Explaining an Adoption and Continuance Intention to Use Contactless Payment Technologies: During the COVID-19 Pandemic

Wilert Puriwat [1], Suchart Tripopsakul [2*]

[1] *Chulalongkorn Business School, Chulalongkorn University, Bangkok, Thailand*

[2] *School of Entrepreneurship and Management, Bangkok University, Bangkok, Thailand*

Abstract

The COVID-19 pandemic has affected the lives of people and services, pushing them toward new technologies that are in step with the development of a "New Normal" way of life. Contactless technologies have been realized as a mechanism to reduce the risks of infection, accelerating the move to touchless behaviors. The purpose of this study is to develop an Integrated Expectation-Confirmation and Health Belief Model (ECHBM) to explain an adoption and continuance intention to use contactless technologies during the COVID-19 pandemic in Thailand. Based on an empirical research survey of 142 samples, the proposed conceptual model was empirically validated using structural equation modelling (SEM). The study found that perceived usefulness, perceived susceptibility, perceived seriousness, and satisfaction significantly influenced continuance usage intention of contactless payment technologies, whereas perceived usefulness and confirmation were found to be significant determinants of consumer satisfaction. The effect of perceived susceptibility was found to be relatively higher than that of satisfaction, and confirmation was found to have an indirect effect on continuance usage intention through perceived usefulness and satisfaction. The integrated ECHBM model has strong explanatory power (56.8%) to predict customers' continuance usage intention toward use of contactless payment technologies during the COVID-19 pandemic. The study proposes a novel challenge to explain an adoption and continuance intention to use contactless payment technologies as a protective health behavior to mitigate risks of being infected by COVID-19.

1- Introduction

The World Health Organization (WHO) declared COVID-19 a pandemic on March 11, 2020. Since then, COVID-19 has fundamentally changed the world, with people moving dramatically toward online channels and businesses responding in turn. These effects have driven faster digital adoption. The growing use of technology in working, playing, and staying connected have created new digital behaviors. Covid-19 has shaped a demand for touchless technologies that allow users to avoid physical touching of surfaces and other people while severely impacting the world economy. The current prediction of global GDP in 2020 is for a decline from 3% to 1.8% due to the ongoing growth of the pandemic [1]. While traditional industries like manufacturing or tourism have suffered tremendous losses, social distancing and shut and lock down policies have allowed various digital platform businesses and online services to prosper.

Because of the spread of COVID-19, contactless payment technologies have become a more favored payment method in countries where these methods were not previous prevalent. Contactless and digital payment methods require less

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physical interaction, and users feel safer from COVID-19 infection since they do not have to have physical contact with surfaces such as banknotes, coins, or even other peoples' hands. According to a survey by RTi Research [2], about 30% of the respondents in the US have begun to utilize contactless payments since the pandemic occurred. Moreover, around 70% of those users are likely to continue using contactless payments post-COVID-19. In Germany, contactless payments markedly grew from 35% to more than 50% because of the pandemic. China had the highest adoption rate of contactless payment technology, where e-wallet purchases were 23% higher than cash purchases [3].

The fear of Covid-19 infection is a catalyst for contactless payment technology usage. Risk perception of COVID-19 can be realized as "the push factor" to motivate an adoption and continuance usage intention of contactless payment technology. Previous studies have confirmed a relationship between health anxiety or fear emotion and using health-related technologies. Al-Maroof et al. (2020) [4] found a significant effect of fear emotion related to Google Meet adoption during COVID-19. Wnuk et al. (2020) [5] revealed that an adoption of COVID-19 tracking technologies was significantly predicted by users' perceived personal threat and lack of personal control. However, to the best of our knowledge, empirical research pertaining to an adoption and continuance usage of contactless payment technology is very limited and has not been fully tested by academics and researchers, especially during COVID-19. In order to address this research gap, we seek to advance the body of knowledge of this field by proposing an Integrated Expectation-Confirmation and Health Belief Model for explaining an adoption and continuance intention to use contactless technologies. This study may contribute insight and understanding for practitioners of motivational factors and users' attitude and behavior toward continuance usage of contactless payment technologies. The structure of the paper is as follows. In section two, the literature review, a proposed research model and hypotheses are discussed. Sections three and four comprise the research framework, research design, data collection process, and questionnaire development. Results of the study and discussions are presented in section five. Finally, a conclusion discussing limitations and future research is found in sections six and seven.

2- Literature Review and Theoretical Background

2-1- Expectation-Confirmation Theory

Previous information technology adoption studies have noted that there are differences in user perception between first-time adoption to new technologies and continued usage of those technologies [6]. One of the most prevalent theoretical frameworks examining the differences between initial adoption and continued usage is the Expectation-Confirmation Theory from [7].

Bhattacherjee (2001) [7] stated that the ultimate success of a new information technology depends not only on users' initial adoption, but also their continued usage of that technology. The importance of continued usage has been confirmed, as the cost of acquiring new customers may be five times higher than that of retaining existing customer [7]. Hong et al. (2006) [6] stated that increasing 5% of customer retention expenditure could reduce 18% of operating cost and subsequently lead to a 25 to 95% profit increase. Examining the difference between initial adoption and continued usage behavior in an information technology context, Bhattacherjee (2001) [7] proposed an expectation-confirmation model (ECM) that investigates and emphasizes continued usage of information technology. The ECM focuses on the influence of a user's expectation and confirmation on their satisfaction and perceived usefulness, which ultimately impact the user's continuance usage intention of an information system [8]. According to ECM theory, there are four main constructs: confirmation, perceived usefulness, satisfaction, and continuance usage intention. Confirmation refers to the extent to which users perceive that their first expectations are met during genuine usage. Perceived usefulness is found to be an important construct to examine first-time user adoption of new technologies and continuance usage intention [9]. Perceived usefulness and confirmation from previous use importantly affect users' satisfaction in adopting and using technologies. Confirmation also affects perceived usefulness. Perceived usefulness and user satisfaction subsequently result in continuance usage intention [10]. Prior studies have extended ECM to explain continuance intention to use in various contexts [11]. Thong et al. (2006) [12] have included perceived enjoyment and perceived ease of use constructs in an original ECM to understand post adoption beliefs. Further, the extended ECM has satisfactory explanatory power to account for satisfaction and continued usage intention in the mobile internet service context. Oghuma et al. (2016) [13] modified the ECM by combining perceived usability, perceived security, and perceived service quality into the model for explaining continuance usage intention of Short Message Service (SMS). The result showed that perceived service quality and perceived usability affect satisfaction and continuance usage intention of SMS usage. Perceived service quality also affects confirmation, which affects perceived usability. Humbani and Wiese (2019) [14] developed an integrated ECM model with the modified Technology Readiness Index (TRI) to explain the mobile payment application adoption and continuance usage intention.

2-2- Health Belief Model

The Health Belief Model (HBM) was initially developed by the US General Health Service's social psychologists in the 1950s. The HBM provides insights into how to educate individuals on performing actions to respond to health risks

[15]. The model is based on individuals' motivation to perform a behavior [16]. The theory highlights how an individual's perception generates motivations and lead to behaviors. HBM explains that individuals refer to two main components when determining whether to implement health-related behaviors, namely perceptions about risks and outcome expectancies regarding the behavior [17]. Risk perception pertains to the perceived seriousness of the negative consequences of existing risks along with the perceived susceptibility to the risk; the former is a belief regarding the seriousness of the condition-induced consequences, and the latter is a personal belief about the likelihood of contracting the condition. The outcome expectancies are the perceived net outcomes, computed by assessing the perceived benefits of the health-related behavior implemented to avert the risk relative to the perceived barriers to that behavior. Perceived health risks consist of 2 dimensions: perceived susceptibility to disease and perceived seriousness of disease. Perceived susceptibility is defined as "a persons' view of the likelihood of experiencing a potentially harmful condition," and perceived seriousness refers to "how threatening the condition is to the person" [18].

Recently, some scholars have applied technology acceptance models and the HBM to investigate factors influencing use intention of digital technologies used in the COVID-19 pandemic. Walrave et al. (2020) [19] investigated factors influencing a contact tracing app use intention for containing COVID-19 based on the HBM in Belgium. The results showed that the contact tracing app use intention was significantly predicted by the perceived benefit of the app, self-efficacy, and perceived barriers. Sukendro et al. (2020) [20] explored factors predicting the use of e-learning during COVID-19 among students in Indonesian universities. The results found that behavior intention to use e-learning was significantly predicted by perceived usefulness and students' attitudes towards e-learning, and facilitating conditions had a significant impact on perceived ease of use and perceived usefulness.

2-3- Contactless Payment Technology

Contactless payment technologies have been realized as one method to reduce the risk of COVID-19 transmission. As a spokesperson for the World Health Organization (WHO) noted, "When possible, it would be advisable to use contactless payments to reduce the risk of [COVID-19] transmission" [21]. Contactless payment can be described as any payment transaction that requires and absence of physical contact between the consumer's payment device and the physical terminal [22]. Karjaluoto et al. (2019) [23] pointed out the difference between "contactless payment" and "remote payment," where the remote payment method uses cellular networks (or WiFi) during payment transactions, while contactless payment generally utilizes near-field communication (NFC) technology, which does not require an internet connection—allowing clients to use their NFC-enabled payment cards and smartphones instead of paying with banknotes or swiping credit cards at the POS terminal. The survey of consumers in March 2020 revealed that having a contactless feature on their credit card was a necessary feature [24], since cardholders are looking toward contactless and digital wallets as safer alternatives. The other survey [25] also showed that 55% of U.S. consumers worried about paying with cash by using banknotes and that 82% of respondents believe that contactless payment is a safer way to pay. In Thailand, Thai people are also aware of the benefit of contactless payment technologies. The Visa Consumer Payment Attitudes study revealed that 79% of Thais are using contactless payments more often than they did two years ago, and 75% of Thai respondents who are not using contactless payments today are interested in doing so in the future [26].


Figure 1. Street food in Thailand with contactless payment (https://brandinside.asia/ktb-qr-payment/).

3- Research Framework and Hypotheses Development

The purpose of this study is to explain continuance usage intentions of contactless payment technologies during the COVID-19 pandemic. An Integrated Expectation-Confirmation Model and Health Belief Model is proposed. Based on this premise about risk perception and changes in contactless payment technology adoption and usage, the authors have included perceived susceptibility and perceived seriousness, which are two sub dimensions of perceived health risks from the HBM, as predictors of continuance usage intention. We propose that perceived health risks from COVID-19 may act as the "push factor" to trigger people's adoption and continuance usage of contactless payment technologies.

The original ECM contains four constructs: namely, perceived usefulness, confirmation, satisfaction, and continuance usage intention [7]. Perceived susceptibility and perceived seriousness constructs from the HBM are included in our proposed model framework, since people tend to be worried about an infection of COVID-19, and our assumption is that the COVID-19 phenomenon accelerates contactless payment technology adoption and continuance usage. The proposed research framework in this study is shown in Figure 2.
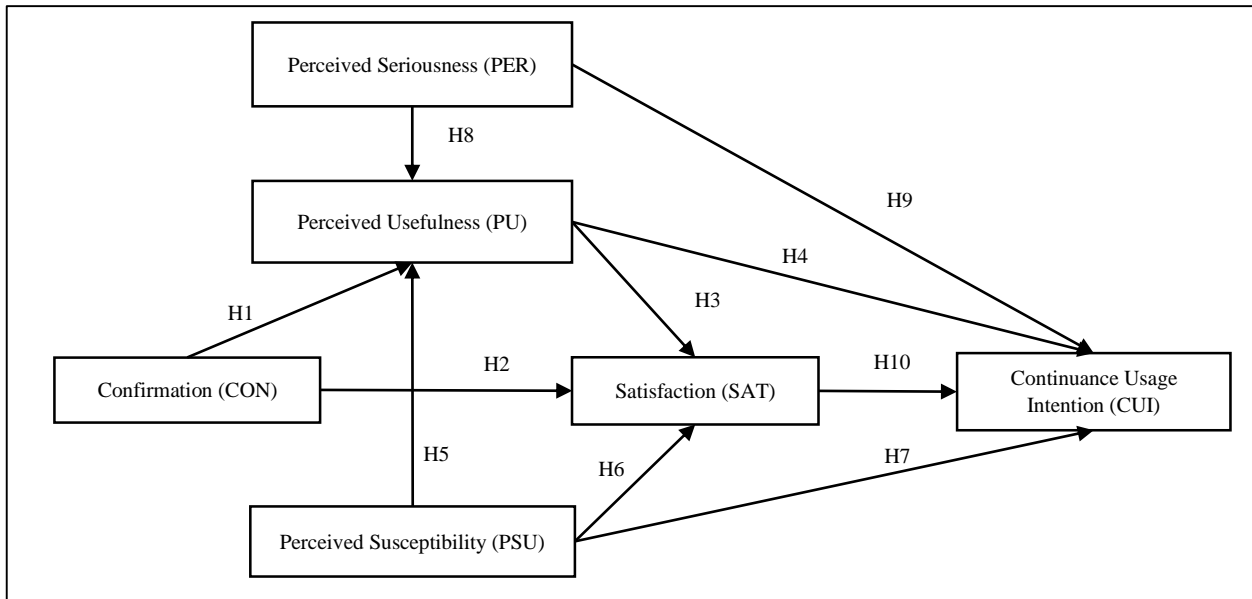
Figure 2. The proposed research framework.

Based on the proposed research framework, the hypotheses are as follows:

H1: Confirmation (CON) will have a positive impact on perceived usefulness (PU).

H2: Confirmation (CPN) will have a positive impact on satisfaction (SAT).

H3: Perceived usefulness (PU) will have a positive impact on satisfaction (SAT).

H4: Perceived usefulness (PU) will have a positive impact on continuance usage intention (CUI).

H5: Perceived Susceptibility (PSU) will have a positive impact on perceived usefulness (PU).

H6: Perceived Susceptibility (PSU) will have a positive impact on satisfaction (SAT).

H7: Perceived Susceptibility (PSU) will have a positive impact on continuance usage intention (CUI).

H8: Perceived Seriousness (PER) will have a positive impact on perceived usefulness (PU).

H9: Perceived Seriousness (PER) will have a positive impact on continuance usage intention (CUI).

H10: Satisfaction (SAT) will have a positive impact on continuance usage intention (CUI).

4- Research Methodology

4-1- Research Design and Data Collection

The empirical part of this study was conducted in Thailand using a questionnaire survey. Convenience sampling was used to distribute a self-administered questionnaire via Google Forms. To improve the credibility of the research, all the participants who were selected for the survey were actual contactless technology users, as established by a preliminary screening question. The question was, During the COVID-19 pandemic have you ever used any contactless technology? Only those respondents who answered "yes" to the question were allowed to take part in the survey. The questionnaire consisted of three sections. In the first section of the questionnaire, the main purpose of the study was explained, and

contactless payment technologies were clarified with examples. The second section was devoted to demographic and behavioral questions, while the third section was for the main construct items. Five-point Likert scales were adopted to measure the main scale items (such as "1 = strongly disagree / 5 = strongly agree," "1 = not at all worried / 5 = extremely worried," "1 = not probable / 5 = very probable").

4-2- Questionnaire Development

The propose of this study is to explain continuance usage intentions of mobile payment during the COVID-19 pandemic. The authors developed an Integrated Expectation-Confirmation Model and Health Belief Model framework. Perceived usefulness was measured by 5 items adapted from [27]. Confirmation was measured by 3 items adapted from [28]. Satisfaction was measured by 4 items, and continuance usage intention was measured by 3 items modified from [7] and [29]. For those two additional constructs from HBM—namely, perceived susceptibility and perceived seriousness—the authors adapted 10 measurement scales from [30] incorporating self-development of measurement because of previous work limitation. In total, there were 25 questionnaire items; the details of constructs and measurement scales are shown in Table 1.

Table 1. Questionnaire constructs and variables.

Constructs	Items	Observed Variables
Perceived Usefulness (PU)	PU1	I find mobile payment applications useful in my daily life.
	PU2	Using mobile payment applications increases my chances of purchasing things that are important to me.
	PU3	Using mobile payment applications enables me to accomplish the purchasing process more easily.
	PU4	I feel safe when I use mobile payment applications for purchasing things.
	PU5	Overall, mobile payment applications are useful.
Perceived Susceptibility (PSU)	PSU1	I have a likelihood of being infected by COVID-19.
	PSU2	There is a great chance that I will be exposed to COVID-19.
	PSU3	I would say that I am the type of person who is likely to be infected by COVID-19.
	PSU4	I have a strong possibility of being infected by COVID-19 due to my daily habits.
	PSU5	It is most likely that I will be infected by COVID-19 in my lifetime.
Perceived Seriousness (PER)	PER1	I am afraid of being infected by COVID-19.
	PER2	If I am infected by COVID-19, I will have difficulty with my life.
	PER3	If I am infected by COVID-19, it will hinder my personal relationships.
	PER4	If I am infected by COVID-19, I will be long haunted by resultant problems.
	PER5	If I get sick from COVID-19, I will die.
Confirmation (CON)	CON1	My experience with using mobile payment applications was better than what I expected.
	CON2	The service level provided by mobile payment applications was more than what I expected.
	CON3	Overall, most of my expectations from using mobile payment applications were confirmed.
Satisfaction (SAT)	SAT1	I feel satisfied with using mobile payment applications.
	SAT2	I feel pleased with using mobile payment applications.
	SAT3	I feel contented with using mobile payment applications.
	SAT4	Overall, I am satisfied with mobile payment applications.
Continuance Usage Intention (CUI)	CUI1	I intend to continue using mobile payment applications rather than discontinue their use.
	CUI2	Continuing to use mobile payment applications for paying goods and services is something I would do.
	CUI3	I will frequently use mobile payment applications in the future.

5- Results and Discussions

5-1- Sample Profiles

In total, 154 users took part in this survey. After eliminating 12 responses with incomplete or invalid data, a total of 142 valid responses were retained for data analysis. Table 2 summarizes the demographic statistics of the sample.

Table 2. Descriptive statistics.

Item	Description	Sample	(%)
Gender	Male	77	54.21
	Female	65	45.79
Age	Less than 20	19	13.11
	20-35	51	35.84
	36-55	59	41.31
	55 or above	14	9.74
Marital status	Single	68	47.85
	Married	72	50.57
	Other	2	1.58
Education	Below undergraduate	14	9.80
	Undergraduate	63	44.24
	Postgraduate	65	45.96
Monthly Income (USD)	Less than 660	15	10.63
	661 – 1,649	55	38.65
	1,650 – 2,474	46	32.49
	More than 2,474	26	18.23

Note **:** N = 142; missing data not shown and calculated in the table; 1 USD = 30.32 Baht

5-2- Measurement Model

Following the two-step approach recommended by Anderson et al. (1988) [31] and cited in Awang (2015) [32] work, we initially tested the measurement model to verify the reliability and validity of our research instrument by adopting a confirmatory factor analysis (CFA) approach. After that, we evaluated the structural model and tested our proposed hypotheses. The AMOS program (version 22) was used to estimate both the measurement and structural models.

To ensure the measurement of this study, internal consistency, construct reliability, convergent validity, and discriminant validity were evaluated. Initially, a Cronbach's alpha test was carried out to assess the internal consistency amongst the measurement items. The results showed that Cronbach's alpha values were all higher than 0.7, indicating their adequacy. Secondly, construct reliability was checked by calculating composite reliability scores. The obtained composite reliability scores of all constructs were above 0.7, which satisfied the recommended threshold. Thirdly, Convergent validity was tested by examining the average variance extracted (AVE) and indicator loadings. As shown in Table 3, all AVE values were higher than the recommended minimum of 0.5 [33]. The standard loadings of all items were above the desired threshold of 0.7 and significant at 0.001. This showed a good convergent validity. Further, discriminant validity exists when the square root of the AVE of each construct is greater than its correlation coefficients with other constructs. As shown in Table 4, the square roots of the AVEs were larger than the inter-construct correlations depicted in the off-diagonal entries, suggesting acceptable discriminant validity. Overall, the goodness-of-fit indicators for the measurement model above are: Chi-square = 433.277; df = 260; CMIN/df = 1.666; GFI = 0.917; NFI = 0.938; TLI = 0.970; CFI = 0.974; RMSEA = 0.042. This demonstrated a good fit between the model and the data for the further structural model analysis.

Table 3. Summary indicators of the measurement model.

Constructs and items	Loading	t-value	SE	Alpha	Composite Reliability	AVE
Perceived Usefulness (PU)	-	-	-	0.921	0.943	0.770
PU1	0.774	-	-	-	-	-
PU2	0.769	21.314	0.051	-	-	-
PU3	0.789	22.543	0.051	-	-	-
PU4	0.876	23.043	0.049	-	-	-
PU5	0.715	19.107	0.053	-	-	-
Perceived Susceptibility (PSU)	-	-	-	0.912	0.885	0.607
PSU1	0.774	-	-	-	-	-
PSU2	0.769	15.593	0.062	-	-	-
PSU3	0.789	16.058	0.059	-	-	-
PSU4	0.876	18.041	0.059	-	-	-
PSU5	0.675	13.409	0.057	-	-	-
Perceived Seriousness (PER)	-	-	-	0.932	0.934	0.740
PER1	0.808	-	-	-	-	-
PER2	0.850	19.588	0.056	-	-	-
PER3	0.904	21.431	0.046	-	-	-
PER4	0.873	20.363	0.052	-	-	-
PER5	0.864	20.039	0.049	-	-	-
Confirmation (CON)	-	-	-	0.925	0.777	0.538
CON1	0.708	-	-	-	-	-
CON2	0.768	11.254	0.098	-	-	-
CON3	0.752	11.199	0.097	-	-	-
Satisfaction (SAT)	-	-	-	0.921	0.911	0.720
SAT1	0.880	-	-	-	-	-
SAT2	0.867	22.807	0.047	-	-	-
SAT3	0.876	23.250	0.048	-	-	-
SAT4	0.767	18.480	0.053	-	-	-
Continuance Usage Intention (CUI)	-	-	-	0.911	0.822	0.606
CUI1	0.829	-	-	-	-	-
CUI2	0.748	14.340	0.067	-	-	-
CUI3	0.756	14.483	0.058	-	-	-

Note: PU1, RP1, CON1, SAT1, CUI1 are fixed parameters

Table 4. Construct correlations and the square root of AVE.

	PU	PSU	PER	CON	SAT	CUI
PU	0.877					
PSU	0.360	0.779				
PER	0.234	0.398	0.860			
CON	0.280	0.388	0.405	0.734		
SAT	0.494	0.533	0.237	0.308	0.849	
CUI	0.560	0.406	0.216	0.281	0.521	0.779

Notes **:**Italic diagonal elements are the square root of AVE for each construct **.**Off-diagonal elements are the correlations between constructs

5-3- Structural Model

The result of the structural model analysis is shown in Figure 3. Based on the results of path coefficients, confirmation has a significant positive influence on satisfaction (Beta=0.358 ,(and satisfaction significantly influences continuance usage intention (Beta=0.262.(Thus, H2 and H10 are supported. Confirmation also has a significant positive influence on perceived usefulness (Beta=0.268 .(Thus, H1 is supported. The positive effects of perceived usefulness on satisfaction (Beta=0.347) and continuance usage intention (Beta=0.383) are both found to be significant. Thus, H3, and H4 are supported. In addition, perceived susceptibility has a significant positive influence on perceived usefulness (Beta=0.146) and continuance usage intention (Beta=0.279 .(Thus, H5 and H7 are supported. Perceived seriousness also has a significant positive effect on perceived usefulness (Beta=0.128) and continuance usage intention (Beta=0.151), and thus H8 and H9 are supported. However, perceived susceptibility does not significantly influence satisfaction, and therefore H6 was not supported.
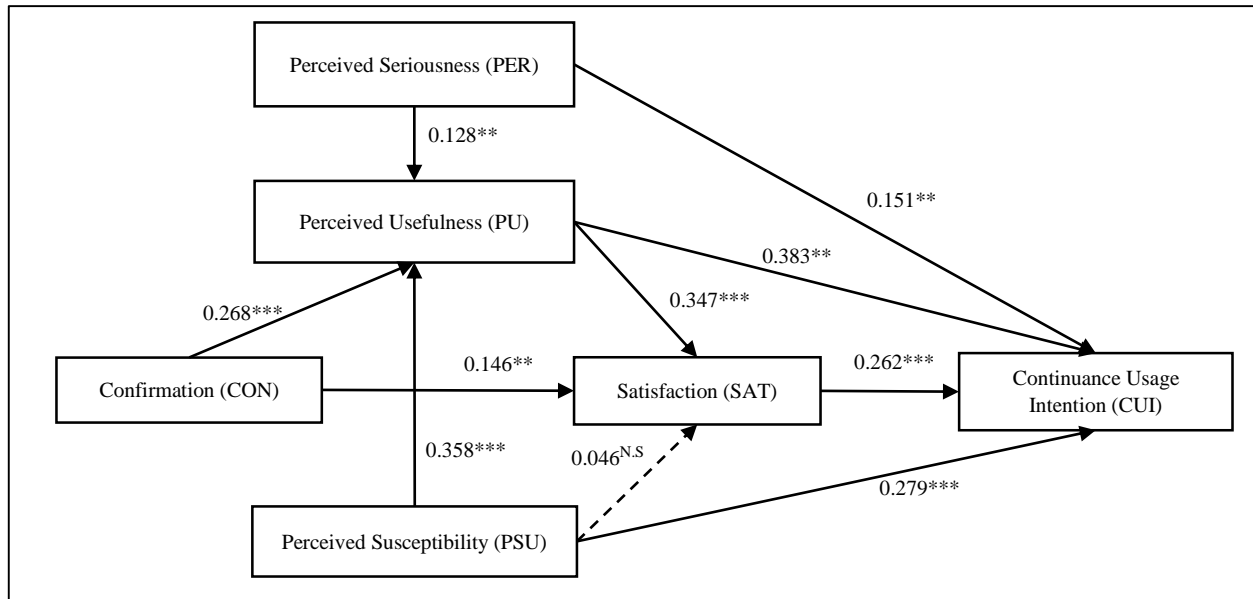
Note: Fit index: Chi-square = 435.494; df = 263; CMIN/df = 1.656; GFI = 0.917; NFI = 0.938; TLI = 0.971; CFI = 0.974; RMSEA = 0.041

*p < 0.05; **p < 0.01; ***p < 0.001, N.S: not significant.

Figure 3. The result of research model.

Considering the explanatory power (R2) for satisfaction and continuance usage intention, satisfaction was explained by two exogenous constructs, namely perceived usefulness (Beta=0.347) and confirmation (Beta=0.358), which account for 51.5% of the total variance together. Continuance usage intention was explained by four exogenous latent variables, namely perceived usefulness (Beta=0.383), satisfaction (Beta=0.262), perceived susceptibility (Beta=0.279), and perceived seriousness (Beta=0.151), which positively affected users' continuance usage intention, accounting for 56.8% of the total variance together. Interestingly, the effect of perceived susceptibility (Beta=0.279) was found to be relatively higher than satisfaction (Beta=0.262), and confirmation was found to have an indirect effect (0.221; p<0.001; 95% CI [0.154, 0.398]) on continuance usage intention through perceived usefulness and satisfaction. This result indicates that an Integrated Expectation-Confirmation and Health Belief Model also has a strong explanatory power in predicting users' continuance usage intention of contactless payment technologies during COVID-19 pandemic.

6- Conclusion

The Covid-19 pandemic has had an impact on many aspects of our daily life and produced a "New normal" phenomenon, one part of which is acceleration of a digital transformation process. E-commerce business in Thailand substantially increased in term of sales during 2020 as a result of lock down and social distancing policy by the Thai government. Contactless technologies are one of mechanisms that help people to navigate this altered daily life, assisting with the avoidance of physical contact with surfaces such as banknotes. An adoption and continuance usage of these technologies does not rely on only "pull factors," but also "push factors" such as a fear of COVID-19 infection. In accordance with this premise, the authors have developed an Integrated Expectation-Confirmation Model and Health Belief Model to explain continuance usage intention of contactless technologies during COVID-19 pandemic.

Based on empirical survey research with 142 samples, the Structural Equation Modelling (SEM) was used to validate a proposed model. The results show that the proposed model has a strong explanatory power in predicting users' continuance usage intention of contactless technologies during COVID-19 pandemic, perceived susceptibility and

perceived seriousness have significantly positive impacts on continuance usage intention, and perceived susceptibility and perceived seriousness have significantly positive impacts on perceived usefulness. These findings imply that contactless technology users are aware of the benefit of contactless technologies as one method to reduce to contact with surfaces such as banknotes and coins or even other people's hands. By using contactless technologies, users can reduce their chances of coming into contact with suspected surfaces. There are some implications from these findings. Firstly, the results of this study attempted to advance the knowledge of continuance usage intention of contactless technologies. To the best of our knowledge, there are few studies that investigate continuance usage intention of contactless technologies by incorporating those two models: namely, the expectation-confirmation model and the health belief model. COVID-19 acts as the push factor and catalyst to force people to adopt contactless technologies and digital transformations. Secondly, a practical implication is that contactless technology developers and banking institutes should promote the benefits of contactless technologies that help users to reduce their chances to make physical contact with surfaces in their daily life.

6-1- Limitations and Research Recommendations

This study has some limitations that should be considered. Initially, the authors only studied users who utilized contactless payment technologies in Thailand. The results should be thoughtfully generalized in other countries with different cultures. Thus, more participants from other countries should be included to detect any significant differences in continuance usage intention of contactless payment technologies. This future research will also make it possible to capture the effects of cultural differences. Secondly, the cross-sectional method was used in this study. Consequently, a specific viewpoint of explanations on how risk perception could change over time is not possible. A longitudinal study is recommended in future research to explore how users could change in their perception, satisfaction, and usage over time.

7- Declarations

7-1- Author Contributions

WP conceptualized and participated study design, coordinated data collection, carried out the initial analyses, drafted the initial manuscript, and read and approved the manuscript. ST participated in study design, guided the methodology coordinated and supervised data collection and analyses, reviewed and edited manuscript. All authors have read and agreed to the published version of the manuscript.

7-2- Data Availability Statement

The datasets generated during and/or analyzed during the current study are not publicly available due to IRB stipulations but are available on request from the corresponding author.

7-3- Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

7-4- Conflicts of Interest

The author declares that there is no conflict of interests regarding the publication of this manuscript. In addition, the ethical issues, including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, and redundancies have been completely observed by the authors.

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