Impact of Cashless Transaction on Business: A Case of Kathmandu Valley

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Abstract

This study examines the impact of cashless transaction on business: A case of Kathmandu Valley. Customer satisfaction is the dependent variable. The selected independent variables are security, ease of use, fastest transaction, perceived benefit, and accessibility. The primary source of data is used to assess the opinions of respondents regarding security, ease of use, fastest transaction, perceived benefit, accessibility, and customer satisfaction. The study is based on primary data of 129 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 impact of cashless transaction on business: A case of Kathmandu Valley.

The study showed a positive impact of security on customer satisfaction. It indicates that higher the security of cashless transaction leads to increase in customer satisfaction. Similarly, the study showed a positive impact of ease of use on customer satisfaction. It indicates that higher the ease of use, higher would be the customer satisfaction. Likewise, the study also revealed a positive impact of perceived benefit on customer satisfaction. It indicates that individual's belief that specific positive outcomes will result higher the customer satisfaction. Further, the study observed a positive impact of accessibility on customer satisfaction. It indicates that higher the accessibility of cashless transaction and digital payment on business, higher would be the customer satisfaction. In addition, the study observed a positive impact of fastest transaction on customer satisfaction. It indicates that quick transaction leads to increase in customer satisfaction.

Keywords: security, ease of use, fastest transaction, perceived benefit, accessibility, customer satisfaction

1. Introduction

A cashless society describes an economic situation in which financial transactions are not conducted with money in the form of physical banknotes or coins, but with digital information (usually an electronic representation of money) between the transacting parties, a transfer takes place (Kotkowski and Polasik, 2021). Jain (2006), computerized payments would make it easier to trace down errant funds. Businesses, banks, and the general public in India would all benefit from this. In addition, he drew attention to the importance of electronic payments and communication networks throughout his remarks. Similarly, Ajayi (2014) points out that electronic payments bring a lot of other advantages in addition to ease of use and security. According to Kinyanjui and Kahonge (2018), management of cash in organizations involves the process of receiving and paying money for services rendered or received. Moreover, the phenomenal growth of Internet shopping is driven by greater emphasis on customers' efficient use of time, together with an increasing number of computer trained customers (Kim and Kim, 2004).

According to Paul and Friday (2012), cashless transactions as an economic setting

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wherein goods and services are transacted without using of cash. In addition, Kasavana (2016) emphasized that "cash payments have eluded a significant segment of the self-service industry" not to mention that most customers that are driven by reward programs and convenience have shifted from cash to cashless payments. Similarly, Hidayat *et al.* (2016) examined the customer satisfaction as the analysis of the perceived incompatibility between prior expectations and the product's actual performance as perceived following its consumption. Lin *et al.* (2011) examined important factors and their impact on customer satisfaction with e-commerce in Taiwan. The study found information quality has a positive effect on customer satisfaction with e-commerce.

According to Khan and Mahapatra (2009), stated that the main factors in service quality are reliability, accessibility, user-friendliness, privacy/security, efficiency, responsiveness, and fulfillment. Furthermore, E-banking helps banks to increase speed, shorten processing periods, improve the flexibility of business transactions and reduce costs associated with having personnel serve customers physically (Ayo *et al.,* 2010). According to Son and Kim (2018), organizations can't disregard data innovation, since it assumes an imperative job in keeping up aggressive edge both locally and comprehensively, and that most organizations money streams are complicatedly connected to their appropriation of data innovation. Moreover, Buyers have turned out to be mindful of the benefits of cashless installments and as their acknowledgment of these installments builds, an ascent in the supply of products and enterprises that can be purchased through the cashless stage is normal (Upadhyay and Jahanyan, 2016).

The cashless method is a system where all transactions no longer use cash but through electronic media such as debit cards and virtual wallets (Marlinah, 2016). Similarly, cashless payment refers to financial transactions in which customers conduct financial transactions, primarily by using cards or electronic methods (Bilińska-reformat and Kieżel, 2016). With the advent of Internet, means of payment system has assumed a different dimension, as cashless economy is progressively replacing paper money and coins (Agbo and Agbo, 2016). Customer satisfaction is defined as a collection of outcomes of perception, evaluation and psychological reactions to the consumption experience with a product or service. Steve (1996) defined that electronic payment is a system that is automated through the use of information technology where bank transactions are done within and without banking halls and not necessarily the customer's branch.

The benefits of acceptance of cashless economy include reduction in corruption and the cost of services by banks (such as cost of credit), improved operational efficiency, improved financial inclusion, via providing substitutions that aid easy transactions and greater reach, and enhanced efficiency of the monetary policy in managing the level of inflation and driving the growth of the economy (Atanda and Alimi, 2018). Cashless policy is the new innovation in the banking sector that was brought about by our quest for digitalization and evolution of the payment system. Atanda and Alimi (2018) argued that cashless economy as an economy where spending of money is not dependent on the carriage of money from one person to the other. Moreover, the cashless policy encourages the use of electronic banking tools instead of cash. Chibueze *et al.* (2013) opines that electronic delivery channels include internet banking, smart card banking (the use of ATM machine) and mobile or telephone banking allows individuals to check their account balances and make fund transfers using their mobile phones. Online banking is a method that uses the internet to enable financial

transactions to be carried out by clients and the customer can check on accounts balance or perform other activities at any time through online banking (Shih and Fang, 2004).

E-commerce has provided new opportunities for the adopters and also enabled them to withstand in national and international business markets (Ghobakhloo *et al.,* 2011). It has emerged as a major base for global economic growth and proved that it has the potential to change the economic and social structure of the countries (Jardim-Goncalves *et al.*, 2012). Hernández-García *et al.* (2011) revealed that the models designed by following the strategies aiming at the behavior of the customers can be of more help to understand the nitty-gritties of the customer behavior towards e-commerce. In developing countries, cost involved with internet service management and infrastructural issues have been identified as challenges that affect the widespread adoption of e-commerce (Egbokhare *et al.*, 2011). According to Rawat and Sharma (2023), rapid advancements in digital technology and its applications have improved people's lives and increased the prosperity of organizations. Similarly, Zhou (2022) stated that digital payment market is "a gradual or abrupt shift in an economic development payment service from the use of physical currency to the system. In addition, cashless payment means any type of electronic payment that is made without using physical currency (Sreenu, 2020).

According to Omotunde *et al.* (2013), cashless economy is an economy where transaction can be done without necessarily carrying physical cash as a mean of exchange of transaction but rather with the use of credit or debit card payment for goods and services. A 'cashless' system, also known as an electronic payment system, is a concept of the use of mobile banking and online shopping encourages the customers to buy more without caring the hard cash available with them at the time of purchasing (Farida and Subroto, 2019). The customers can perform various banking services with the help of internet at any time at any place (Hawaldar *et al.,* 2017). Moreover, electronic banking is expected to affect the operations and performance of small and medium scale enterprises in a form of transactional convenience, saving of time, quick transaction alert and cost saving (Aliyu, 2012).

In the context of Nepal, E-commerce was initially started introduced in 1999, with the concept of shipping presents and gifts, allowing Nepalese travelling overseas, particularly in the United States, to give presents to friends, loved ones and relatives (Malla, 2018). 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 (Nongkoo and Hamanee, 2023). The awareness and adoption rate of cashless transactions among university students in Nepal is not well documented (Ranabhat *et al.,* 2023). In Nepal, mobile wallets such as Khalti, eSewa, and IME Pay are some of the popular digital payment services that have been adopted by people (Budhathoki, 2020).

The above discussion shows that empirical evidences vary greatly across the studies on the consumer satisfaction and expectations towards the cashless transaction on business. 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 impact of cashless transaction on business: A case of Kathmandu Valley. Specifically, it examines the relationship of security, ease of use, fastest transaction, perceived benefit, and accessibility with consumer satisfaction

and expectations towards the cashless transaction on business.

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 the primary data which were collected from 129 respondents through questionnaire. The study employed convenience sampling method. The respondents' views were collected on security, ease of use, fastest transaction, perceived benefit, accessibility, and customer satisfaction. This study is based on descriptive as well as causal comparative research designs.

The model

The model used in this study assumes that customer satisfaction depends upon cashless transaction on business. The dependent variable selected for the study is customer satisfaction. Similarly, the selected independent variables are security, ease of use, fastest transaction, perceived benefit, and accessibility. Therefore, the model takes the following form:

Customer satisfaction = f (security, ease of use, fastest transaction, perceived benefit, accessibility)

More specifically,

$$CS = \beta_0 + \beta_1 S + \beta_2 FS + \beta_3 PB + \beta_4 EOU + \beta_5 A + e$$

Where,

CS = Customer satisfaction

S = Security

FS= Fastest transaction

PB= perceived benefit

EOU = Ease of use

A = Accessibility

Customer satisfaction was measured by using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly agree and 5 for strongly disagree. There are 5 items and sample items include "I am satisfied with my experience when using cashless transactions at this business", "I feel more satisfied with this business when I receive incentives or rewards for using cashless transactions" and so on. The reliability of the items was measured by computing the Cronbach's alpha ($\alpha = 0.768$).

Perceived benefit was measured by using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly agree and 5 for strongly disagree. There are 5 items and sample items include "Cashless transactions offer various benefits; such as rewards or cashback incentives", "I feel more in control of my spending when using cashless transactions" and so on. The reliability of the items was measured by computing the

Cronbach's alpha (α = 0.777).

Security was measured by using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly agree and 5 for strongly disagree. There are 5 items and sample items include "I feel confident in the security measures of cashless transactions", "I trust that my financial information is safe during cashless transactions" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.759).

Ease of use was measured by using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly agree and 5 for strongly disagree. There are 5 items and sample items include "Cashless transactions are convenient for me to use in my daily life", "Using cashless transactions saves me" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.762).

Accessibility was measured by using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly agree and 5 for strongly disagree. There are 5 items and sample items include "Cashless transactions are easily accessible to me wherever I go", "I consider the availability of cashless payment methods when selecting a place to shop or dine" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.745).

Fastest transaction was measured by using a 5-point Likert scale where the respondents were asked to indicate the responses using 1 for strongly agree and 5 for strongly disagree. There are 5 items and sample items include "Cashless transactions enable quicker payment processing compared to cash", "I prioritize cashless transactions because they help me save time during transactions" and so on. The reliability of the items was measured by computing the Cronbach's alpha (α = 0.752).

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

Security

Security is the ability of the website to protect customers' private information that is shared during online transactions from unauthorized use or disclosure (Belanger *et al.*, 2002). customer satisfaction is greatly influenced by their perceptions of security and trust. Similarly, Putra and Sfenrianto (2020) demonstrated that a good payment system's security factor and speed influenced customer satisfaction in the digital payment method. Likewise, Nizam *et al.* (2019) found that companies and customers avoid e-commerce operations for several reasons, and security is one of the key reasons. Moreover, Li *et al.* (2020) found that cloud computing, security, e-learning, and quality of service are four significant factors that affect customer satisfaction in e-banking services. Furthermore, Ling *et al.* (2016) revealed that service quality, privacy and security, content and web design, speed, and accessibility influence customer satisfaction. Just the same, Murugiah and Akgam (2015) revealed that security has a positive impact on customer satisfaction. Based on it, this study develops the following hypothesis:

H_1: There is a positive relationship between security and customer satisfaction.

Ease of use

Made *et al.* (2021) stated that ease of use factor is the degree to which customers feel the information system is easy to use and does not require much effort to use, ease of use is also interpreted as a belief about the decision-making process and purchase intentions. Similarly, Phuong *et al.* (2020) found that customer satisfaction intervenes in the relation between perceived ease of use and perceived usability with continuance intention on the e-wallet platform in Vietnam. In addition, Hammoud *et al.* (2018) revealed that perceived ease of use is one of the most important factors in creating customer satisfaction. Likewise, Putra and Raharjo (2021) found that ease of use has a positive impact on customer satisfaction. In addition, the factors that influence the adoption of QRIS through mobile banking applications for non-cash transactions in Indonesia. Additionally, Nadia *et al.* (2021) considered that ease of use of applications is an important reason for customers to reuse a technology system that makes things easier for them. Based on it, this study develops the following hypothesis:

H_2: There is a positive relationship between ease of use and customer satisfaction.

Fastest transaction

Ahmad and Al-Zu (2011) stated that speed can be defined as the frequency of network connection breakdown, the time to navigate the Internet banking website, the amount of time that the customer spends for page response, and the rate that banks response to the complaint of customers. Similarly, Shariq (2006) showed a positive relationship between the speed to load Internet banking website and customer satisfaction. Putra and Sfenrianto (2020) concluded that a good payment system's security factor and speed influenced customer satisfaction in the digital payment method. Moreover, Roozbahani *et al.* (2015) found that speed and efficiency have a significant correlation with E-payment tools and customer satisfaction. Furthermore, Jahan *et al.* (2020) found that transaction speed is a critical factor affecting customer satisfaction with digital wallets. Analogously, Raji *et al.* (2021) revealed that security, transactional speed, ease to use, reliability, and responsiveness significantly and positively influenced customer satisfaction. Based on it, this study develops the following hypothesis:

H_3: There is a positive relationship between fastest transaction and customer satisfaction.

Perceived benefit

Customer value addition in an online technology environment can be defined as the value received, which is perceived as worth what is paid for, based on relative performance and utility of a technology (Varki and Mark, 2001). Likewise, Imran *et al.* (2020) revealed that good quality is closely related to customer satisfaction because perceived benefits are important for e-wallet users to use and reuse a technology system. Similarly, Alhakami and Slovic (1994) stated that perceptions of benefit and risk are inversely related and psychologically linked to customers' overall affective evaluation of activity or technology. In same way, Lee *et al.* (2021) showed that the perceived benefits vary on the basis of product consumption state and customer's preferences and choices. Furthermore, perceived benefits that customers receive are generally determined as the sum of the advantages that satisfy the needs and wants of customers (Trentin *et al.* 2014). In addition, Plewa *et al.* (2015) argued that the perceived benefits of customers are equivalent to the value-in-use, which come from customers' evaluation of the specific attributes and the quality of the products or services.

Furthermore, Putra and Raharjo (2021) concluded that perceived benefits are closely related to user satisfaction because perceived benefits are the main concern for users in using and reusing a technological system. Based on it, this study develops the following hypothesis:

H_4: There is a positive relationship between perceived benefit and customer satisfaction.

Accessibility

Patricio *et al.* (2003) defined that the speed of operations, ease of use and accessibility are the strong predator of customer satisfaction. Furthermore, Selviasari and Dewi (2022) expressed that customer responses to pricing are influenced by knowledge and details regarding product or transaction prices, as well as accessibility. In addition, Holmes *et al.* (2013) asserted that highly involved customers use smartphones to shop since they value the accessibility and convenience. Likewise, Alzoubi *et al.* (2020) stated that service quality is the degree to which execution, accessibility, and reliability of a certain application is offered to the customer. Additionally, Haadi and Ajibola (2018) revealed that customers are satisfied with e-banking due to its cashless nature, cash accessibility, saves time from bank visitation and seamless transactions. Moreover, Roy (2017) found that fear of internet frauds and perception of insecure online transactions discourage people to use cashless payment options. The study also found that due to availability, convenience, easy accessibility and understanding e-payment services can be used by all types of customers, even physically challenged. Based on it, this study develops the following hypothesis.

H_5: There is a positive relationship between accessibility 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 correlation coefficients are based on 129 observations. The dependent variable is CS (Customer satisfaction). The independent variables are S (Security), EOU (Ease of use), FS (Fastest transaction), PB (Perceived benefit), and A (Accessibility).

Variables	Mean	S.D.	CS	S	EOU	FS	PB	A
CS	1.808	0.367	1					
S	1.944	0.351	0.101	1				
EOU	1.915	0.349	0.222**	0.294**	1			
FS	1.950	0.441	0.383**	0.213**	0.410**	1		
PB	1.888	0.388	0.317**	0.236**	0.320**	0.356**	1	
A	1.847	0.348	0.262**	0.274**	0.267**	0.304**	0.386**	1

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

Table 1 shows that security is positively correlated to customer satisfaction. It indicates

that higher the security of cashless transaction leads to increase in customer satisfaction. Similarly, ease of use is positively correlated to customer satisfaction. It indicates that higher the ease of use, higher would be the customer satisfaction. Likewise, fastest transaction is positively correlated to customer satisfaction. It indicates that quick transaction leads to increase in customer satisfaction. Further, perceived benefit is also positively correlated to customer satisfaction. It indicates that individual's belief that specific positive outcomes will result higher the customer satisfaction. In addition, accessibility is positively correlated to customer satisfaction. It indicates that higher the accessibility of cashless transaction and digital payment on business, higher would be the customer satisfaction.

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 speed, features, cost, reliability, and availability on customer satisfactions.

Table 2

Estimated regression results of security, ease of use, fastest transaction, perceived benefit, and accessibility on customer satisfaction

The results are based on 129 observations using linear regression model. The model is $CS = \beta_0 + \beta_1 S + \beta_2 EOU + \beta_3 FS + \beta_4 PB + \beta_5 A + e$ where the dependent variable is CS (Customer satisfaction). The independent variables are S (Security), EOU (Ease of use), FS (Fastest transaction), PB (Perceived benefit), and A (Accessibility).

Model	Intercept	Regression coefficients of					Adj. R_bar^2	SEE	F-value
		S	EOU	FS	PB	A			
1	1.105 (6.424)**	0.361 (4.151)**					0.113	0.34565	17.232
2	0.903 (5.565)**		0.473 (5.670)**				0.196	0.32905	32.153
3	0.92 (7.442)**			0.455 (7.366)**			0.294	0.30833	54.263
4	0.754 (5.776)**				0.558 (8.234)**		0.343	0.29742	67.806
5	0.878 (5.681)**					0.503 (6.119)**	0.222	0.32372	37.44
6	0.733 (3.939)**	0.171 (1.808)	0.388 (4.079)**				0.21	0.32615	17.998
7	0.617 (3.521)**	0.115 (1.296)	0.151 (1.471)	0.347 (4.508)**			0.315	0.3037	20.612
8	0.481 (2.853)**	0.053 (0.623)	0.07 (0.708)	0.215 (2.713)**	0.355 (4.085)**		0.391	0.28626	21.571
9	0.437 (2.531)**	0.023 (0.263)	0.063 (0.641)	0.179 (2.093)*	0.339 (3.863)**	0.117 -1.15	0.393	0.28589	17.567

Notes:

i. Figures in parenthesis are t-values.
ii. The asterisk signs (**) and (*) indicate that the results are significant at one percent and five percent level respectively.
iii. Customer satisfaction is dependent variable.

The regression results show that the beta coefficients for security are positive with customer satisfaction. It indicates that security has a positive impact on customer satisfaction. This finding is consistent with the findings of Nizam *et al.* (2019). Similarly, the beta coefficients for ease of use are positive with customer satisfaction. It indicates that ease of use has a positive impact on customer satisfaction. This finding is consistent with the findings

of Putra and Raharjo (2021). In addition, the beta coefficients for fastest transaction are positive with customer satisfaction. It indicates that fastest transaction has a positive impact on customer satisfaction. This finding is consistent with the findings of Jahan *et al.* (2020). Further, the beta coefficients for perceived benefit are positive with customer satisfaction. It indicates that perceived benefit has a positive impact on customer satisfaction. This finding is consistent with the findings Plewa *et al.* (2015). Moreover, the beta coefficients for accessibility are positive with customer satisfaction. It indicates that accessibility has a positive impact on customer satisfaction. This finding is consistent with the findings of Roy (2017).

4. Summary and conclusion

A cashless society describes an economic situation in which financial transactions are not conducted with money in the form of physical banknotes or coins, but with digital information (usually an electronic representation of money) between the transacting parties, a transfer takes place. Payments would make it easier to trace down errant funds. Businesses, banks, and the general public in India would all benefit from this. In addition, he drew attention to the importance of electronic payments and communication networks throughout his remarks. Electronic payments bring a lot of other advantages in addition to ease of use and security. Management of cash in organizations involves the process of receiving and paying money for services rendered or received. The phenomenal growth of Internet shopping is driven by greater emphasis on consumers' efficient use of time, together with an increasing number of computer trained consumers. Similarly, maintaining business relationships and selling information, services and commodities by means of computer telecommunications networks. The use of the Internet, the Web and apps to transact business. More formally, digitally enabled commercial transactions between and among organizations and individuals.

This study attempts to examine the impact of cashless transaction on business: A case of Kathmandu Valley. The study is based on primary data of 129 respondents.

The major conclusion of the study is that security, ease of use, fastest transaction, perceived benefit, and accessibility have positive impact on customer satisfaction. It indicates that higher the security, ease of use, fastest transaction, perceived benefit, and accessibility, higher would be the customer satisfaction. The study also concludes that perceived benefit is the most significant factor followed by ease of use that determines the customer satisfaction.

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