

E-Wallet- Factors Affecting Its Intention to Use

Amit Kumar Nag , Bhumiphat Gilitwala



Abstract: The purpose of this research paper is to determine the influence of factors on intention to use E-Wallet, Bangkok, Thailand. The five factors which are selected for the study are perceived usefulness, perceived ease of use, security/privacy confidence, social influence and trustworthiness. In this study, the research is based on data collected through electronic questionnaires which were filled by 384 respondents who belong to service class of Bangkok, Thailand. The data were collected by using judgement quota and convenience sampling of non-probability sampling method. The data so collected was analyzed by using Pearson Product Moment Coefficient Correlation (Bivariate) in order to find out the level of significance and relationship between independent and dependent variables. The result of analysis revealed that all the independent variables have a significant relationship with intention to use E-Wallet, with one of the variables, namely trustworthiness showing a strong relationship with intention to use E-Wallet whereas social influence showing lowest impact on intention to use E-Wallet. The results and findings of the study throw light on factors that the companies can emphasize and work upon to design their product related as well as marketing related strategies. The companies will be in a better position to attract new and existing customers towards E-Wallet usage. The use of E-Wallet is becoming popular not only in developed economies, but also in developing economies owing to the ease, safety and fast completion of day to day financial activities of the users. Moreover, the digitalization of monetary transactions throughout the world is a major factor which necessitates the use of E-Wallets by the users, thereby increasing the number of such users in the days to come.

Keyword: Intention to use, Perceived usefulness, Perceived ease of use, Security/Privacy confidence, Social influence, Trustworthiness, Mobile application and E-Wallet.

I. INTRODUCTION

The whole world nowadays is getting digitalized and payments through mobile phones have become the easiest mode of payment, replacing the primitive modes of payment. The technological advancements have made it necessary for today's consumer to be dependent on mobile since it is faster, easier and handy to do the day to day transactions using their mobile phones. Moreover, the incentives (Reward points and Cash Back) provided to the user, choosing to pay through E-Wallets, attracts the users from all age groups to pay through E-Wallets.

Besides, owing to the convenience and safety of this mode of payment it has already become a widely used and popular mode in developed economies like Europe and United States. While on the other hand, in developing economies like India and China, majority of E-Wallet users use this mode due to the reason that these people do not visit the banks and ATMs frequently.

For instance, in India there are more than 220 million users of PAYTM since mobile wallets are accepted from small general stores to big business houses, malls, etc. Similarly, in China almost 94% of payments are done using E-Wallet with the help of apps like Wechat and Alipay. In Thailand, the mobile service group can be divided into three main groups: 1) Mobile operator group, it is the main service provider in the mobile wallet market. This group has the advantage of having a large number of customer base. 2) The Fin Tech group, it is an outstanding player which is developing very fast by focusing on promotions such as Rabbit LinePay and PayPal. 3) The third group comprises of mobile phone manufacturers like Samsung and Apple whose handsets are used by majority of people of Thailand.

II. LITERATURE REVIEW

Intention to Use

Yi and Hwang (2003) predicted that the use of web-based information system will be largely affected by self-efficacy, enjoyment, learning goals and on the acceptance of the technology.

Perceived Usefulness

Davis (1989) was pioneer in developing technology acceptance model which helped in predicting the intention to use helps in accepting information system and information technology. Jaruwachirathanakul et al. (2005) mention that perceived usefulness was able to promote the adoption of web banking with Thai consumers.

Ease of Use

(Churchill 1991) suggested that it is always easy and desirable to undertake activities which require less time to be implemented since people sort out activities in chronological order as per their preference.

Security/Privacy confidence

Peoples prosperity to embrace and use new technologies for attaining objectives of domestic as well as official activities is termed as technology readiness (TR). The common man is very sensitive about household and official activities which calls for safety and privacy (Parasuraman and Colby, 2005).

Social Influence

Adopting new technologies and being updated is the call for survival in the present competitive world, and using modern technology for day to day activities is affected by social influence (Venkatesh, 2000).

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Sudeep (2007) states that incorporation of advance technology has a social impact on the users as they feel connected with the modern world.

Trustworthiness

Kim et al (2001) (Kini and Choobineh, (1998) trust acts as a key factor affecting users’ intension to go for shopping online. Pavlou et al., (2003) stated that innovation and trust worthiness play a vital role for acquiring acceptance of any technology by its users. The users need to be assured that the information related to their persona issues need not be disclosed to anybody in a wrongful manner (Culnan & Armstrong, 1999). (Eriksson et al, 2005) stated that trust has positive influence on PU and PEOU of TAM. The attitude towards online banking is affected to a great extent by PU and PEOU (Chiou and Shen, 2012).

III. CONCEPTUAL FRAMEWORK

The conceptual framework was explicated by choosing the factors that were significant and had relationship on intention to use. The intention of the research work is to find the influence of variables of the study like perceived usefulness, perceived ease of use, security/privacy confidence, social influence and trustworthiness on intention to use.

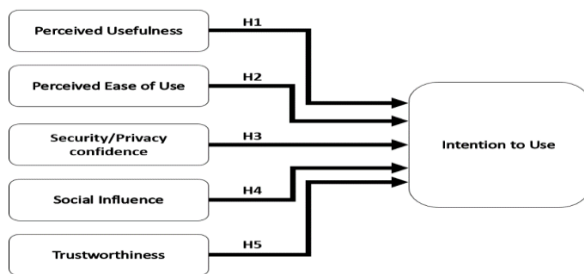


Figure 1: The Conceptual Framework

IV. RESEARCH OBJECTIVE

The objective of this study is to find out the various factors that effects service class’s intention to use e-Wallet. The research will focus on perceived usefulness, perceived ease of use, security/privacy confidence, social influence trustworthiness and intention to use. Therefore, a set of research objective has been formulated which is as follows:

1. To analyze the relationship between the perceived usefulness and intention to use E-Wallet.
2. To analyze the relationship between the perceived ease of use and intention to use E-Wallet.
3. To analyze the relationship between the Security/Privacy confidence and intention to use E-Wallet.
4. To analyze the relationship between the social influence and intention to use E-Wallet.
5. To analyze the relationship between the trustworthiness and intention to use E-Wallet.

V. HYPOTHESIS

Hypothesis 1

H1_o: Perceived usefulness has no significant relationship on intention to use E-Wallet.

H1_a: Perceived usefulness has a significant relationship on intention to use E-Wallet.

Hypothesis 2

H2_o: Perceived ease of use has no significant relationship on intention to use E-Wallet.

H2_a: Perceived ease of use has a significant relationship on intention to use E-Wallet.

Hypothesis 3

H3_o: Security/Privacy confidence has no significant relationship on intention to use E-Wallet.

H3_a: Security/Privacy confidence has a significant relationship on intention to use E-Wallet.

Hypothesis 4

H4_o: Social influence has no significant relationship on intention to use E-Wallet.

H4_a: Social influence has a significant relationship on intention to use E-Wallet.

Hypothesis 5

H5_o: Trustworthiness has no significant relationship on intention to use E-Wallet.

H5_a: Trustworthiness has a significant relationship on intention to use E-Wallet.

VI. METHODOLOGY

Cronbach’s Alpha test was applied to test the reliability of the questionnaire by doing the pilot test with 30 samples. Then, Descriptive method was used to collect and analyze the demographic information for the target respondents. Finally, Pearson correlation was used to test the level of relationship between independent variables and dependent variables. In the present study, the target population was the service class using E-Wallet in Bangkok for which the sample size of 384 respondents was used based on the sample size table of Krejcie and Morgan (1970). Thus, the sample was prepared on a non-probability basis.

VII. RESULTS

In this research, electronic questionnaires were filled by 384 respondents who had experience of using e-Wallet in Bangkok, Thailand. The majority of target respondents comprised of Male (51.0%). Of the total respondents 82.6% were having single status. Nearly 50.3% of the total respondents were of the age group between 26-35 years. Almost 37.8% of the total respondents belonged to the income group of 30,001 – 40,000 Baht per month, while majority were having Bachelor’s degree (67.4%). Nearly 69.8% of the total respondents were employees of private company.

Table 1: Summary results of demographic factors in term of frequency and percentage.

Demographic Factors	Characteristic	Frequency (f)	Percentage (%)
Gender	Male	196	51.0%
Marital status	Single	317	82.6%
Age	26-35-year-old	193	50.3%
Income per month	30,001-40,000 Baht	145	37.8%
Education	Bachelor’s Degree	259	67.4%
Occupation	Private Company Employee	268	69.8%



Hypothesis 1

H1_o: Perceived usefulness has no significant relationship on intention to use E-Wallet.

H1_a: Perceived usefulness has a significant relationship on intention to use E-Wallet.

Table 2: The Analysis of relationship between perceived usefulness and intention to use E-Wallet by using Pearson Product Moment Coefficient Correlation (Bivariate)

		Correlations	
		Perceived Usefulness	Intention to use
Perceived Usefulness	Pearson Correlation	1	.515**
	Sig. (2-tailed)		.000
	N	384	384
Intention to use	Pearson Correlation	.515**	1
	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

As indicated in Table 2, the result from the Pearson correlation analysis showed that the level of significance is equal to .000 which is less than .01 (.000 < .01). It means that null hypothesis was rejected. Then, there is a statistically significant relationship between perceived usefulness and intention to use at the 0.1 significant level. The correlation coefficient (r) is equal to .515, which means that there is moderate relationship between perceived usefulness and intention to use or can explain that both variables move in the same direction. Also, for the Strength of associate (R^2) is (.5152)², which is equal to 0.265. It means that if perceived usefulness increase, it will affect the working people intention to use E- Wallet to increase to 26.5%.

Hypothesis 2

H2_o: Perceived ease of use has no significant relationship on intention to use E-Wallet.

H2_a: Perceived ease of use has a significant relationship on intention to use E-Wallet.

Table 3: The Analysis of relationship between perceived ease of use and intention to use E-Wallet by using Pearson Product Moment Coefficient Correlation (Bivariate)

		Correlations	
		Perceived ease of use	Intention to use
Perceived Ease of Use	Pearson Correlation	1	.557**
	Sig. (2-tailed)		.000
	N	384	384
Intention to use	Pearson Correlation	.557**	1
	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

As indicated in Table 3, the result from the Pearson correlation analysis showed that the level of significance is equal to .000 which is less than .01 (.000 < .01). It means that null hypothesis was rejected. Then, there is a statistically significant relationship between perceived ease of use and intention to use at the 0.1 significant level. The correlation coefficient (r) is equal to .557, which means that there is moderate relationship between perceived ease of use and intention to use or can explain that both variables move in the same direction. Also, for the Strength of associate (R^2) is (.5572)², which is equal to 0.310. It means that if perceived ease of use increase, it will affect the working people intention to use E-Wallet to increase to 31.0%.

Hypothesis 3

H3_o: Security/Privacy confidence has no significant relationship on intention to use E-Wallet.

H3_a: Security/Privacy confidence has a significant relationship on intention to use E-Wallet.

Table 4: The Analysis of relationship between security/privacy confidence and intention to use E-Wallet by using Pearson Product Moment Coefficient Correlation (Bivariate)

		Correlations	
		Security/ Privacy Confidence	Intention to use
Security/ Privacy Confidence	Pearson Correlation	1	.494**
	Sig. (2-tailed)		.000
	N	384	384
Intention to use	Pearson Correlation	.494**	1
	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

As indicated in Table 4, the result from the Pearson correlation analysis showed that the level of significance is equal to .000 which is less than .01 (.000 < .01). It means that null hypothesis was rejected. Then, there is a statistically significant relationship between security/privacy confidence and intention to use at the 0.1 significant level. The correlation coefficient (r) is equal to .494, which means that there is moderate relationship between security/privacy confidence and intention to use or can explain that both variables move in the same direction. Also, for the Strength of associate (R^2) is (.4942)², which is equal to 0.244. It means that if security/privacy confidence increase, it will affect the working people intention to use E-Wallet to increase to 24.4%.

Hypothesis 4

H4_o: Social influence has no significant relationship on intention to use E-Wallet.

H4_a: Social influence has a significant relationship on intention to use E-Wallet.

Table 5: The Analysis of relationship between social influence and intention to use E-Wallet by using Pearson Product Moment Coefficient Correlation (Bivariate) Correlations

		Social Influence	Intention to use
Social Influence	Pearson Correlation	1	.440**
	Sig. (2-tailed)		.000
	N	384	384
Intention to use	Pearson Correlation	.440**	1
	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

As indicated in Table 5, the result from the Pearson correlation analysis showed that the level of significance is equal to .000 which is less than .01 (.000 < .01). It means that null hypothesis was rejected. Then, there is a statistically significant relationship between social influence and intention to use at the 0.1 significant level. The correlation coefficient (r) is equal to .440, which means that there is moderate relationship between social influence and intention to use or can explain that both variables move in the same direction. Also, for the Strength of associate (R^2) is (.4402)², which is equal to 0.193. It means that if social influence increase, it will affect the working people intention to use E-Wallet increase to 19.3%.

Hypothesis 5

H5o: Trustworthiness has no significant relationship on intention to use E-Wallet.

H5a: Trustworthiness has a significant relationship on intention to use E-Wallet.

Table 6: The Analysis of relationship between trustworthiness and intention to use E-Wallet by using Pearson Product Moment Coefficient Correlation (Bivariate) Correlations

		Trustworthiness	Intention to use
Trustworthiness	Pearson Correlation	1	.649**
	Sig. (2-tailed)		.000
	N	384	384
Intention to use	Pearson Correlation	.649**	1
	Sig. (2-tailed)	.000	
	N	384	384

** . Correlation is significant at the 0.01 level (2-tailed).

As indicated in Table 6, the result from the Pearson correlation analysis showed that the level of significance is equal to .000 which is less than .01 (.000 < .01). It means that null hypothesis was rejected. Then, there is a statistically significant relationship between trustworthiness and intention to use at the 0.1 significant level. The correlation coefficient (r) is equal to .649, which means that

there is strong relationship between trustworthiness and intention to use or can explain that both variables move in the same direction. Also, for the Strength of associate (R^2) is (.6492)², which is equal to 0.421. It means that if trustworthiness increase, it will affect the working people intention to use E-Wallet increase to 42.1%.

Table 7: Summary results from hypothesis testing

Hypothesis	Pearson Correlation	R Square (R^2)	Results
Hypothesis 1	0.515	0.265	Reject H1 _o : There is moderate relationship between perceived usefulness and intention to use e-Wallet.
Hypothesis 2	0.557	0.310	Reject H2 _o : There is moderate relationship between perceived ease of use and intention to use e-Wallet.
Hypothesis 3	0.494	0.244	Reject H3 _o : There is moderate relationship between security/privacy confidence and intention to use e-Wallet.
Hypothesis 4	0.440	0.193	Reject H4 _o : There is moderate relationship between social influence and intention to use e-Wallet.
Hypothesis 5	0.649	0.421	Reject H5 _o : There is significant strong relationship between trustworthiness and intention to use e-Wallet.

VIII. DISCUSSION AND CONCLUSION

On testing first hypothesis it is observed that the significant level is 0.000 which is less than 0.01 (.000 < 0.01) indicating that perceived usefulness has a moderate relationship with intention to use E-Wallet which is depicted by table 2. The second hypothesis highlighted that the significant level is .000 which is again less than 0.01 (.000 < 0.01) signifying that perceived ease of use has a moderate relationship with intention to use e-Wallet, which is shown by Table 3. In the third hypothesis the Pearson Correlation showed the significant level is .000 which is less than 0.01 (.000 < 0.01) indicating that the security/privacy confidence has a moderate relationship with the intention to use e-Wallet. The result of fourth hypothesis reveals that the significant level is .000 which is less than 0.01 (.000 < 0.01) establishing the fact that social influence has a moderate relationship with the intention to use e-Wallet. On testing the fifth hypothesis it is established that the significant level is .000 which is less than 0.01 (.000 < 0.01) showing that trustworthiness has a strong relationship with intention to use E-Wallets.

IX. RECOMMENDATIONS

According to the research, perceived usefulness, perceived ease of use, security/privacy confidence, social influence and trustworthiness has significant relationship with intention to use e-Wallet. Based on the findings it is recommended that the companies developing apps should emphasize on these variables to create value and offer new services or features effectively. Considering perceived usefulness and its effect on the intention to use E-Wallet it is recommended that the companies providing the services of E-Wallet need to improve the application by making it more interesting. They should also try to highlight and promote the benefit of e-Wallet.



In view of effect of perceived ease of use on intention to use e-Wallet, the user can be made aware that using E-Wallet can make financial transactions simple and fast. In term of financial application, security/privacy confidence is very important. For this, full proof encryption of the data is a must while sending and receiving messages. Companies need to increase the firewall to monitor, protect and manage the data of the user. Only then, the customer will feel secured and protected while using E-Wallet for performing financial transactions.

Social influence is one of the factors which has a major impact on the intention of the service class to use e-Wallet. Companies need to make the e-Wallet more popular through advertisement via TV or Website to show the products detail to the customer. Thus, Companies need to create image of e-Wallet to the user. Trustworthiness is one of the key variables that showed the highest correlation with service class intention to use e-Wallet in Bangkok. Moreover, continuous improvement of e-Wallet data protection is advised to develop a sense of trust amongst the E-Wallet users.

X. FURTHER RESEARCH

In order to improve and further develop the finding, various additional researches can be conducted on the intention to use E-Wallet. This investigation will be useful for intention to use mobile banking to improve the action plan. In addition to the independent variables covered in the present research various other major factors like customer services, interface design and system quality can also be incorporated to make the research study more concrete. Further studies can be carried out which can apply different conceptual framework. The present research work is carried out only in Bangkok, Thailand with a sample of service class people who have intention to use E-Wallet. There might be significant differences among people from different regional areas, developing and developed economies. Therefore, it is suggested that further research should be carried out on a comprehensive basis at micro as well as macro level in order to have more accurate findings.

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