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Consumer's Intention to use a Cashless payment application in Thailand

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Abstract

This empirical study is about the factors that influence the consumers' intention to use cashless payment application supported by a number of hypotheses and its influence on the intention to use. The results present the influence between variables (1) price, (2) usefulness, (3) responsiveness, (4) ease of use, (5) security and trust. The effect of trust and security have long been recognized in online transaction literature. This study has developed a conceptual model to support the factors which have influence on consumers' intention to use cashless payment. The required data were gathered from a sample of 393 respondents who are living in Bangkok, the factors that influence on the intention to use the cashless payment application have a four variables and have two variable is not the main factors that consumers' concerned. The goal is finding the benefit for Thai people and the service provider in order to improve the service or create the new functions to influence the consumer's intention.

Keywords: Price, usefulness, responsiveness, ease of use, security and trust

Introduction

Cashless payment has become a popular mode of payment in the society for products and services purchased online. The growth of e-commerce which drives businesses and createds new financial needs, in many cases, cannot be successful when using pay by cash (Sumanjeet, 2009).The use of cashless payment application is positioned to become the dominant form of payment, economic forces encourage consumers and merchants to create consumer intention to use cashless payment (Andrieu, 2001).

Cashless payment is created to benefit consumers in term of convenience. Cashless payments or Electronic payments have their roots in the 1870s, when Western Union debuted the Electronic Fund Transfer (EFT) in 1871, and people started to send the money electronically to purchase goods and services. Digital payments have become popular across the world by 2010 when people made cashless payments online. Cashless payment expected to reach 726 billion people in 2020 based on 2014-2015 cashless payment which rose to around 11.2 percent. In developing countries, it grew to around 21.6 percent. And in Asia, it mostly increased to around 30.9 percent, particularly in china and India, Ryan Browne. (2014).

Cashless payment is the new business in Thailand. It is the new payment system made through an application in mobile phone without using the cash payment. The Thai government and the private sector try to encourage people who are living in Thailand to use said payment system and thus to become a cashless society. There are many applications that offer quicker response and convenient payment. In Thailand, many applications in mobile phones have a payment functions which helps Thailand develop many businesses in the future, such as increased employment, wage and salary, GDP and productivity.

Cashless payment is designed to benefit the consumer behavior when they using online transactions. The application-based user interface allows customer to access and man- age their transactions properly. A study by the (Central Bank of Malaysia (2009)) found that the consumer's lack of awareness is the reason why they are not using the online transaction. Although Ramalingam (2012) mentions that online transaction is moving towards greater cashless payment adoption, interestingly, people are still considered as "infants" with regard to internet knowledge.

This study is to investigate the influence of the ease of use, price value, usefulness, trust, security and responsiveness on consumer intention to use cashless payment. So, this paper presents an investigation on important factors influencing cashless payment application , based on the information collected from customers in Bangkok. An empirical study using a structured questionnaire is conducted to evaluate the factors and collect statistics from consumers who live in Bangkok. The result shows that price value, responsiveness, trust has significant influence on consumers' intention to use cashless payment application, while security and usefulness has no significant influence.

The contributions of this paper are highlighted below:

To study the factors that influence consumer's intention to use cashless payment application in Bangkok.

This study is structured as follows: The first part presents the literature related to the topic of study and influence the consumer intention to use cashless payment application. As a result, a research framework with hypotheses is developed to be tested. The second part consist of the methodology used in the study. The data collected are analyzed and interpreted before the results are presented. In the last part, conclusion and implication of this study is discussed.

Literature Review

Shon and Swatman (1998) explained about the meaning of cashless payment as any exchange of funds initiated via an electronic communication channel. Gans and Scheelings (1999) defined cashless payment as using the electronic signal connected directly to the credit account. Cashless payment represent the society are using non-cash payment that does not involve a paper cheque (Hord, 2005). This study represents the definitions of cashless payment and factors that influence the consumers' intention to use cashless payment application.

Cashless payment requires the internet for connecting to make the transaction, similar to using the electronic banking (e-banking), Electronic shopping (e-shopping) or

electronic learning (e-learning). When cashless payment application refers to financial exchange (Kalakota andWhinston, 1997; Zhang and Jasimuddin, 2012), it is the main functions of e-banking to serve or support the transaction to the service provider.

1. Usefulness

Davis(1989) - has defined the usefulness as an individual trust in using the system that will be increase the individual's efficiency and performance. Consumers are concerned about the usefulness of using a new system which is a factor that influences the customer's adoption to the change; and usefulness is one of the purposes for the use of the new system by a consumer (Venkatesh& Davis, 2000). Usefulness is defined as when the consumer using the new system or new service, they expected the application to provide many benefits for them such as improve their performance, and also increase their efficiency (Mathwick, Malhotra&Rigdon, 2001). Usefulness has significant factor that influence the consumer's intention to use cashless payment application. Cashless payment application should be a system that is readily available and independent of time and place, so the consumer's will perceive usefulness.

2. Ease of use

Ease of use can be defined as user-friendly. It means that it is easy to use and apply more likely beneficial. Ease of use significantly builds the customer satisfaction. For example, if the transaction with an e-payment service is delayed or there was a slow response time especially when the consumer has been experiencing a problem when using the application, this will lead the consumers to experience uncertainty about the transaction. Chin, L. P., & Ahmad, Z. A. (2015). The result from ease of use is a significant factor to determine usefulness and consumer's intention to use. Ease of use represents the consumer's enjoyment of using the cashless payment application. Chung-Chi, S. and Jyh-ShenC(2010) on their study of ease of use, state that consumer expectations depends on whether the transaction is short-term or long term. The result of study mentions that when the process or transaction is short, the consumer will not be concerned about the security, thus the perceived ease of use will be increase towards cashless payment application.

3. Price value

In general, price and promotion can attract consumers to use the cashless payment application. The application using eye catching price promotions such as price discounts helps the application to increase transactions on purchase of products and services, Hirschman & Holbrook (1994). A winning cashless payment application should provide special offers to make the shopping experience enjoyable for consumer. The consumer also focuses on the highlight of the application that they're making the transaction with, such as special deals and offers to satisfy their needs. The increase in promotion, Hirschman & Holbrook (1994) is a factor that can influence on the consumer to make the transaction. Kopalle et al. (1996) stated that one impact of promotion on the consumer's purchasing decision is when the amount of money the consumer spent is reduced and meet the consumer's expected benefit.

4. Responsiveness

To build customer satisfaction, responsiveness is one factors that can make the consumer feel that they are decided to using the right payment application. Responsiveness

is presents the application's ability to respond to the customer's requirement timely and flexibly. The service provider should always develop their the application or have an advance technology to support the application to deliver their services on time and can reduce cost to increase the customer value (Zhu, Wymer and Chen, 2002). The response time of the service for serving customer should be at the lowest which will helps the service provider in winning the trust of new customer and retaining the existing consumers. If cashless payment applications are responsive towards their consumers, the satisfied consumers will not feel the difference between them and traditional mode of payment (M. Jun and S. Cai,2001).

5. Trust

Consumer's perceived trust means that when the consumer is using the application for paying goods and service, they believe that the cashless payment application can meet the expectations. Trust is the set of consumer beliefs built based on the characteristic or performance of the company who are the owners of the application. (Yousafzai et al., 2003) Trust is defined as a the consumer's perception about how the application can reduce the risks, and thus result in positive consumer's intention to use cash- less payment application. Trust is an important and main factor that people are concerned with because of the high degree of uncertainty and risk during the transaction (Zhou, 2011). Thus, the consumers are more concerned about the trust more important than security Kniberg (2002).

6. Security

Security is also an important factor for the consumer's when they are using the application for paying because they are concerned about personal information that they provide online. Lack of perceived security is one of the factors that mostly affect the development of e-commerce. The more users feel secure when they're using the application, the more they will use those applications especially when they are assured of the protection of user information. Importantly, Kalakota and Whinston (1997) found that when the application are more reliability when it depend on the technical infrastructure, implementation, well-transaction rules and legal factors.

In online shopping context, the service provider must be ensure that their payment systems are free from internal/external factors that will affect their system and consumer data. This is a normal situation when the internet has no centralized control and barriers (Abrazhevich, 2004). Therefore, these studies will help to easily target criminals. Normally, people perceived that online payments are presumed to be more unsafe. So, a study was conducted on the security concerns of consumer and its influence on the consumer intention to use cashless payment application (Kurnia and Benjamin,2007)

Research Methodology

The research methodology presents the way the research was designed, showing the sampling technique used, tool of measurement, how the data was collected, analyzed it and correspondingly made a conclusion.

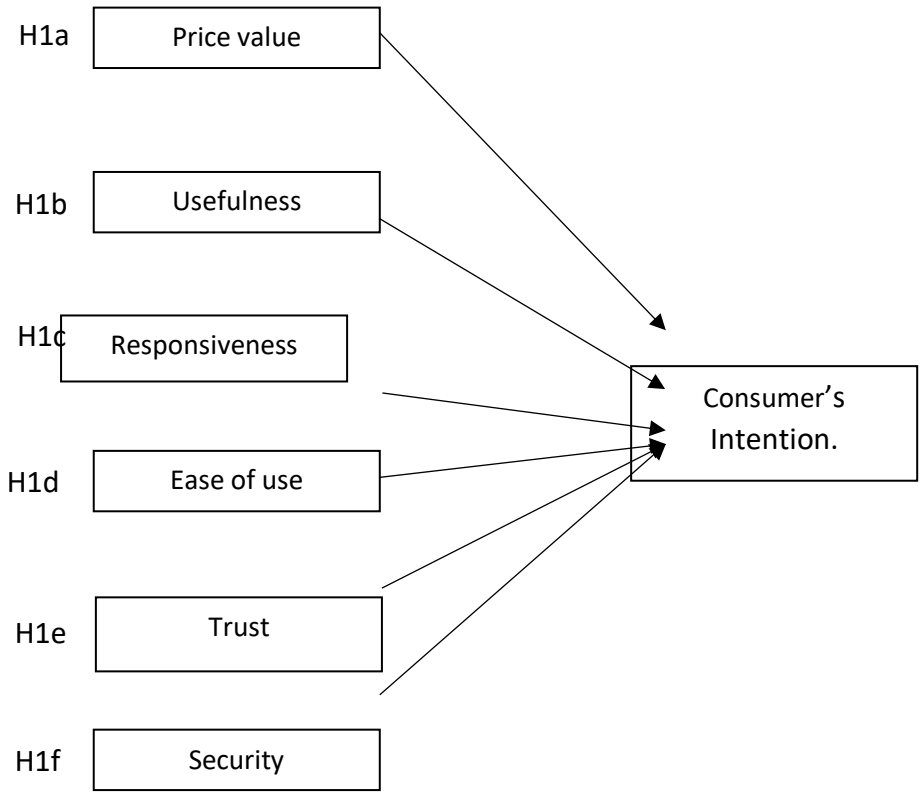

Figure1: Conceptual Framework

Conceptual framework.

This study will combine factors from several existing variables and theories, to analyze the factors which influence consumers' intention to use cashless payment application. As mentioned in the previous chapter, to develop the conceptual framework from the theoretical framework model. The following factors that influence intention price, ease of use, usefulness, responsiveness, trust, security, as the independent variables: and consumer's intention as dependent variable. From the previous study, the researcher applied and developed the research structure on how the independent variables influence the dependent variable

Research Hypothesis

H1a: Price has significant influence on Consumer's Intention to use cashless payment application

H1b: Usefulness has significant influence on Consumer's Intention to use cashless payment application

H1c: Responsiveness has significant influence on Consumer's Intention to use cashless payment application

H1d: Ease of use has significant influence on Consumer's Intention to use cashless payment application.

H1e: Trust has significant influence on Consumer's Intention to use cashless payment application

H1f: Security has significant influence on Consumer's Intention to use cashless payment application.

The survey used an online questionnaire, divided into two (2) parts. Part 1 is comprised of 4 questions about the demographic information of respondents. Part 2 is comprised of 20 questions meant to measure the independent and dependent variables. The item were adapted from the different studies i.e. benefits (Davis, 1989), security and trust (Kim et al., 2009)The methodology used the Five-Point Likert scale from 1 as strongly disagree to 5 as strongly agree. The data collected for this research were from the target group of respondents who are living in Bangkok.

The target population is Thai people who live in Bangkok. Each group distributed the questionnaires in different areas to cover most Bangkok people, as much as possible in order to get the data that can be representative of the total population. Questionnaire conveniently distributed via online. This research used non-probability sampling method to do the surveys.

Reliability Test

Pilot testing for reliability was done when the researcher was able to gather the responses from 30 respondents. All the items score factor are 0.60 and above, thus a the resulting scales are sufficiently reliable. Reliability could be measured by Cronbach Alpha coefficient and composite reliability (Hair, J., Black, W., Babin, B., Anderson, R., Tatham, R. and Black, W. (2010). Furthermore, as shown in Table 1, composite reliability value range from 0.709 to0.838 and were all greater than recommended value which should be more than 0.60 (Bagozzi and Yi,1988).

Table 1: Consistency of scales test (N=30)

Variable	No. of items.	Cronbach's Alpha
Price	2	0.743
Usefulness	3	0.712
Responsiveness	2	0.795
Ease of use	4	0.725
Trust	4	0.838
Security	3	0.732
Consumers' Intention	3	0.821

Result and Discussion

Multiple Linear Regression technique was employed to analyze the data and test the independent and dependent variables.

In this research, the data was collected from the respondents who are living in Bangkok. The demographic factors can represent basic characteristics of the respondents. The researcher collected data from 393 respondents.

Table 2 Demographic Information of Respondents (N=393)

Criterion	Factor	Frequency	Percent
Gender	Female	289	73.5
	Male	104	26.5
Age	Between 20-29	230	58.5
	Between 30-39	89	22.6
	Between 40-49	28	7.1
	>=50	46	11.7
Education	College degree	9	2.3
	University Degree	384	97.7
Income	Less than 20,000	38	9.7
	20,000-30,000	125	31.8
	30,0000-40,000	84	21.4
	40,000-60,000	72	18.3
	More than 60,000	74	18.8

There are a total of 393 questionnaires is distributed to the respondents. However, based on the findings the demographic presented are those who have an experience of being online payment user. The majority of the respondents age are in the range of 20-29 years old with 58.5%, while 22.6% is 30-39 years old and 40-49 with 7.1% and >=50 with 11.7%. As for the gender, females comprise the majority of the respondents, with 73.5%, while males are only 26.5%. In terms of income per month, most of the respondent's have an income rate is 20,000-30,000 THB with 31.8%. Most of the respondents are graduates with university degree at 97.7% , while 2.3% graduates of College degree.

Descriptive Analysis and Correlation Matrix

The five point Likert scale was used to test the variable from 1 strongly disagree to 5 strongly agree.

Table 3: Correlation Matrix for H1-H6

Variable	Mean	SD	PE	UF	EOU	TRU	SEC	RES	IT
PE	4.1247	0.715	1						
UF	4.0517	0.663	0.254	1					
EOU	4.3842	0.644	0.227	0.351	1				
TRU	2.9052	0.889	0.171	0.477	0.296	1			
SEC	3.9534	0.653	0.149	0.246	0.331	0.261	1		
RES	4.0954	0.750	0.135	0.422	0.481	0.461	0.361	1	
IT	3.9779	0.701	0.198	0.496	0.440	0.480	0.248	*0.6	1

Note:* Correlation is significant at 0.05 levels

Table 3, the correlation, presents that there is a positive relationship between variables at p=value<0.05. Specially, there is a strong positive relationship between consumer intention (IT) and responsiveness at 0.600.

Table 4: Multiple regression Results

As Table 4 shows the multiple regression result to test the hypotheses using the independent and the dependent variables. The correlation coefficient results shows that variation inflation factor(VIF) result for all variable that are tested, can be explained that

the variable can be used for analysis in this research (Chatterjee et al., 2000; Kleinbaum et al., 1988).

	Hypothesis	Standardized Coefficients (β)	VIF	Sig	Result
H1a	PRICE>INTEN	0.039	1.120	0.317	Not Support
H1b	USEFUL > INTEN	0.207	1.468	0.000	Supported
H1c	RES > INTEN	0.374	1.630	0.000	Supported
H1d	EOU > INTEN	0.139	1.419	0.002	Supported
H1e	TRUST > INTEN	0.170	1.461	0.000	Supported
H1f	SEC > INTEN	-0.034	1.212	0.404	Not support
Adjusted R Square	0.461				

Presents the result of R square which is equal to .461, which means 46.1% of the dependent variable which is consumer's intention to use could be explained by the six independent variables. The p-value of usefulness, responsiveness, ease of use and trust are supported. However, price and security are not significantly associated with the consumer's intention to use. Therefore, H1a and H1f are not supported. The multicollinearity problem which was tested via VIF, shows that the independent variables' present values are less than 0.05 , hence it is not a critical problem in this research not supported.

Conclusion and Recommendation

The purpose of this research is to study the factors that influence on consumer's intention to use cashless payment application in Bangkok. The target population is people who are living in Bangkok. This research used the factors, namely, price, usefulness, responsiveness, ease of use, trust and security as independent variables.

The experiment analyzed and examined samples from 393 respondents using Multiple Linear Regression. The conceptual framework is comprised of the six independent variables that influence the dependent variable, which is Consumer's intention to use. The advantage of this research is that it is able to find out the factors that influence consumer behavior to use the online system for doing business, and reflects the situation of country that e-commerce is the significant factor that will benefit every business.

This research supported that four out of six independent variables, which are usefulness, responsiveness, ease of use and trust have positive influence on consumer intention to use cashless payment application. But security and price have no influence on consumer's intention to use cashless payment.

First, responsiveness scored the highest overall mean, which corresponds with the highest correlation and beta value. The finding supported other studies that responsiveness of cashless payment can also create the trust of the customers by giving immediate response to questions and solution to problems by the service provider. Moreover, the financial sector is also important to provide financial service to individual and companies. The response time of the service should be immediate to satisfy customer needs and win the trust of new customers and at the same time retain the existing customers.(H. Lee, Y. Lee and D. Yoo).

Although ease of use, this factor has been found to influence consumers' intention to use cashless payment application and the result is significant. The findings in a prior study (Abrazhevich, 2001; Pikkarainen et al., 2004) stated that the respondents like the cashless payment applications that are user-friendly, easy to understand about the contents and structure. Also they prefer transactions that can be done even during traveling for the convenience of users.

Trust is explained as the factor that can reduce perceived risk and influence consumer's intention to use cashless payment (Yousafzai et al., 2003). Linck et al. (2006) and Kousaridas et al. (2008) have mentioned that trust is the factor that can gain the customer loyalty. Many researches such as Abrazhevich (2001) and Chou et al. (2004) mentioned that trust is an important factor for understanding interpersonal customer behavior which influence consumers' intention to use cashless payment application.

Usefulness is the second most important factor that influence consumer's intention to use cashless payment application. The findings found support from (Chakravorti, 2003;Sumanjeet, 2009; Zywicki, n.d.)who stated that usefulness is a significant factor oil cashless payment application usage. The study's results show that the respondents indicated that they found it easier and more convenient to make the transaction through the cashless payment application. Cashless payment application also helps the consumer save time and cost, the structure or the detail of application also helps the consumer understand the transaction process.

Price value is a factor that does not influence consumer's intention to use cashless payment application; Price value is defined as the factor that offer benefit or advantage to the consumer in terms of price.

While security should be one of the important factors that influence consumer intention to use cashless payment application in Thailand, the result of the study shows otherwise. The implication is that people who live in Bangkok do not perceive security to be a significant issue because the consumer are increasingly acknowledging the structure and steps of the application or online transaction facility provided.

Additionally, the factor that benefits the entrepreneur to market or promote their application is price, which is the factor that impact on consumer intention to use cashless payment application, such as promotion or discounts on products and services. It push es marketing to find ways to makes the customers feel that they can get the benefit from the cashless payment application.

Overall, there are some limitations in this research, such as finding the six factors to be investigated, allowing the implication from the perspective of strategies to increase

the consumer's intention to use be prescribed. Above all, it suggest that the service provider should continually enhance their cashless payment by creating applications that meet their consumers' expectations. AsBohle et al. (2000) describes it, cashless payment application should ensure ease of use and effective in order to gain the market share from cash transaction. On the score, the finding shows that four variables are supported or have influence on the consumer's intention to use cashless payment including usefulness, ease of use, responsiveness and trust which are the appropriate factors that should be developed and create strategies to enhance the cashless payment application. The features create should make the consumer understand clearly the application in order to increase the consumers' awareness.

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