 61(2), 35-51.
- Faber, E., and H. Bouwman, 2003. Designing business models for mobile payment services. *International conference on international business* 14(2), 1-12.
- Fabris, N., 2019. Cashless society – The future of money or a Utopia? *Journal of Central Banking Theory and Practice* 8(1), 53-66.
- Franciska, A. M., and S. Sahayaselvi, 2017. An overview on digital payments. *International Journal of Research* 4(13), 2101-2111.
- Gerrans, P., D. G. Baur, and S. Lavagna-Slater, 2022. Fintech and responsibility: Buy-now-pay-later arrangements. *Australian Journal of Management* 47(3), 474-502.
- Gorshkov, V., 2022. Cashless payment in emerging markets: the case of Russia. *Asia and the Global Economy* 2(1), 10-33.
- Graziano, E. A., F. Musella, and G. Petroccione, 2024. Cashless payment: behavior changes and gender dynamics during the COVID-19 pandemic. *EuroMed Journal of Business* 1(1), 2-19.
- Grover, P., A. K Kar, M. Janssen, and M. Ilavarasan, 2019. Perceived usefulness, ease of use and user acceptance of block chain technology for digital transactions-insights from user-generated content on Twitter. *Enterprise Information Systems* 13(6), 771-800.
- Gurung, A., and P. R. Pokharel, 2023. Customer acceptance of electronic payment systems in Nepalese

- commercial banks. *Journal of Money Laundering Control* 13(3), 202-214.
- Hanafizadeh, P., B. W. Keating, & H. R. Khedmatgozar, 2014. A systematic review of Internet banking adoption. *Telematics and Informatics* 31(3) 492–510.
- Hasan, A., M. AtifAman, and M. A. Ali, 2020. Cashless economy in India: challenges ahead. *Journal of Commerce* 8(1), 21-30.
- Hermawan, V. K., and E. L. Paramita, 2020. Trust dan perceived usefulness dan pengaruhnya terhadap preferensi konsumen dalam menggunakan e-wallet. *Jurnal Ekobis: Ekonomi Bisnis and Manajemen* 10(2), 223–236.
- Hernandez, L., N. Jonker, and A. Kosse, 2014. Cash versus debit card: The role of budget control. *The Journal of Consumer Affairs* 51(1), 91-112.
- Hjelm, J. L., and R. A. Brzoska, 2020. How contactless payments are influencing consumer behavior in on-the-go consumption in a cash-free society. *IUP Journal of Marketing Management* 14(2), 1-47.
- Hodson, R., R. Dwyer, and L. Neilson, 2014. Credit card blues: The middle class and the hidden costs of easy credit. *The Sociological Quarterly* 55(2), 315–340.
- Joshi, R., 2015. Impact of online banking on customer satisfaction of Nepalese commercial banks. *Nepalese Journal of Management* 2(2), 36-45.
- Karki, S., 2023. Cashless economy: Awareness and adoption among university students in Kathmandu Valley. *Doctoral dissertation, Department of Economics* 8(1), 12-25.
- Kaur, P., A. Dhir, R. Bodhi, T. Singh, and M. Almotairi, 2020. Why do people use and recommend m-wallets? *Journal of Retailing and Consumer Services* 56(1), 1-11.
- Khan, J., 2011. Cash or card: Consumer perceptions of payment modes. *Doctoral Dissertation, Auckland University of Technology* 5(2), 12-28.
- Khanal, B., 2015. Impact of service quality dimensions on customer satisfaction and customer loyalty in Nepalese commercial banks. *Nepalese Journal of Business* 2(1), 41-52.
- Khurana, B., 2017. Dream of cashless India: benefits and challenges. *International Journal of Research Granthaalayah* 5(5), 377–381.
- Kim, K., & B.Prabhakar, 2004. Initial trust and the adoption of B2C e-commerce. The case of Internet banking. *ACM sigmis database* 35(2), 50-64.
- Kini, A., and J. Choobineh, 1998. Trust in electronic commerce: definition and theoretical considerations. *Proceedings of the 31st Hawaii International Conference on System Science, IEEE* 4(1), 51-61.
- Klyton, A., J. F. Tavera-Mesías, and W. Castaño-Muñoz, 2021. Innovation resistance and mobile banking in rural Colombia. *Journal of Rural Studies* 81(1), 269-280.
- Kumar, R., A. Sachan, and R. Kumar, 2020. Impact of service delivery system process and moderating effect of perceived value in internet banking adoption. *Australasian Journal of Information Systems* 24(1), 1-22.
- Kurniawan, B., S. F. Wahyuni, and T. Valentina, 2019. The influence of digital payments on public spending patterns. *Journal of Physics: Conference Series* 1402(6), 66-55.



- Latief, F., & D. Dirwan, 2020. Pengaruh kemudahan, promosi, dan kemanfaatan terhadap keputusan penggunaan uang digital. *Jurnal Ilmiah Akuntansi Manajemen* 3(1), 16–30.
- Malik, P., G. Singh, S. Sahai, C. Bajpai, R. Goel, and C. Krishnan, 2017. Consumer awareness of digital payment with special reference to the village area. *Pertanika Journal of Social Sciences and Humanities* 25(4), 1585-1600.
- Marpaung, F. K., R. S. Dewi, E. Grace, M. Sugiat, and A. Sudirman, 2021. Behavioral stimulus for using bank mestika mobile banking services: UTAUT2 model perspective. *Golden Ratio of Marketing and Applied Psychology of Business* 1(1), 61–72.
- Ming-Yen Teoh, W., S. C. Chong, and S. Mid Yong, 2013. Exploring the factors influencing credit card spending behavior among Malaysians. *International Journal of Bank Marketing* 31(6), 481-500.
- Mohd, S., and R. Pal, 2020. Moving from cash to cashless: A study of consumer perception towards digital transactions. *Journal of Indian Economy* 7(1), 1-13.
- Mukherjee, A., and P. Nath, 2003. A model of trust in online relationship banking. *International Journal of Bank Marketing* 21(1), 5-15.
- Muluka, K. O., 2015. Influence of digital banking on customer satisfaction: a case of national bank of Kenya Bungoma County. *Journal of Marketing* 64(3), 50-64.
- Mun, Y. Y., and Y. Hwang, 2003. Predicting the use of web-based information systems: self-efficacy, enjoyment, learning goal orientation, and the technology acceptance model. *International Journal of Human-Computer Studies* 59(4), 431-449.
- Namahoot, K. S., and T. Laohavichien, 2018. Assessing the intentions to use internet banking: The role of perceived risk and trust as mediating factors. *International Journal of Bank Marketing* 36(2), 256–276.
- Ohlan, M., E. Rani, and C. D. Autade, 2019. Impact of Cashless transactions on purchasing behavior of respondents. *International Journal of Current Microbiology and Applied Sciences* 8(711), 823-829.
- Oktania, D. E., and T. A. Indarwati, 2022. Pengaruh perceived usefulness, perceived ease of use, dan compatibility with lifestyle terhadap niat beli di social commerce. *Jurnal Ilmu Manajemen* 10(1), 255–267.
- Oliveira, T., M. Thomas, G. Baptista, and F. Campos, 2016. Mobile payment: Understanding the determinants of customer adoption and intention to recommend the technology. *Computers in Human Behavior* 61(1), 404–414.
- Ong, H. B., and L. L. Chong, 2023. The effect of cashless payments on the internet and mobile banking. *Journal of Financial Services Marketing* 28(1), 178-188.
- Ozturk, A. B., 2016. Customer acceptance of cashless payment systems in the hospitality industry. *International Journal of Contemporary Hospitality Management* 28(4), 801-817.
- Parasuraman, A., V. A. Zeithaml, and A. Malhotra, 2005. E-S-QUAL: A multiple-item scale for assessing electronic service quality. *Journal of Service Research* 7(3), 213-233.
- Patel, K. J., and H. J. Patel, 2018. Adoption of internet banking services in Gujarat: An extension of TAM with perceived security and social influence. *International Journal of Bank Marketing* 36(1), 147–169.

- Paudel, B., 2022. A study on the effectiveness of payment service providers with its future prospects: a case study among the users in kathmandu valley. *Doctoral dissertation, IOE Pulchowk Campus* 12(4), 2394-6962.
- Podile, V., and P. Rajesh, 2017. Public perception on cashless transactions in India. *Asian Journal of Research in Banking and Finance* 7(7), 63-77.
- Pradhan, S., 2019. Customer satisfaction towards e-banking services offered by Nepal SBI BANK LTD. *International Journal of Advance Research in Science and Engineering* 8(3), 21-32.
- Rafee, B. M., V. Ramesh, S. J. Asan, A. Basha, and K. S. M. Zaheed, 2022. A Survey on implications of cashless payments on the spending patterns of urbanites in the era of digital India. *International Journal of Early Childhood Special Education* 14(7), 1-9.
- Roy, S., 2017. Factors affecting customers' adoption of electronic payment: An empirical analysis. *International Journal of Multidisciplinary Research and Advance in Engineering* 9(3), 71-81.
- Sari, R., 2021. The influence of using paylater on the impulse buying behavior of e-commerce users in Indonesia. *Journal of Business and Investment Research* 7(1), 1-22.
- Singh, S., and R. Rana, 2017. Study of consumer perception of digital payment mode. *Journal of Internet Banking and Commerce* 22(3), 1-14.
- Singhal, D., and V. Padhmanabhan, 2008. A study on customer perception towards internet banking: Identifying major contributing factors. *Journal of Nepalese Business Studies* 5(1), 101-111.
- Soman, D., 2001. Effects of payment mechanism on spending behavior: the role of rehearsal and immediacy of payments. *Journal of Consumer Research* 27(4), 460-474.
- Soodan, V., and A. C. Pandey, 2020. Consumer attitude as driver for cashless transactions: A case of credit card adoption from Uttarakhand-India. *International Journal of Research in Finance and Marketing* 2(2), 95-103.
- Stavins, J., 2001. Effect of consumer characteristics on the use of payment instruments. *New England Economic Review* 3(1), 19-31.
- Sultana, S., 2015. A study on customer payment behavior in organized retail outlets at Coimbatore district. *Journal of Management and Science* 5(2), 1-16.
- Syahril, W. N., & Rikumahu, B. (2019). Penggunaan technology acceptance model (TAM) dalam analisis minat perilaku penggunaan e-money pada mahasiswa Universitas Telkom. *Jurnal Mitra Manajemen*, 3(2), 201-214.
- Tee, H. H., and H. B. Ong, 2016. Cashless payment and economic growth. *Financial Innovation* 2(1), 1-9.
- Trütsch, T., 2014. The impact of contactless payment on spending. *International Journal of Economic Sciences* 3(4), 70-98.
- Venkatesh, V., M. Morris, G. Davis, and F. Davis, 2003. User acceptance of information technology: toward a unified view. *MIS Quarterly* 27(3), 425-478.
- Winarno, W. A., I. Mas'ud, and T. W. Palupi. 2021. Perceived enjoyment, application self-efficacy, and subjective norms as determinants of behavior intention in using OVO applications. *Journal of Asian Finance, Economics and Business* 8(2), 1189-1200.
- Yang, M., A. A. Mamun, M. Mohiuddin, N. C. Nawi, and N. R. Zainol, 2021. Cashless transactions: A

*study on intention and adoption of e-wallet, Sustainability* 13(2), 831-849.

- Yuvaraj, S., and N. Sheila Eveline, 2018. Consumers' perception towards cashless transactions and information security in the digital economy. *International Journal of Mechanical Engineering and Technology* 9(7), 89-96.
- Yuvaraj, S., and N. Sheila Eveline, 2018. Consumers' perception towards cashless transactions and information security in the digital economy. *International Journal of Mechanical Engineering and Technology* 9(7), 89-96.
- Zhou, Q., F. J. Lim, H. Yu, G. Xu, X. Ren, D. Liu, and H. Xu, 2021. A study on factors affecting service quality and loyalty intention in mobile banking. *Journal of Retailing and Consumer Services*, 60(1) 10-24.