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Users' Behavioral Intention to Use E-Payment Service in Nepal: Based on SEM Analysis

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Abstract

Background: Digital payments were revolutionized after 1990 in Nepal's payment system, and the rise of ICT and mobile tech since 2010 led customers to embrace e-payments. While e-payment adoption grows, progress is needed to make bank cards default for online purchases and enhance user awareness and trust for secure digital transactions. Further, understanding user perspectives and influencing factors is crucial.

Objectives: This study aims to analyze the intention of users to use e-payment services in the Nepalese context.

Methods: Explanatory research design is used to meet the purpose of the study. A total of 295 respondents were selected as users of the e-payment services are increasing and there is no exact number of users identified. A structured questionnaire was developed and a pretest was carried out on 10% of the sample. Data is collected from the survey through the structured questionnaire and used the Kobo Toolbox and Interviewed from Key Informants Interview (KII) method.

Results: The study shows mobile banking users are highly increasing yearly, followed by internet banking with growing users. The SEM result depicts the significant relationship between behavioral intention on user satisfaction ($\beta = 0.191$, $P < 0.05$), perceived usefulness ($\beta = 0.099$, $P < 0.05$), perceived ease of use ($\beta = 0.084$, $P < 0.05$), social influence ($\beta = 0.064$, $P < 0.05$) and perceived credibility ($\beta = 0.096$, $P < 0.05$). Furthermore, improved credibility and ease in e-payment functions can enhance customer satisfaction.

Conclusion: The study concluded that Perceived Credibility (PC), Perceived Usefulness (PU), Perceived Ease of and Social Influence (SCI) have an impact on user satisfaction and Behavioral Intention (BI) to use the e-payment system. Additionally, User Satisfaction was also found to be related to Behavioral Intention (BI) to use an e-payment system.

Keywords: E-payment, Nepal, structural equation modeling, user behavior intention,

JEL Classification: C5, E5, E42, G2, Q55,

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Introduction

In the last few years, the exponential expansion in ICTs has dramatically changed the business world (Devkota & Phuyal, 2018; Devkota et al., 2023) resulting rapid emergence of electronic trade (EC). It was emphasized that e-commerce has now reached a stage of change in the development of revolutionary ideas (Kaynak, Tatoglu, & Kula, 2005; Parajuli et al., 2021). Various nations of Asia Latin America, and Central and Eastern Europe have already emphasized that the changes in payment systems are the prerequisites to economic development (Khiaonarong, 2000). However, Nepal's history of payment systems dates back to two and a half centuries. (Maharjan et al., 2022). One of the important steps in encouraging people to move from cash to paper payment methods was the introduction of the NRB Clearing House. Further fastest growing mobile phone technology after 2010 along with another mode of digital payment gateway allures customers to e-payment systems (Dhungana et al., 2022). However, e-payment is visibly found to be accelerated after COVID-19 in Nepal (Tamang et al., 2021).

People's daily life is becoming more digital nowadays. Their purchasing habits have evolved from going to physical stores to shopping online, and they now use seamless in-app electronic payment experiences (E-payments), which can be made using QR codes at the point of sale (POS) or cash at physical stores. E-payments have had a significant social impact (Yu & Chung, 2022). Because of the exponential rise of the online economy in recent years, it is critical to pay for open networks. The potential for operational efficiency, convenience, privacy protection, and direct client access regardless of the region would lead to significant expansion in electronic payment (Karki et al., 2021). Regardless of the rise in e-payment systems cyber threats and vulnerabilities are also increasing, and the Nepalese payment system providers present a very tough problem of data privacy and security breaches.

As the study aims to analyze individuals' behavioral intention to use an e-payment system, The Theory of Planned Behavior (TPB) behind the Theory of Reasoned Action (TRA) initiative was effective in predicting and explaining human behavior through different information technology (Ajzen, 2002). According to the TPB, the actual performance is affected directly by the behavioral intent of an individual in performing those acts, and in effect, is determined collectively by his behavioral attitude, subjective laws, and perceived behavioral controls (Lee, 2009). Based on TRA's efforts the TPB is proposed to overcome the limitations on actions that persons have inadequate volitional control of the primary model (Ajzen, 1991). Essentially, TPB is distinct from TRA by the inclusion of a perceived behavior control aspect. The considerations of this theory to research compliance and consumer experience in the TPB theory e-payment system are taken into account in relation to all those benefits. Further, the conceptual framework is also then based on this theory as the variables used to construct the framework of this study are extracted from this theory. The result of the SEM shows a significance relationship between social influence, perceived usefulness, perceived ease of use, and perceived credibility in user behavior intension. This result indicates that for e-payment adoption, users consider usefulness,

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credibility, friend recommendations, and ease of use.

Though in the Kathmandu valley digital payments are quickly distributed as being capital of the nation, consumers elsewhere are slowly becoming acquainted with electronic payment (Bhandari et al., 2021). While the breach has narrowed due to the initiatives of multiple banks and all e-payment service providers there is still a ton of progress to be made to ensure that bank cards and e-payment platforms are allowed by default for online purchases and to inform consumers about the secure digital use of their debit or credit cards or e-payment portals (Devkota et al., 2021a). The user's view of e-payment systems in Nepal therefore needs to be recognized and the factors that influence their decision to use cashless payment need to be defined. This is a significant concern since the response offers an indicative framework for designing marketing plans for the banking sector and e-payment solutions providers, to support future emerging modes of online transactions facilities.

Nepal has 63 percent internet penetration, according to the Nepal Telecom Authority (NTA). There is an enormous difference between internet penetration and financial exposure for consumers. Financial exposure is only 61 percent of which is officially banked at only 40 percent, with 21 percent using other structured outlets (Dahal, 2018). There are growing unaffected authentication and approval problems in every transaction in terms of flexibility offered by online shopping and e-payment (Dangol & Kautish, 2019). The risks of cyber threats and vulnerabilities are growing, and the Nepalese bank payment system poses an exceptionally difficult problem of data privacy and security breaches. Informative security and safety are the greatest challenges facing banks all over the world today. If you talk of cybersecurity "cybercrime" is the first thing that is on the rise. In addition to several initiatives, cybersecurity is a matter of great concern to many people. Government and private companies take several steps to avoid cybercrime (Dangol & Kautish, 2019). Thus, this paper then focuses on determining all the factors that may have an influential effect on the e-payment system of Nepal and the people’s perception towards it.

Limited research was conducted in Nepal with respect of these new situations in the e-payment system. It can also be seen from the literature review that only limited variables are taken into account for that kind of study. Therefore, this study seeks to cover all relevant fields which had to be examined in order to improve Nepal's recent e-payment system and to provide the related parties with significant relevant steps. While previous studies explored the acceptability of e-payment services, most studies were carried out in developed countries and only a few studies concentrated on the context of developing and underdeveloped countries. And our country is on the verge of being underdeveloped nations and electronic payment on the other is more likely to make a contribution to the overall economic growth; hence, this subject must also be studied in context of our country.

This study is structured into four sections. The second outlines the research methods, including the research design, conceptual framework, hypotheses, variables, sample size, research instruments. The next third section presents the analysis and discussion of the study's results. Finally, the last section

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presents a discussion and conclusion of the study.

Review of Literature

According to TPB, the actual conduct of a person in the execution of certain actions is directly influenced by his behavioral intention, and his or her attitude, subjective standards and perceived behavioral controls to perform the behavior are determined jointly by him or her (Lee, 2009). The purpose to conduct is a measure of one's willingness to make an effort when carrying out certain behavior. In the last ten years, the IT use and adoption of e-service was widely used in tandem with TAM and TPB (Davis, 1993; Hsu, 2004; Hsu et al., 2006).

Theory of Planned Behavior was developed by Icek Ajzen in 1985. The framework assumes that a person's intention to adopt Internet banking is determined by three components which include: (1) attitude, which describes a person's impression towards online banking; (2) subjective norms, which describes the social impact or say influence that may affect a people's intention to use online banking; and (3) perceived behavioral control, which describes the people's beliefs about need of required resources and scopes to accept online banking (Margaret Tan, 2000). Grounded on the exertion of TRA (Theory of Reasoned Action), TPB is proposed to remove the limitations of the real model in handling with behavior over which people have incomplete voluntary control and in substance, TPB differs from TRA in that it senses that it has the additional factor of perceived behavior control (Lee, 2009). The theory of planned behavior, an extended form of TRA, approaches the limitations of the original model when it comes to conduct over which people have incomplete willingness to control. A third element, perceived behavioral control (PBC), also impacts behavioral intentions and actual behavior beside attitudinal and normative influence.

The theory of reasoned measures is unqualified for predicting situations in which people have low will control. The TPB contains Ajzen (1991) as a background to behavioral intentions for removing this limitation perceived behavioral control (PBC). In the TPB, therefore, such actions are dictated by the intention of an individual to do so, and in turn by attitudes, social norms (SN) and PBC. PBC is described as "people's perceptions of their capacity to perform a certain behaviour." Empirical evidence shows that PBC increases intentions. Subjective norms(SN) mean perceived conduct constraints that are important for what others say or do (Ajzen, 2015).

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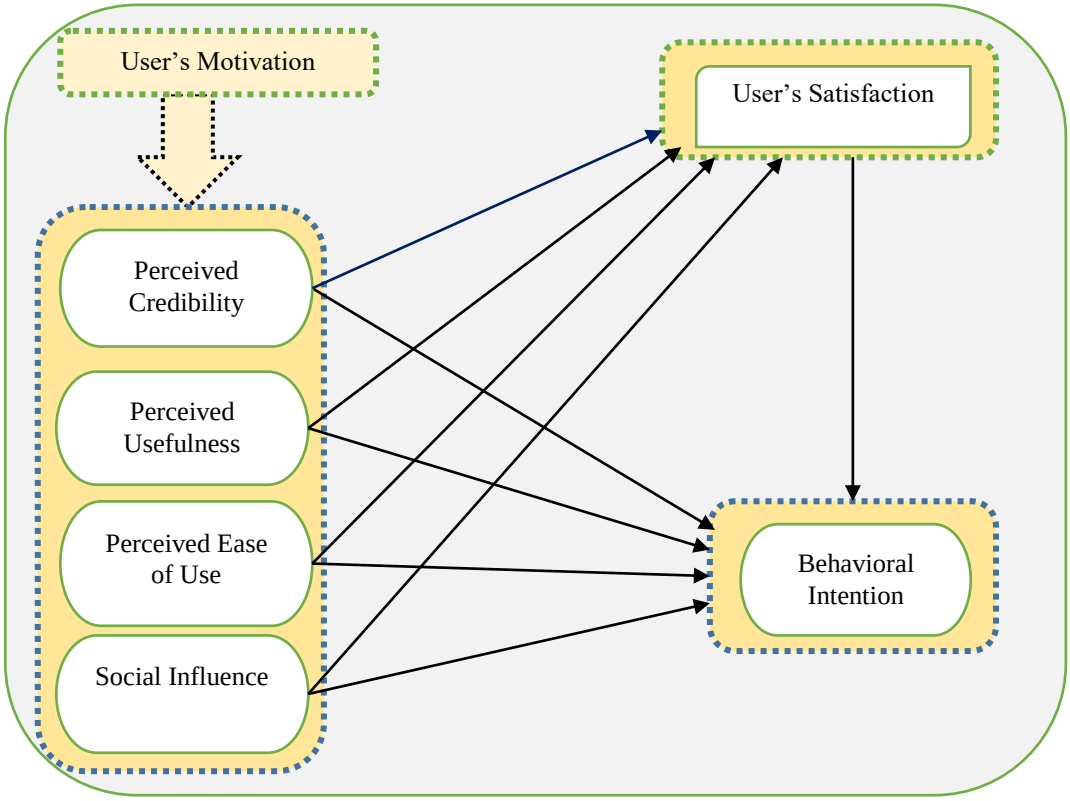
Figure 1

Conceptual Framework



In the conceptual framework as shown in figure 1, the TPB indicates that behavioral intent, which is influenced by subjective norms, attitudes to actions, and perceived behavioral control, is a key factor in individual action. Subjective norm (SN) means a person who seeks to conduct an organizational or peer stigma in relation to perceptions about others' assumptions. Perceived behavioral control (PBC) is the understanding of the easiness of a given conduct based on belief that controlling factors may make its performance easier or less difficult (Lin et al., 2015).

Satisfaction

User satisfaction was described by someone who communicates directly with the application as an effective attitude towards a particular computer application(Dianat, Adeli, Asgari, & Ali, 2019). The satisfaction with e-payment is to the degree to which the individual's attitude affects the difference between the e-payments perceptions and expected results. In the sense of online banking, consumer loyalty serves as a core determining factor of profitability and banks prefer to use various media to tailor goods and services to suit customer requirements (Sikdar, Kumar, & Makkad, 2015). This study then tests following hypothesis as:

H_{01}: There is no significant relationship between user satisfaction and behavioral intention to use e-payment service.

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Perceived Usefulness

The perceived usefulness of a person is specified in terms of the degree to which the use of a program enhances the work efficiency of that person (Hackney, 2010). The belief of the person that the use of new technology can enhance or boost his/her efficiency is known in other words as usefulness The core purpose users use e-payment systems is that they find their financial transfers beneficial using e-payment systems. This research thus attempts to check the following hypothesis:

H_{02}: There is no significant relationship between perceived usefulness and behavioral intention to use e-payment service.

H_{03}: There is no significant relationship between perceived usefulness and satisfaction.

Perceived Ease of Use

Perceived ease of use (PEOU) is the degree to which a person thinks that it is effortless to use a program (Salamat & jaffer, 2011) . The perceived ease of use shows how easy a program is for the user to use. It is the degree to which a person recognizes it as valid, in other words that the use of a difficult approach is at no cost to that person. The TAM model of Davis (1989) has been shown to be a phenomenon, as several surveys have shown that perceived ease of use and usefulness lead to the universal adoption of e-payment systems. Further, this study hypothesizes that the perceived ease of use doesn't have significant relationship with the behavioral intention and satisfaction.

H_{04}: There is no significant relationship between perceived ease of use and behavioral intention to use e-payment service.

H_{05}: There is no significant relationship between perceived ease of use and satisfaction.

Social Influence

Social influence is characterized as the extent to which an individual perceives the use of the new system by other important people. The role of social influences is complex and is subject to various contingent influences in technology acceptance decisions (Zhou, 2011). Three processes have an impact on social behavior: enforcement, internalization, and recognition. Through prior study also it was found that the social influence have impact on the behavioral intention to use e-payment system (Junadi & Sfenrianto, 2015; Nustini & Fadhillah, 2020). Then, this study purpose following hypothesis:

H_{06}: There is no significant relationship between social influence and behavioral intention to use e-payment service.

H_{07}: There is no significant relationship between social influence and satisfaction.

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Behavioral Intention

Behavioral intent implies the willingness of a person to execute the behavior assigned, which allows it the primary indicator of the real actions (Alsajjan & Dennis, 2010). The measurable response of a person in a given situation to a given objective is known as behavioral intention. According to Ajzen the behavior, the effect of intent on actions is dependent on compatible expectations and perceptions of behavioral control so a beneficial purpose only results if the behavior is strongly regulated.

Perceived Credibility

Perceived credibility applies to the two significant aspects (safety and confidentiality) which most researchers claim impact the intention of consumers to accept electronic payment systems (Lin et al., 2015). Important elements of the decision to use an Online banking platform were described as perceived legitimacy. In a broad sense, their voluntary acceptance of Internet banking systems is affected by the perceived credibility that individuals hold in the mechanism in order to securely confirm their transactions and retain the confidentiality of their personal details (Wanget al., 2003). In this sense, effective communication is important (Shrestha et al., 2020). The following hypothesis is proposed by these outcomes:

H_{08}: There is no significant relationship between perceived credibility and behavioral intention to use e-payment services.

H_{09}: There is no significant relationship between perceived credibility and satisfaction.

The undertaken variables for this study are social influence, perceived ease of use, perceived usefulness, perceived credibility, behavioral intention, and satisfaction. Table 1 shows the constructs and items undertaken for the study.

Table 1

Variable Construct

Construct	Variables	Description
Social Influence	Important people views	Many people who matter to me say I should use e-payment.
	Expectation	The e-payment is supposed to be used by me.
	Important	In my opinion, it is necessary for all to use e-payment in society.
	Opinion	Those whose opinions I respect expect mobile payment to be used.
	Influencer	Those who influence my actions claim my mobile payment should be used.
Perceived Ease of Use	Structure and contents	It is easy to understand the structure and content of the website.

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	To become skillful	It is easy for me to use e-payment services with expertise.
	Learning to use	It is easy to learn how to use an e-payment.
	Flexibility	When I make e-payments, I feel flexible
	Various payment channels	E-payment provides different wallet platforms to make my shopping online easier.
	Effort	When I make an e-payment, less effort is required.
Perceived Usefulness	Search for a mode of payment	E-payment will improve my quest for the payment method I like.
	Time minimization	E-payment lowers my payment period to a minimum.
	Better payment	E-payment helps me to make better decisions about payment.
	Level of productivity	Using e-payment services adds to my productivity.
	Effectiveness	Having an e-payment service enhances my ability to make various payments.
Perceived Credibility	Security concern	If I make an e-payment system, I am worried about privacy or security.
	Influence of security	Security issues affect me considerably by the use of an e-payment system
	Access of information	I assume that the other party (who is not allowed) is unable to access the information I provide during e-payment transactions.
	Trustable software	Trustworthy software ensures secure payment methods.
	Protection	If the program is protected by the new know-how (singularity, skill, or abilities), I shall use e-payment.
	Associated risk	I feel that e-payment system-related risks are minimal.
	Fraudulent transactions	I am comfortable with e-payments that do not lead to fraud in the transaction.
Behavioral Intention	Sign-up availability	If it is possible to register for an e-payment service, I will suggest it to my family and friends.
	Experience	If I have a good experience with e-payments, I recommend friends and family subscribe to the service.
	Financial Transactions	I'd do some research via electronic payment to connect to my financial account.

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	More use	I will try to make more use of e-payments in my daily life.
	Decision	I assume it's a nice and good idea to use e-payment services.
Satisfaction	Transaction processing	I am satisfied with the transaction processing of the online payment system.
	Safety aspects	I'm pleased about the safety aspects of the website for online payments.
	Overall experience	I have had a good overall experience with this platform.
	Ability	I am able to use the e-payment system.
	Choice	I think I've been using this platform to the right choice.

Materials and Methods

Our study used an Explanatory research design and was conducted in Kathmandu Valley which is located between the latitudes 27 ° 32'13 "and the latitudes 27 ° 49'10" to the North and the range 85 ° 11'31 "and 85°31’38” to the east, at a height of 1,300 meters above the sea level. It has an area of 899 square kilometers, with three areas, Kathmandu, Lalitpur, and Bhaktapur, and the entire valley has an area of 665 square kilometers (Paudel et al., 2020).

In 2075/76, there was a 64% rise in the number of mobile banking subscribers, to 8347187. Moreover, the number of subscribers to online banking grew 10% and rose to 344 917. The rise of mobile banking is promising and indicates that mobile payment services are favored by people. As the users of the e-payment services are increasing there is no exact number of users identified that can be stated population for the study. Hence, it is considered that all of the individuals who use e-payment services to make various payments are considered as the population in this study.

However, the sample size was determined from the formula; n= z^2pq/l^2 (Devkota et al., 2021a). Where n_0= sample size for study, Standard tabulated value for 5% level of significance (z) = 1.96, Prevalence or proportion of an event 50% = 0.50, p= 0.5, q =1-P, = 0.5, Allowable error that can be tolerated (e) = 6%. This study also undertakes a 5% non-response error. Thus, the sample size taken for the study was 280. Further, a simple random sampling technique was used in order to select a sample for the study. Those individuals who use e-payment tools in various forms were taken as samples for the study.

The structured questionnaire was developed to have the survey from the customer who uses the e-payment system. In order to draw the appropriate outcome for this analysis, Likert scales (1-5), with indexes ranging from 'strongly disagree' to 'strongly agree' were employed for all queries. Key Informants Interview (KII) was carried out to ensure that the work carried out discussed field issues. Questionnaires have been exchanged with users of the Kathmandu Valley e-payment system. Pretest formulated questionnaires were taken on 10% of the sample before the data collection process began. A

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pilot study was carried out and after optimizing them the final survey and interview were taken from the respondents. The developed questionnaire was managed and collected through the KOBO Tool Box.

Data analysis in this study was carried out based on inferential analysis consisting of the modeling of structural equations based on various latent structures. The use of the data analysis and use of Microsoft Excel applications such as STATA and SPSS AMOS were conducted for the entry of data and research tabulation. The data analysis includes analyzing the determinants of users' perception of e-payment system. Factor analysis was carried out to analyze how the respondents to a variety of measured variables are affected by underlying constructs(Pett, Lackey, & Sullivan, 2011). Structural Equation Modeling (SEM) was conducted to analyze the data that was assumed before.

Result and Discussion

The survey was conducted among 295 participants. Among them, the composition of male and female were 59% of males and 41% of females respectively. The majority of respondents were between the age of 21-30 and the majority of the respondents of this study have completed their bachelor's level. The study shows that the highest number of users are the users of the mobile banking facilities, and the rate of the users is increasing as the year passes. The second highest used payment channel was then internet banking, and the users of internet banking are also increasing as the year passes.

Table 2

Socio-demographic Variables

Socio-demographic Variables	**No. of Respondents**
Sex:	
Male	174
Female	121
Age:	
Below 20	36
21-30	195
31-40	39
41-50	22
Above 50	3
Education Level:	
Uneducated	6
School Level	45
Intermediate	69
Bachelors'	111
Masters	59
Above Masters'	5

Source: Based on authors' calculation and field survey, 2023.

Summary Statistics

In order to measure mean, median and standard deviation, skewness, and kurtosis for the study, 295 respondents who use the e-payment system are observed and surveyed. Mean and standard deviation lie in the range from 3.5410 to 4.0123 and 0.53514 to 0.64648 respectively indicating the data have low

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scatteredness (See Table 2). To have the outcome of acceptance and unacceptance of normality, skewness, and kurtosis are applied with the value between -3 to +3 and -10 to +10 respectively (Kallner, 2018). Our result lies under the acceptable range. So, the assumption of normality is acceptable.

Table 3

Mean, Standard Deviation, Skewness, and Kurtosis Values of Indicators (n=244)

	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Indicators	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic
SCI1	1	5	3.79	.728	-1.001	2.551
SCI2	1	5	3.86	.737	-1.135	2.937
SC3	1	5	3.98	.785	-1.088	2.475
SC4	1	5	3.76	.715	-1.046	2.702
PEU3	1	5	3.74	.699	-.399	.647
PEU4	1	5	3.79	.680	-.585	1.147
PEU5	1	5	3.85	.713	-.528	.888
PU2	1	5	3.86	.716	-.541	1.288
PU3	1	5	3.73	.737	-.765	1.565
PU5	1	5	3.83	.705	-.597	1.464
PC1	1	5	4.02	.714	-.378	.386
PC3	2	5	4.00	.729	-.122	-.750
PC4	1	5	4.05	.749	-.443	.183
BI2	1	5	4.02	.679	-.498	1.143
BI4	1	5	3.91	.676	-.538	1.278
BI5	1	5	3.90	.696	-.752	2.022
SAT2	1	5	3.66	.716	-.150	.223
SAT3	1	5	3.64	.823	-.574	.908
SAT4	1	5	3.76	.711	-.307	.459

Source: Based on authors' calculation and field survey, 2023.

Exploratory Factor Analysis (EFA)

EFA is performed to establish the reliability and validity of the reduction obtained in order to determine the strength of the factor analysis solution (Chawla, 2016). Kaiser-Meyer-Olkin (KMO) sample consistency assessment and Bartlett's sphericity test are the methods used to assess if they are ideal for factor evaluation (Bailey, Pentina, Mishra, & Ben Mimoun, 2017) the dataset is accepted if KMO is >0.50 and BTS is <0.05. KMO and BTS values from our result are matched with the condition. So, we are assured the dataset has a good internal consistency and the data in the test are correlated. The bias in the study is found when the different variables respond the same while using the measurement methods. Harman's single factor test is applied to estimate the covariance of the data which works on finding out the biases in the data. Our result showed 36.073% of the cumulative percentage of single factor which is below 50% (Harman 1960). It represents dataset has no issues with biasness. Similarly, Cronbach's alpha was also examined so as to measure the internal consistency of all the constructs with minimum threshold value of 0.70 and all the values of Cronbach's alpha in the study were above 0.75

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(see Table 5) which indicates good internal consistency among variables. Likewise, only factor loading values greater than 0.5 are used to interpret the results. As a result, identical loading of all the indicators corresponding to the various constructs indicates that they all contribute to the same extent to the construct to which they belong.

Confirmatory Factor Analysis (CFA)

Confirmatory factor analysis (CFA) measures whether responses are affected in a projected manner by a given range of constructs (Pett et al., 2011). Various model fit indices (CMIND, RMR, GFI, CFI, TLI, IFI, and RMSEA) are used in the literature to resolve the model fit problem (Campbell & Campbell, 2016). As (Bentler 1990) our result meets all the criteria of (CMIND < 5, RMR <0.08, GFI>0.80, CFI>0.90, TLI>0.90, IFI>0.90, and RMSEA<0.08) (See Table 4). Hence, the model is a perfectly fit for the dataset as the dataset is acceptable with good fitting.

Table 4

Measures of Model Fit

Fit indicates	(CMIN/ DF)	RMR	GFI	CFI	TLI	IFI	RMSEA
Obtained Value	1.748	0.015	0.917	0.967	0.958	0.967	0.055
Decision for model fit	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent	Excellent

Source: Based on authors' calculation and field survey, 2023.

Measurement Model and Hypothesis Testing

The measurement model quantifies the relations between hypothetical frameworks that could perhaps be known but not measurable elements and observed variables that, in the form of a linear mixture, represent a particular imaginary construct (Lam & Maguire, 2012). In terms of convergent validity there are three criteria i.e.1) AVE>0.5, 2) CR >0.7, and 3) CR>AVE, and then for the discriminant validity there are two criteria i.e. 1) AVE>ASV & MSV and 2)$\sqrt{\text{AVE}} > \text{R}$ are examined (Akhlaq & Ahmed, 2013). All constructs have AVE> 0.5, CR> 0.7, and CR>AVE which has fulfilled the criteria for convergent validity and AVE>MSV and it then also fulfilled the criteria for discriminant validity (see Table 5).

Table 5

Reliability and Validity

Construct	Indicator	Factor Loading	CROANBACH ALPHA	CR	AVE	MSV
Social Influence	SCI_1	.898		0.880	0.711	0.131

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	SCI_2	.873	0.878			
	SCI_3	.843				
Perceived Ease of Use	PEU_1	.886				
	PEU_2	.830	0.859			
	PEU_3	.798		0.867	0.686	0.183
Perceived Usefulness	PU_3	.846				
	PU_4	.846	0.866			
	PU_5	.810		0.867	0.686	0.266
Perceived Credibility	PC_2	.777				
	PC_4	.775	0.756			
	PC_6	.802		0.758	0.512	0.266
Behavioral Intention	BI_1	.883				
	BI_2	.869	0.908			
	BI_5	.772		0.918	0.789	0.360
User's Satisfaction	SAT_1	.844				
	SAT_2	.869	0.915			
	SAT_4	.846		0.912	0.776	0.360

Source: Based on authors' calculation and field survey, 2023.

The study's reliability and validity, as illustrated in Table 5, meet the necessary criteria, with composite reliability and average variance inflation factor surpassing the required thresholds of 0.7 and 0.5. Moreover, the average variance extracted (AVE) was used to evaluate the model's convergent validity. The degree of relationship between the construct's items is demonstrated by convergent validity. An AVE value larger than 0.5 is a reliable sign of convergent validity. Every score was higher than 0.5. Every transaction exceeded the suggested threshold. Therefore, to meet the minimum acceptance level of AVE, some of the item's constructs were removed.

Table 6

Latent Construct Correlation

SEM correlations						
	SAT	PC	PU	PEU	SI	BI
SAT	**0.881**					
PC	0.391	**0.715**				
PU	0.335	0.516	**0.828**			
PEU	0.393	0.209	0.428	**0.828**		
SI	0.314	0.263	0.272	0.362	**0.843**	
BI	0.600	0.407	0.403	0.370	0.268	**0.888**

Source: Based on authors' calculation and field survey, 2023.

In Table 6, the latent construct correlation was used to assess discriminant validity, in order to determine how different one component in the model is from the other construct. Fornell and Lacker criterion or latent construct correlation was checked and satisfied as the square root of each construct's AVE has a greater value than the correlations of other latent constructs (Asyraf & Afthanorhan, 2013). Hence, this test was checked and satisfied. It can also be observed from the path model as shown in Figure 2.

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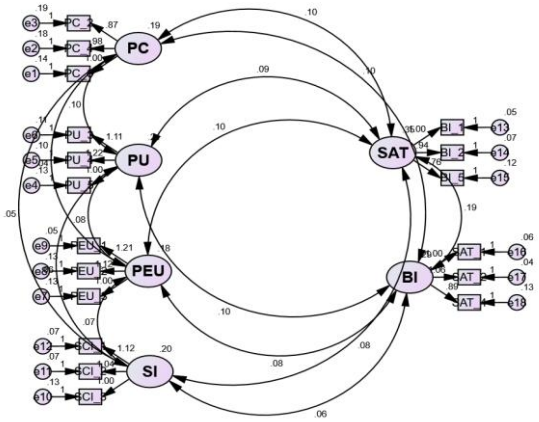
Figure 2

Structural Model



Test of Hypothesis

Hypothesis determines the relationship between the dependent and independent variable through the p-value which should be <0.05 to have a significance relationship (Leo et al., 2020). The relationship between the dependent and independent variables related to e-payment is formulated and tested. Table 7 shows the relationship of all the variables is significant as all the hypotheses have p-value < 0.05 which means the hypothesis is rejected.

Table 7

Path Estimates for Structural Model

Hypothesis	Relationship	Estimate	S.E.	C.R.	P	Significant/ insignificant
H_1	User Satisfaction → Behavioral Intention	.191	.026	7.381	***	Significant
H_2	Perceive Usefulness → Behavioral Intention	.099	.019	5.095	***	Significant
H_3	Perceived Usefulness → User Satisfaction	.091	.021	4.382	***	Significant
H_4	Perceived Ease of Use → Behavioral Intention	.084	.018	4.766	***	Significant
H_5	Perceived Ease of Use → User Satisfaction	.099	.020	5.009	***	Significant
H_6	Social Influence → Behavioral Intention	.064	.018	3.627	***	Significant
H_7	Social Influence → User Satisfaction	.083	.020	4.169	***	Significant
H_8	Perceived Credibility → Behavioral Intention	.096	.020	4.849	***	Significant
H_9	Perceived Credibility → User Satisfaction	.102	.022	4.692	***	Significant

Source: Based on authors' calculation and field survey, 2023.

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Mediation Analysis is a mathematical approach used to measure the causal series from which a mediating variable that affects a dependent variable is triggered by an intermediate variable. The Sobel test is used to analyze the mediating effect. Following the indicators set by Hayes (2009) our result showed a p-value is 0.000 <0.05 for all the relationships which shows a partial mediating effect by Satisfaction (SAT) in between the Perceived Credibility (PC) and Behavioral Intention (BI) (a= 0.444, b= 0.433), Perceived Usefulness (PU) and BI (a= 0.535, b=0.397), Perceived Ease of Use (PEU) and BI (a=0.490, b=0.432), Social Influence (SCI)) and BI (a= 0.420, b= 0.498). The mediation effect is presented in Table 8.

Table 8

Result of Indirect Effect and Sobel Test Examining the Mediating Relationship

Relations			Mediating Effect		Test Statistic	p-value
			B	s_b		
PC→ **SAT → BI**	A	0.444	0.433	0.050	5.86035	0.00***
	s_a	0.05				
PU → SAT → BI	A	0.535	0.37	0.052	5.79927	0.00***
	s_a	0.06				
PEU → SAT → BI	A	0.490	0.432	0.051	5.72902	0.00***
	s_a	0.063				
SI → SAT → BI	A	0.420	0.498	0.051	5.50584	0.00***
	s_a	0.063				

Source: Based on authors' calculation and field survey, 2023.

This study analyzed individuals' behavioral intention to use e-payment services in Nepal. Overall, the findings have almost supported much of the relationships formed. The essential impact of perceived utility, credibility, ease of use, and social influence on behavioral intentions to use e-payment systems is examined. This study finds that 95% of total respondents have knowledge of the e-payment system, of which the awareness hangs down further reflecting that the awareness level of the e-payment system in Nepal is gaining betterment. Nustini & Fadhillah, (2020) further stated that the faith of other individuals, such as friends, authorities, and groups, would have a positive impact on social factors to influence a person to use IT.

Agarwal et al. (2009) contend that satisfied customers with e-banking sites' security and trust has the biggest effect on the total satisfaction of e-banking clients and customer satisfaction including ease of access and usability. This study finds exactly the way that Agarwal et al. (2009) mentioned. It means perceived credibility, ease of use, usefulness and social influence have a significant impact on the customers' satisfaction level implying that if e-payment has proper better credible and ease in its functioning then it can lead to higher satisfaction level of the customers. The component associated with the behavioral intent to pay electronically also resulted in perceived ease of use in the e-payment system in this study and the finding is highly significant. The results support previous research (Nasir

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& Morgan, 2018), where user-friendly payment was found to have an essential link with consumers' e-payments perception, study conducted in Malaysia.

In addition, trust, confidentiality, security, and convertibility are elements that decide e-payment acceptance in Indonesia, in compliance with Hidayanto & Handayani (2015) study. Indonesian customers are now more concerned about the advantages they obtain and consider the risks by using a technology. In this analysis, it was found that Nepalese e-payment consumers appear to pay more attention to the credibility and secrecy of the application. The features of an online banking system, such as utility, ease of use, perceived behavioral power, and subjective standard, influence judgment attitude and acceptance, as observed in the Lin et al. (2015) research undertaken in Vietnam. Supporting the result of previous research, the e-payment system's features dominate the behavioral intention or judgment of the e-payment system, including the effect of social influence.

In addition, as per the research conducted on Vietnamese and Taiwanese clients (Lin & Nguyen, 2011), perceived ease of use and usefulness appear to also have a substantial effect on their intention to use, as in the initial TAM model and other tests, as well as on their intention to use. Therefore, after considering the product characteristics, the use of new technologies, especially the e-payment system, was favored. This report also notes that the e-payment method with greater accessibility is embraced by consumers on the verge of those results. Furthermore, subjective norms or social influence implicitly impact e-behavior by other influential views, which are also confirmed by the related kinds of observations made by Alsajjan and Dennis (2010). Technology Acceptance Model is that model which accepts the TRA's framework and assumes that the acceptance of technology by a person is determined by his willingness to use this technology. In turn, the intention is based on a person's attitude toward and perception of the usefulness of new technologies (Yousafzai et al., 2010).

The findings show that the dimensions of service quality Privacy, responsiveness, security, compliance, and reliability affect customer satisfaction positively and significantly, and are proof of customer satisfaction. The most important effect on customer satisfaction has been privacy. This means that users must trust that their personal data is secured and protected on the website of the bank and that their bank will not misuse their information (George & Kumar, 2014).

Conclusion and Suggestions

The key purpose of this analysis is to analyze determinants of perception towards electronic payment systems. All independent variables included in this analysis have a major influence on contingent factors. Overall, the findings have almost supported much of the relationships formed. In other words, it was observed that Perceived Credibility (PC), Perceived Usefulness (PU), Perceived Ease of and Social Influence (SCI) have impact on user satisfaction and Behavioral Intention (BI) to use the e-payment system. Additionally, User Satisfaction was also found to be related to Behavioral Intention

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(BI) to use an e-payment system. The behavioral goal to use the e-payment system therefore depends on how well e-payment consumers understand, fulfill, and have a social impact.

This research is not the first of its kind in the e-payment field but shows the key determinants of consumer perception – which is critical in the general functionality of the e-payment system. In addition, the analysis and conclusions of this study allow bank decision-makers, financial service providers, internet banking developers, and practitioners to build appropriate strategies for developing their overall approach to cope with the right consequences of the online payment system. The findings of this study help bank decision makers, financial service providers, developers of internet banking systems and practitioners to make effective policies to enhance their overall strategy for the proper implications of the online payment system by considering all the variables. This study analyzes and results to assist bank policy makers, financial service providers, internet banking developers, and experts in designing productive strategies to strengthen their overall response to the relevant consequences of the online method of payment. This work may be useful for more researchers in the same area of study and for prospective students, who would develop their understanding of the e-payment system. In Nepal, there have been limited studies on these emerging e-payment network circumstances.

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