Journal of Ecohumanism
2024
Volume: 3, No: 7, pp. 2196 – 2212
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i7.4371

The Determination of User Retention to Use e-Wallet after COVID-19 Pandemic, (Case Study of G-Wallet in Thailand)

Pitch Prompunthum[1], Suthawan Chirapanda[2]

Abstract

The determinants of G-Wallet user retention has become important. This study examines the factors influencing user retention and the continued use of the G-Wallet application in Thailand. This research investigates the relationships between perceived usefulness, perceived ease of use, satisfaction, confirmation of expectation, relative advantage, compatibility, complexity, behavioral intention, and continuous use behavior.This research is quantitative research with 573 users. Key findings indicate that PU significantly enhances positive user attitudes towards G-Wallet, while PEoU has a negative effect on attitude, suggesting a complex relationship where ease of use may be perceived as diminishing the value of the application. COE positively impacts user satisfaction; however high satisfaction does not directly translate to a strong behavioral intention for continued use. RA and COMP positively affect behavioral intention, while complexity acted as a deterrent. Behavioral intention strongly predicts continuous use behavior, though satisfaction's effect on continued use is significant.

Keywords: *G-Wallet, User Retention, Technology Acceptance Model, Technology Continuance Theory, Innovation Diffusion Model, Satisfaction, Behavioral Intention, Continuous Use Intention.*

Introduction

Digital financial services, particularly in developing economies, have undergone a rapid transformation with the rise of e-wallet applications. G-Wallet, a government-backed digital wallet, emerged as a key player during Thailand's COVID-19 relief efforts. However, despite its initial success, the platform faces challenges in retaining users in a predominantly cash-based economy. Understanding the drivers of continuous use for G-Wallet can provide insights into how digital payment platforms can secure long-term user engagement.

This study explores the factors influencing G-Wallet's retention through the lens of key theoretical models: the Technology Acceptance Model (TAM), Technology Continuance Theory (TCT), and the Innovation Diffusion model. This study delves into exploring different relationships between key research constructs, including the perceived ease of use (PeoU), perceived usefulness (PU), attitude (ATT), confirmation of expectation (COE), satisfaction (SAT), relative advantage (RA), compatibility (COMP), complexity (COMX), behavioral intention (BI), and continuous use behavior (CU) to seek to provide guidance for strategies that can enhance G-Wallet's user retention and align with broader financial inclusion goals in Thailand.

Literature Review

Technology Acceptance Model (TAM)

The Technology Acceptance Model (TAM) has been widely applied to understand technology adoption and user behavior in various contexts, including financial services. Proposed by Davis (1989), TAM posits that Perceived Usefulness (PU) and Perceived Ease of Use (PEoU) are the primary factors influencing users' attitudes towards technology, ultimately shaping their intention to use and their actual usage behavior.

[1] Business School, University of the Thai Chamber of Commerce, Email: pitch@e-merchant.co.th.
[2] Business School, University of the Thai Chamber of Commerce, 126/1 Vibhavadee Rangsit, Dindeang, Bangkok 10400 THAILAND, Email: suthawan_chi@utcc.ac.th, (Corresponding Author)

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PU refers to the degree to which a user believes that using a particular system enhances their performance, while PEoU refers to the user's perception of the effort required to use the system.

Several studies have validated TAM in the context of e-wallets. For example, Sarassina (2022) showed that PU was a critical determinant of user satisfaction and adoption of e-wallets in Southeast Asia. Similarly, Ariffin *et al.* (2021) found that PU had a stronger influence on e-wallet adoption than PEoU, suggesting that users prioritize perceived benefits over the simplicity of the interface. In contrast, other studies have noted that PEoU can play a more significant role in cases where users lack prior exposure to digital payment systems (Venkatesh & Davis, 2000).

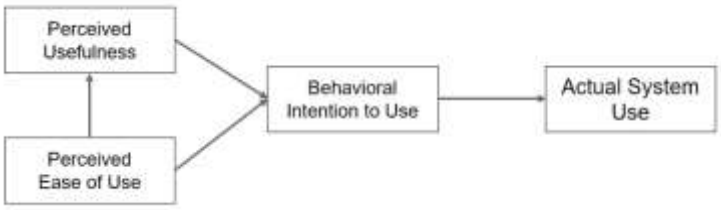


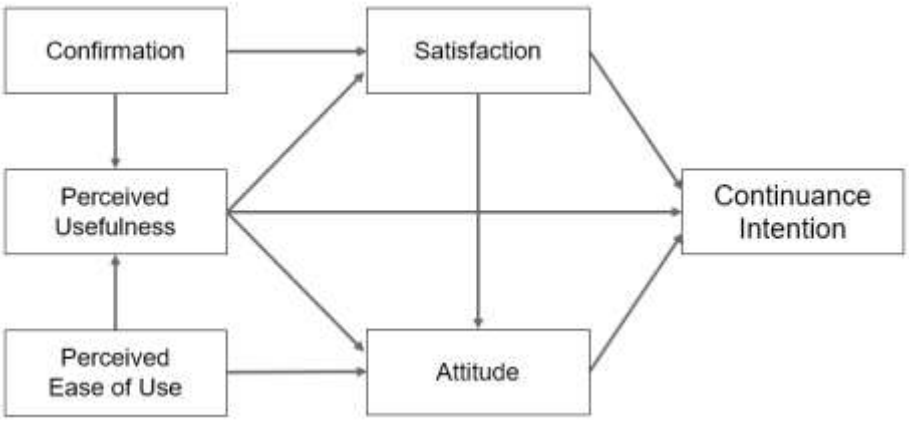
Figure 1. Technology Acceptance Model

Technology Continuance Theory (TCT)

The Technology Continuance Theory (TCT), an extension of TAM, introduces the concept of post-adoption behavior, emphasizing the factors that influence users' intention to continue using a technology. TCT highlights the role of Confirmation of Expectations (COE) and Satisfaction (SAT) in shaping Behavioral Intention (BI) and Continuous Use Behavior (CU) (Liao *et al.*, 2009). Confirmation refers to the extent to which the system meets users' initial expectations, and satisfaction represents the emotional response to this confirmation.

Empirical research has shown that users are more likely to continue using a system if it meets their expectations, leading to higher satisfaction levels (Bhattacherjee, 2001). In the context of e-wallets, satisfaction is a crucial determinant of long-term engagement, as users are more likely to remain loyal to a platform that consistently meets or exceeds their expectations (Daragmeh *et al.*, 2021). However, as observed in the present study, high satisfaction does not automatically translate into a strong intention to continue use intention, suggesting the need for additional factors to be considered.

Figure 2. Technology Continuance Theory



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Innovation Diffusion Model

The Innovation Diffusion model, proposed by Rogers (1983), provides another lens through which to view technology adoption and retention. This model identifies five key attributes that influence users' decisions to adopt new technologies: Relative Advantage (RA), Compatibility (COMP), Complexity (COMX), Trialability, and Observability. RA refers to the perceived benefits of the innovation compared to existing solutions, while COMP measures how well the innovation fits with users' needs and existing systems. Conversely, COMX refers to the difficulty in understanding and using innovation, which can deter adoption.

In the context of G-Wallet, RA and COMP have emerged as critical factors influencing user retention. Prior research suggests that users are more likely to continue using digital payment platforms that align with their existing financial behaviors and offer clear advantages over traditional payment methods (Miller, 2015). On the other hand, high levels of complexity can serve as a barrier to continuous use, particularly for users who may not be digitally literate or accustomed to mobile payment systems.

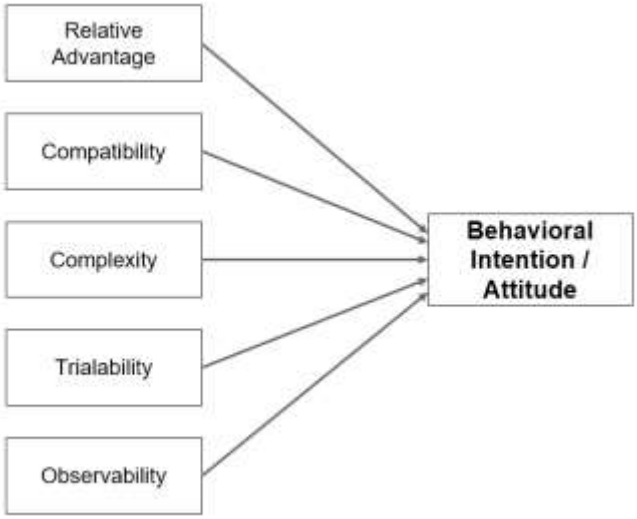

Figure 3. Innovation Diffusion Model

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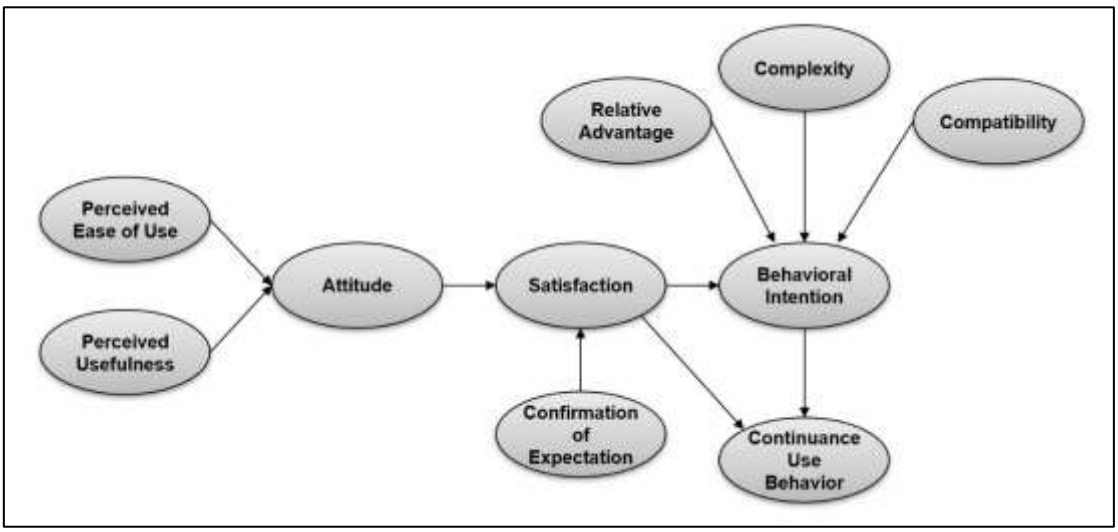
Conceptual Model and Hypothesis Development

Based on the literature review and the theoretical model adoption, this research adopts theoretical adoption from Technology Acceptance Model (TAM), Technology Continuance Theory (TCT), and the Innovation Diffusion model illustrates the following conceptual framework.

Figure 4. Conceptual Model for Research



Research hypotheses presented in the following lists.

H1: Perceived Ease of Use (of e-wallet application) is a significant predictor of attitude (towards e-wallet application).

H2: Perceived Usefulness (of e-wallet application) is a significant predictor of attitude (towards e-wallet application).

H3: Confirmation of expectations (from the e-wallet application) positively affects the satisfaction (received from the e-wallet application).

H4: Attitude (towards e-wallet application) has a positive significant effect on satisfaction (received from e-wallet application).

H5: Satisfaction (received from e-wallet application) has a positive significant effect on behavioral intention to use e-wallet application.

H6: Relative Advantage of e-wallet application has a positive significant effect on behavioral intention to use e-wallet application.

H7: Compatibility of e-wallet application has a positive significant effect on behavioral intention to use e-wallet application.

H8: Complexity of e-wallet application has a negative significant effect on behavioral intention to use e-wallet application.

H9: Behavioral intention (to use e-wallet application) has a positive significant effect on the continuous use intention (of e-wallet application).

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H10: Satisfaction (received from using e-wallet application) has a positive significant effect on the continuous use intention (of e-wallet application).

Methodology

Research Design

This study adopts a quantitative research strategy to explore factors influencing user retention and continuous use of the G-Wallet application in Thailand. A close-ended questionnaire was applied with the utilization of statistical analysis – using Structural Equation Modelling (SEM) analysis to investigate the interaction of key variables i.e. perceived usefulness (PU), perceived ease of use (PEoU), attitude (ATT), confirmation of expectation (COE), satisfaction (SAT), relative advantage (RA), compatibility (COMP), complexity (COMX), behavioral intention (BI) and Continuous Use Intention (CU).

Sampling and Data Collection

The study used a non-probabilistic sampling strategy to ensure representation of different user demographics within the G-Wallet population. The population was segmented based on age groups, and geographic regions. This sampling method was chosen to ensure a balanced representation of all demographic groups, minimizing bias and allowing for more generalized results. The surveys screened the inclusion criteria of the respondents age, which must be of age 18 and above, the respondents must also be a Thai nationality and reside permanently in Thailand, in addition, he/she must be an active user of G-Wallet, who experienced the use within the last 24-months.

Following Yamane's minimum sample size strategy, it is required a minimum of 400 respondents to participate in data analysis, based on the population size of 40 million users of G-Wallet users in Thailand. The Yamane's formulae and sample size calculation illustrates as following:

$$n = \frac{N}{1+N(e)^2} = \frac{40{,}000{,}000}{1+40{,}000{,}000(0.05)^2} = \frac{40{,}000{,}000}{100{,}001} = 399.99 \approx 400\ respondents \quad (1)$$

Where: n = minimum sample size

N = population size

e = sampling error (standard 5% or 0.05)

Determination formula for a known population, a minimum sample size of 400 was necessary to ensure a 95% confidence level with a 5% margin of error. However, the sample size was finally increased to 573 participants to enhance reliability.

Data Collection Method: The data were collected using **face-to-face interviews**, where respondents were approached in person. Trained interviewers asked the survey questions and recorded the responses on behalf of the respondents. This approach was particularly useful in reaching older and rural participants who might be less familiar with digital survey platforms.

Interview Process: Interviewers were provided with structured questionnaires and followed standardized procedures to ensure consistency in data collection. Each respondent was asked to provide their informed consent before participating, and the interviews were conducted in neutral settings, targeting gas stations', convenience stores' and hyperstores' visitors, to ensure comfort and accessibility for all participants.

Questionnaire Format: The survey consisted of 7-point Likert-scale questions (ranging from 1 = strongly disagree to 7 = strongly agree), covering the key constructs of Perceived Usefulness (PU), Perceived Ease of Use (PEoU), Attitude (ATT), Confirmation of Expectations (COE), Satisfaction (SAT), Relative

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Advantage (RA), Compatibility (COMP), Complexity (COMX), Behavioral Intention (BI), and Continuous Use Behavior (CU).

Measurement Instruments

The measurement instruments were adapted from established scales used in prior research. Perceived Usefulness (PU), Perceived Ease of Use (PEoU) and Attitude (ATT) were measured using Davis' (1989) TAM scale, while Satisfaction (SAT) and Behavioral Intention (BI) were measured using Liao *et al.*' (2009) TCT model to reflect the Continuous Use Intention (CU). Relative Advantage (RA), Compatibility (COMP), Complexity (COMX) were measured based on Rogers' (1983) Innovation Diffusion model.

Reliability and Validity Test: To ensure internal consistency, Cronbach's Alpha Reliability Test (CART) was used to assess the reliability of the constructs. The reliability score has been acquired by 30 preliminary respondents, with all items exceeding the 0.70 threshold, indicating strong internal consistency. In addition, an IOC (item-objective-congruence) validity analysis was performed to evaluate the quality and appropriateness of individual items with a scale. The IOC validity test was assessed from 5 experts, the IOC validity value was determined as 0.83, which exceeds the accepted threshold of 0.50 indicating a strong level of content validity for the instrument.

Data Analysis

Data were analyzed using SPSS to examine descriptive statistics and Structural Equation Modeling (SEM) to test the hypothesized relationships and model fit. Model fit was assessed using key indicators such as the Chi-square/df ratio, Goodness of Fit Index (GFI), Root Mean Square Error of Approximation (RMSEA), and the Comparative Fit Index (CFI). All indices indicated an acceptable model fit, confirming the robustness of the model.

Table 1. Model Fit Indices

Measure	Model Fit	Expected Threshold (Citation)	Remarks
CMIN (Chi-Square)	Default model: **2.592** Independence model: **27.056**	< 3.0 (Kline, 2011)	The chi-square value is low, indicating an acceptable model fit.
RMR (Root Mean Square Residual)	Default model: **.080**	< .05 (Hu & Bentler, 1999)	Within acceptable range, indicating a good fit.
GFI (Goodness of Fit Index)	Default model: **.903**	> .90 (Hu & Bentler, 1999)	Good fit.
RMSEA (Root Mean Square Error of Approximation)	Default model: **.053**	< .06 (Hu & Bentler, 1999)	Good fit.
NFI (Normed Fit Index)	Default model: **.914**	> .90 (Bentler, 1990)	Good fit.
CFI (Comparative Fit Index)	Default model: **.945**	> .90 (Bentler & Bonett, 1980)	Good fit.

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Measure	Model Fit	Expected Threshold (Citation)	Remarks
ECVI (Expected Cross-Validation Index)	Default model: **2.028**	Lower is better (Browne & Cudeck, 1993)	Indicates model fit in cross-validation; lower is better.

Results

General Findings

The respondent distribution is geographically diverse, with the highest concentrations in Bangkok and its vicinity (28.3%) and North-East Thailand (26.5%). These are followed by Central (20.6%), Northern (14.7%) and Southern Thailand (9.9%). In terms of age, the majority of respondents are between 26 and 42 years old (45.9%) followed by the generation Z of age 18 to 25 years group (27.1%). Respondents over 58 years old make up 4.4% of the total. The majority of respondents primarily used G-Wallet for the "Government Lottery" service, making it the most utilized feature (86.4%). This also solidified "E-payment" as the main purpose for using G-Wallet (91.8%). Respondents indicated that "Promotions and discounts" were the most influential factor in their decision to use G-Wallet (74.3%), while "Convenience" and "Security" were less significant, cited by 9.3% and 3.0% of users, respectively. A significant majority (83.4%) reported rarely encountering technical issues with G-Wallet, and 59.5% found the service convenient and sufficient for their needs. The most important enhancement suggested by respondents was the addition of more merchant partnerships (44.9%). Overall, 76.3% of respondents were "mildly likely" to recommend G-Wallet to others.

Descriptive Statistics

The descriptive statistics provide an overview of the key variables used in this study, including perceived usefulness (PU), perceived ease of use (PEoU), attitude (ATT), confirmation of expectations (COE), satisfaction (SAT), relative advantage (RA), compatibility (COMP), Complexity (COMX), behavioral intention (BI), and continuous use behavior (CU).

Table 2. Descriptive Statistics for Key Variables

Indicator: Statements	N	Mean	Standard Deviation
Variable: Perceived Usefulness			
PU1: I find the g-wallet application to be useful to me.	573	5.35	.679
PU3: Using the g-wallet application enhances effectiveness.	573	5.40	.671
PU4: Using the g-wallet application is more convenient than using cash payment.	573	5.40	.682
Variable: Perceived Ease of Use			
PEoU2: Using g-wallet application requires minimum effort to learn.	573	5.42	.658
PEoU3: My interaction with the g-wallet application is understandable.	573	5.38	.683
PEoU4: It was easy for me to become skillful at using g-wallet application.	573	5.42	.678
Variable: Attitude			
ATT1: I believe that using g-wallet services is a good idea.	573	5.18	.663
ATT3: Using g-wallet services is interesting.	573	5.20	.713

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Indicator: Statements	N	Mean	Standard Deviation
ATT4: G-Wallet provides a wide range of other financial products.	573	5.23	.700
Variable: Confirmation of Expectation			
COE2: The service level provided by the g-wallet application was better than what I expected.	573	5.21	.594
COE4: The experience with g-wallet corresponds with my anticipation.	573	5.19	.631
COE5: Overall, most of my expectations about the g-wallet application were confirmed.	573	5.24	.655
Variable: Satisfaction			
SAT2: I am satisfied with the performance of the g-wallet application.	573	5.11	.690
SAT3: I believe that my decision to use g-wallet was a wise decision.	573	5.10	.643
SAT4: I think I did the right thing by deciding to use the g-wallet application.	573	5.14	.642
Variable: Relative Advantage			
RA1: G-wallet are better than using cash or other means of payment.	573	4.81	.792
RA2: G-wallet is more interesting than other means of payment.	573	4.78	.808
RA3: Using g-wallet made my transaction experience better than I would have otherwise.	573	4.70	.813
Variable: Compatibility			
COMP1: G-wallet application is compatible with the devices that I own.	573	4.54	1.151
COMP2: G-wallet application is compatible with my lifestyle.	573	4.56	1.166
COMP3: G-wallet application is accepted across majority of the stores where I shop at.	573	4.51	1.148
Variable: Complexity			
COMX1: Using g-wallet application was a challenge.	573	5.21	.643
COMX2: I prefer using cash over g-wallet application.	573	5.13	.564
COMX3: It took me time to understand the payment method in g-wallet application.	573	5.14	.625
Variable: Behavioral Intention			
BI1: I intent to use g-wallet application for online shopping in the next month.	573	5.09	1.286
BI4: I am inclined to use the g-wallet application for making in-store purchases in the coming weeks.	573	4.64	1.188
BI5: I would not consider switching to other g-wallet in the near future.	573	4.56	1.210
Variable: Continuous Use Behavior			
CU1: I have integrated g-wallet application into my regular payment routine.	573	4.41	1.166
CU3: I have made recurring payments using the g-wallet application without considering alternatives.	573	4.32	1.209
CU4: I have a history of using g-wallet application for various types of transactions over time.	573	4.39	1.233

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The descriptive statistics reveal that respondents view G-Wallet positively. The G-Wallet application is considered useful (mean of 5.35), and effective, particularly for convenience over cash payments, both scoring means of 5.40. It is also easy to understand (mean of 5.38), with minimal effort required to learn and become skillful (means of 5.42). Respondents believe that using G-Wallet is a good idea (mean of 5.18), find it interesting (mean of 5.20), and appreciate its broad range of financial products with a mean of 5.23. Respondents moderately agree that the service level provided by G-Wallet exceeded and corresponded with their expectations, with means of 5.21 and 5.19, respectively. They confirmed that the application generally met their expectations (mean of 5.24). Satisfaction levels are generally high and overall performance rated positively (mean of 5.11). They believe they make a wise decision by using it, with means of 5.10 and 5.14, respectively. Despite this, respondents moderately agree that G-Wallet is more interesting than other means of payment and has improved their transaction experience, with means of 4.78 and 4.70, respectively. Among these, the statement "G-Wallet are better than using cash or other means of payment" received the highest agreement (mean of 4.81). Compatibility with devices and shopping preferences scored moderately (means ranging from 4.51-4.56). Challenges were noted, particularly with understanding the payment method (mean of 5.21), and that it took time to understand its payment method, while cash was still preferred by some (mean of 5.14 and 5.13, respectively). While G-Wallet use for online shopping was moderate (mean of 5.09), intentions for in-store purchases and not switch to another g-wallet were lower (means of 4.64 and 4.56, respectively). Continuous use behavior showed weaker agreement, with lower means for integrating G-Wallet into daily routines (mean of 4.41).

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Structural Model and Hypothesis Testing

The Structural Equation Modeling (SEM) analysis was conducted to test the hypothesized relationships between the variables. All indices indicated an acceptable model fit, confirming the robustness of the model, with a Chi-square/df ratio of 2.592, Goodness of Fit Index (GFI) of 0.903, Comparative Fit Index (CFI) of 0.945, and a Root Mean Square Error of Approximation (RMSEA) of 0.053, indicating that the structural model was acceptable for further analysis.

Figure 5. Structural Model

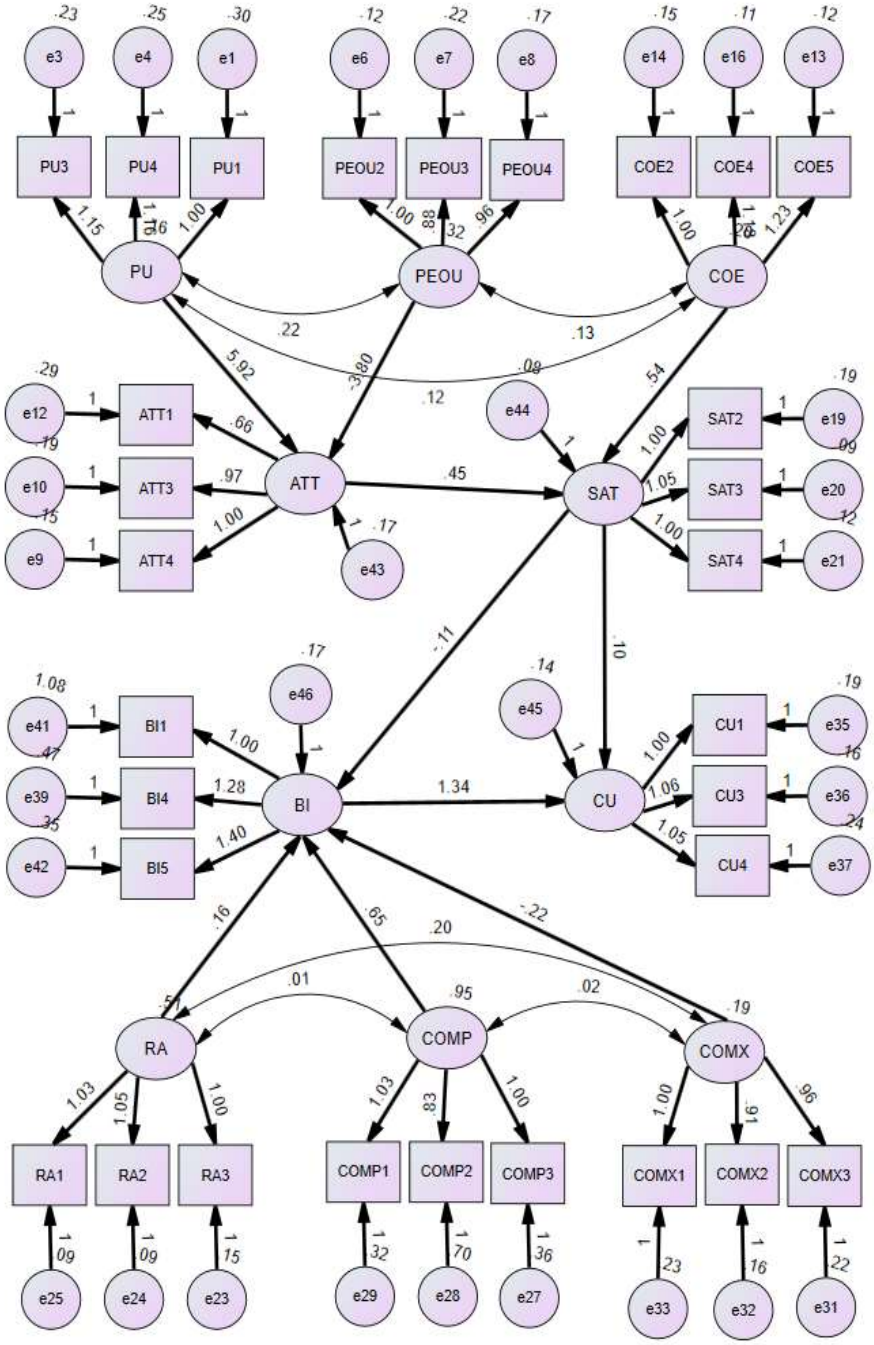

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Table 3. Structural Model Results and Hypotheses Testing

Hypotheses	Estimate	Significance	Direction	Relationship
H1: PEoU → ATT	-3.798	.002	Negative	Significant negative effect. PeoU negatively impacts ATT.
H2: PU → ATT	5.919	***	Positive	Significant positive effect. PU positively impacts ATT.
H3: COE → SAT	0.535	***	Positive	Significant positive effect. COE positively impacts SAT.
H4: ATT → SAT	0.447	***	Positive	Significant positive effect. ATT positively impacts SAT.
H5: SAT → BI	-0.107	.023	Negative	Significant negative effect. SAT negatively impacts BI.
H6: RA → BI	0.162	.001	Positive	Significant positive effect. RA positively impacts BI.
H7: COMP → BI	0.645	***	Positive	Significant positive effect. COMP positively impacts BI.
H8: COMX → BI	-0.224	.015	Negative	Significant negative effect. COMX negatively impacts BI.
H9: BI → CU	1.343	***	Positive	Significant positive effect. BI positively impacts CU.
H10: SAT → CU	0.101	.046	Positive (not significant)	Not significant at the 0.05 level. Weak positive effect.

In the context of G-Wallet in Thailand, there are several key findings reveal; Perceived Usefulness (PU) is a strong positive predictor of Attitude (ATT) towards the application, while Perceived Ease of Use (PEOU) negatively impacts Attitude (ATT). Confirmation of Expectations (COE) and Attitude (ATT) both significantly enhance Satisfaction (SAT), though Satisfaction's influence on Behavioral Intention (BI) is slightly negative. Relative Advantage (RA) and Compatibility (COMP) positively affect Behavioral Intention (BI), whereas Complexity (COMX) has a negative effect. Behavioral Intention (BI) significantly boosts Continuous Use (CU), but the impact of Satisfaction (SAT) on Continuous Use (CU) is borderline significant. These results highlight the importance of Perceived Usefulness (PU) and Confirmation of Expectations (COE) in shaping user attitudes and satisfaction, as well as the complex interplay of factors influencing continued usage of e-wallet applications.

Discussion

The strong positive impact of Perceived Usefulness (PU) on Attitude (ATT) reaffirms the established understanding that usefulness may be the more dominant factor influencing user attitudes in the context of e-wallet services, especially in environments where functionality and practical benefits are highly valued by users. The negative relationship between Perceived Ease of Use (PEoU) and Attitude (ATT) challenges conventional understanding and implied that users might associate simplicity with a lack of sophistication or value. Therefore, while PEoU is traditionally viewed as a critical determinant of positive user attitudes, this finding suggests that, in the context of the G-Wallet application, users might value other aspects of

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the service more, and excessive simplicity might detract from their overall experience. The significant positive effect of Confirmation of Expectations (COE) and Attitude (ATT) on Satisfaction (SAT) highlights the importance of effectively managing user expectations through design, functionality, and user experience, fostering higher level of satisfaction and long-term engagement that led to continuous use and loyalty. However, Satisfaction's influence on Behavioral Intention (BI) is slightly negative, indicating that despite being satisfied with the G-Wallet application, users may be influenced by other factors such as concerns about security, privacy or possibly related to user habits, alternative options in the market or external influences. The significant positive impact of Relative Advantage (RA) and Compatibility (COMP) on Behavioral Intention (BI), emphasize the need for the G-Wallet to be positioned as a superior alternative to other payment methods and compatible with users' existing digital habits. Whereas Complexity (COMX) has a negative effect on Behavioral Intention (BI), acts as a barrier, reinforcing the need for simplicity without compromising perceived value. The strong positive effect of Behavioral Intention (BI) on Continuous Use Intention (CU) suggests that users who initially intend to use the application are highly likely to continue using it in the long term. However, the weak positive effect of Satisfaction (SAT) on CU suggests that while users who are satisfied with the G-Wallet application may be more likely to continue using it, satisfaction alone may not be sufficient to drive long-term engagement.

Implications

Theoretical Implications

The significant positive relationship between perceived usefulness (PU) and attitude (ATT) supports the core assumption of TAM: users are more likely to have favorable attitudes towards technology they perceive as useful. However, the negative effect of perceived ease of use (PEoU) on Attitude is a surprising finding. Traditionally, ease of use is expected to enhance user attitudes, but in this context, it appears that users may associate simplicity with a lack of sophistication or value. This suggests that for fintech applications like G-Wallet, where security and advanced features are paramount, ease of use might not always be a favorable driver of user attitudes. This finding provides new insight into how TAM can be applied in fintech contexts, where functionality might be prioritized over simplicity.

The negative relationship between satisfaction (SAT) and behavioral intention (BI) is another unexpected result. In most continuance models, satisfaction is a strong predictor of future use intentions. However, in the case of G-Wallet, high satisfaction did not necessarily translate into higher behavioral intention, suggesting that other factors may play a more significant role in shaping long-term usage. One potential explanation is that users may be satisfied with the platform but not loyal, given the increasing competition in the fintech industry. This highlights the need for G-Wallet to go beyond merely satisfying users and instead foster habitual use or offer unique incentives to encourage loyalty.

The strong positive effects of Relative Advantage (RA) and Compatibility (COMP) on Behavioral Intention (BI) align with Rogers' Innovation Diffusion model, which emphasizes the importance of perceived benefits and alignment with users' lifestyles in driving technology adoption. This finding underscores the importance of ensuring that G-Wallet not only adds tangible value compared to traditional payment methods but also integrates seamlessly into users' daily routines. G-Wallet's focus on providing secure, government-backed services enhances its relative advantage, while expanding integration with other public services can improve compatibility, fostering long-term retention.

Practical Implications

The study's findings offer practical guidance for improving user engagement and retention on G-Wallet. First, the positive impact of Perceived Usefulness suggests that G-Wallet must continuously innovate and introduce features that add clear value to users, such as financial management tools or seamless integration with government services. Emphasizing these benefits in marketing campaigns can enhance user perceptions and improve attitudes towards the platform.

Journal of Ecohumanism
2024
Volume: 3, No: 7, pp. 2196 – 2212
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i7.4371

Given the negative impact of Perceived Ease of Use on attitudes, G-Wallet must strike a careful balance between simplicity and functionality. Users expect fintech platforms to provide a high level of security and advanced features. Therefore, while the interface should remain user-friendly, it is essential to offer more sophisticated features that appeal to users' need for control and security in managing their finances. This finding may be particularly relevant for fintech developers aiming to attract a more tech-savvy or security-conscious user base.

The negative relationship between Satisfaction and Behavioral Intention suggests that G-Wallet needs to move beyond satisfaction and focus on fostering habitual use through loyalty programs and rewards systems. Offering incentives for frequent usage, such as cashback rewards or tiered loyalty benefits, can create a sense of commitment among users, driving long-term retention even when satisfaction levels are already high. Additionally, expanding the platform's integration with daily activities, such as recurring bill payments or public transportation services, can help to make G-Wallet indispensable to users.

Finally, the significant positive effects of Relative Advantage and Compatibility suggest that G-Wallet should continue to emphasize its unique advantages over traditional payment methods. This includes reinforcing its government backing and lower transaction fees, which enhance its relative advantage. To further improve compatibility, G-Wallet should consider expanding its service offerings to include a wider range of third-party applications, making it an integral part of users' financial ecosystems.

Conclusion

This study explored the key factors influencing user retention in G-Wallet, a government-supported digital wallet in Thailand, and offers valuable insights. While perceived usefulness was identified as a key determinant of user attitudes, the findings indicate that satisfaction alone may not ensure long-term usage. Factors such as relative advantage and compatibility positively influence behavioral intention, while complexity acts as a deterrent, highlighting the importance of these constructs in shaping user behavior. The nuanced and complex relationships between these factors highlight the importance of perceived usefulness and confirmation of expectations in shaping user attitudes and satisfaction, as well as the complex interplay of factors influencing continued usage of e-wallet applications. These results contribute to both academic understanding and practical strategies for promoting digital wallet adoption and retention. As Thailand progresses towards a digital economy, platforms like G-Wallet play a pivotal role in promoting financial inclusion and enabling citizens to participate in the digital financial ecosystem. To sustain user engagement, developers and policymakers should focus on enhancing perceived usefulness, managing user expectations, and emphasizing G-Wallet's relative advantages and compatibility.

While this study employs solely a quantitative method approach, providing statistical and objective insights. Incorporating a mixed-method approach in future research could provide a more holistic understanding by combining quantitative data with qualitative insights. Geographic-wise, the sampling strategy for this study limit to G-Wallet users in Thailand, whom the preferences may differ from those in other regions – the future research should consider conducting comparative studies across different cultural contexts to enhance the generalizability of the results. Finally, this research faced difficulties in collecting sample size leading to the difference from the intended sample size. Despite these challenges, the sample collected remains representative of the target population, allowing for valid and generalizable findings – the future research suggests that the sample screening strategy should allow flexibility of inclusion criterion given more opportunities to experienced G-Wallet users eligible for research contributions. The researcher believes that employing larger and more diverse samples could further enhance the robustness of the findings and allow for more detailed subgroup analyses, thereby strengthening the overall validity and applicability of the research outcomes.

References

Abdul-Halim, N.A., Vafaei-Zadeh, A., Hanifah, H., Teoh, A.P., & Nawaser, K. (2022). Understanding the determinants of e-wallet continuance usage intention in Malaysia. Quality & quantity, 56, 3413-3439.

Journal of Ecohumanism
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DOI: https://doi.org/10.62754/joe.v3i7.4371

Abushamleh, H., Al-Hiyari, N., & Qusef, A. (2021). The Intention to Use E-wallet During Covid-19 Pandemic in Developing Country. 12th International Conference on Information and Communication Systems (ICICS), Valencia, Spain. 310-316.

Adam, A.M. (2021). A study on sample size determination in survey research. New Ideas Concerning Science and Technology, 4, 125-134.

Ahdika, A. (2017). Improvement of quality, interest, critical, and analytical thinking ability of students through the application of research based learning (RBL) in introduction to stochastic processes subject. International Electronic Journal of Mathematics Education, 12(2), 167-191.

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179-211.

Al-Rahmi, W.M., Yahaya, N., Aldraiweesh, A.A., Alamri, M.M., Aljarboa, N.A., Alturki, U., & Aljeraiwi, A.A. (2019). Integrating technology acceptance model with innovation diffusion theory: An empirical investigation on students' intention to use E-learning systems. IEEE Access, 7, 26797-26809.

Al-shanableh, N., Alzyoud, M., Alomar, S., Kilani, Y., Nashmush, E., Al-Hawary S., & Al-Momani A. (2024). The adoption of big data analytics in Jordanian SMEs: An extended technology organization environment framework with diffusion of innovation and perceived usefulness. International Journal of Data and Network Science, 8, 753-764.

Alam, S.S., Masukujjaman, M., Susmit, S., Susmit, S. & Aziz, H.A. (2022). Augmented reality adoption intention among travel and tour operators in Malaysia: mediation effect of value alignment. Journal of Tourism Futures.

Alharbi, S. & Drew, S. (2014). Using the Technology Acceptance Model in Understanding Academics' Behavioural Intention to Use Learning Management Systems. (IJACSA) International Journal of Advanced Computer Science and Applications, 5(1), 143-155.

Aprilia, C. & Amalia, R. (2022). How Perceived Security Influences Continuance Intention to Use Mobile Wallet. Jurnal Minds: Manajemen Ide dan Inspirasi, 9(2), 271-288.

Ariffin, S.K., Abd Rahman, M.F.R., Muhammad, A.M., & Zhang, Q. (2021). Understanding the consumer's intention to use the e-wallet services. Spanish Journal of Marketing – ESIC, 25(3), 446-461.

Arora, S.C., Sharma, M., & Singh, V.K. (2022). Using diffusion of innovation framework with attitudinal factor to predict the future of mobility in the Indian market. Environmental Science and Pollution Research, 30, 98655-98670.

Arunachalam, T. (2019). An investigation on the role of perceived ease of use perceived use and self-efficacy in determining continuous usage intention towards an e-learning system. The Online Journal of Distance Education and e-Learning, 7(4), 268-276.

Atkinson, N.L. (2007). Developing a questionnaire to measure perceived attributes of eHealth innovations. American journal of health behavior, 31(6), 612-621.

Banchongduang, S. (2022). KTB set to roll out digital loans on Pao Tang in 2023. Retrieved October 14, 2023, from https://www.bangkokpost.com/business/2460865/ktb-set-to-roll-out-digital-loans-on-pao-tang-in-2023

Bashir, A. & Kivrak, S. (2020). Investigating engineer's actual usage intention to apply construction technologies in emerging countries. Journal of Measurements in Engineering, 8(3), 80-89.

Bhattacherjee, A. (2001). Understanding Information Systems Continuance: An Expectation-Confirmation Model. MIS Quarterly, 25, 351-370.

Bloomfield, J., & Fisher, M.J. (2019). Quantitative research design. Journal of the Australasian Rehabilitation Nurses Association, 22(2), 27-30.

Boonkong, C., & O'Connor, P. (2022). Cash is still king in Thailand with a cashless society not on the cards here anytime soon - Thai Examiner. Retrieved June 29, 2023, from https://www.thaiexaminer.com/thai-news-foreigners/2022/05/01/cash-still-king-people-reject-app-payments

Brown, J.D. (2002). The Cronbach alpha reliability estimate. Shiken:JALT Testing & Evaluation SIG Newsletter, 6(1), 17-19.

Chang, S.C., & Tung, F.C. (2008). An empirical investigation of students' behavioural intentions to use the online learning course websites. British Journal of Educational Technology, 39(1), 71-83.

Chen, P., Shen, Y., Li, Z., Sun, X., Feng, X.L., & Fisher, E.B. (2022) What Factors Predict the Adoption of Type 2 Diabetes Patients to Wearable Activity Trackers – Application of Diffusion of Innovation Theory. Frontiers in Public Health, 9(773293), 1-11.

Chih-Chung, C. and Chang, S.C. (2005). Discussion on the Behavior Intention Model of Consumer Online Shopping. Journal of Business and Management, 11(1), 41-57.

Choshaly, S.H. (2019). Applying innovation attributes to predict purchase intention for the eco-labeled products. International Journal of Innovation Science, 11(4), 583-599.

Dabphet, A. (2016). Survey of the ASEAN market - Thai people have low credit card holdings, e-Wallet opportunities. Retrieved October 17, 2023, from https://www.marketingoops.com/news/tech-update/ewallet-thailand-and-asean-by-truemoney

Daragmeh, A., Sági, J. & Zéman, Z. (2021). Continuous Intention to use E-Wallet in the Context of the COVID-19 Pandemic: Integrating the Health Belief Model (HBM) and Technology Continuous Theory (TCT). Journal of Open Innovation: Technology, Market, and Complexity, 7(2), 132.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. Management Science, 35(8), 982-1003.

Davis, F.D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. MIS Quarterly, 13(3), 319-340.

Dehghani, M. (2018). Exploring the motivational factors on continuous usage intention of smartwatches among actual users. Behaviour & Information Technology, 37(2), 145-158.

Dirnaeni, D., Handrijaningsih, L., Mariani T.R, S., & Anisah, A. (2021). PERSEPSI KEMUDAHAN, CUSTOMER RELATIONSHIP MANAGEMENT DAN KUALITAS LAYANAN TERHADAP LOYALITAS PELANGGAN E-WALLET MELALUL. Ultima Management : Journal Ilmu Manajemen, 13(2), 287-303.

Farajnezhad, S., Noubar, H.B.K., & Azar, S.F. (2021). The impact of diffusion of innovation model on user behavioral intention in adopting social media marketing. International Journal of Nonlinear Analysis and Applications, 12(2), 1611-1632.

Fiscal Policy Office. (2021, October 1). ข่าวกระทรวงการคลัง ฉบับที่ 181/2564 โครงการคนละครึ่ง ระยะที่ 3 โอนเงินรอบ 2 เพิ่มเติม 1,500 บาท วันนี้. Retrieved October 17, 2023, from https://www.คนละครึ่ง.com/announcement

Furinto, A., Tamara, D., Hartono, D., & Simamora E. (2022). Continuation Use of Digital Wallet Using Extended ECM Model in Indonesia. Industrial Engineering and Operations Management, 203-216.

Goertz, G., & Mahoney, J. (2012). Concepts and measurement: Ontology and epistemology. Social Science Information, 51(2), 205-216.

Google, Temasek, & Bain and Company. (2019). e-Conomy SEA 2019 Swipe up and to the right: Southeast Asia's $100 billion Internet economy. Google & Temasek / Bain.

Google, Temasek, & Bain and Company. (2020). e-Conomy SEA 2020 At full velocity: Resilient and racing ahead. Google, Temasek and Bain.

Government Savings Bank. (2017, August 1). Mobile Wallet กระเป๋าเงินดิจิทัล ในยุคสังคมไร้เงินสด. Retrieved September 2, 2023, from https://www.gsbresearch.or.th/published-works/economic-and-business-research/1894/?type=1

Halim, E., Chandra, A.N., Salim, J., Margarita, V., Destiano, R., & Hebrard M. (2021). Predicting the Determinants of Continuous Intention to Use E-Wallet in Indonesia Post-COVID-19 Pandemic. 2021 International Conference on Information Management and Technology (ICIMTech), IEEE, 545-550.

Islam, A.Y.M.A., Gu, X., Crook, C., & Spector, J.M. (2020). Assessment of ICT in Tertiary Education Applying Structural Equation Modeling and Rasch Model. SAGE Open, 1-17.

Jameel, A.S., Ahmad, A.R., & Alheety, A.S. (2022). Behavioural Intention to Use e-Wallet: The Perspective of Security and Trust. 2nd International Conference on Emerging Smart Technologies and Applications (eSmarTA), IEEE, 1-5.

Joshi, A., Kale, S., Chandel, S., & Pal, D.K. (2015). Likert scale: Explored and Explained. British Journal of Applied Science & Technology, 7(4), 396-403.

Juasrikul, S., and Vandenberg, P., (2022). Thailand's evolving ecosystem support for technology start-up. Asian Development Bank.

Kadir, H.A., Ismail, R., Wok, S., & Manan K.A. (2022). The Mediating Effect of Attitude on E-Wallet Usage Among Users in Malaysia. Journal of Communication Education, 2(1), 59-77.

Kang, S., Hur, W.M., & Son, M. (2014). The moderating role of socio-demographics on smartphone adoption. International Journal of Mobile Communication, 12(5), 532-550.

Karim, F., Aftharnorhan, A., Ghani, N.I.A., Ismail, M.N., & Muhammad, N. (2022). Continuance Intention on Mobile Wallet: Integrated Technology Readiness and Expectation-Confirmation Model Analysis. Journal of Tianjin University Science and Technology, 55(4), 108-131.

Kashada, A., Ghaydi, A.E., & Mohamed, W. (2020). The impact of perceived usefulness & perceived ease of use on the successful adoption of information systems in developing countries. IOSR Journal of Computer Engineering, 22(1), 45-48.

Kim, B. S., & Bae, M. E. (2010). A Study on the influence of e-Service Quality of Internet Open-Market as Perceived Value, Customer Satisfaction and e-Loyalty. Journal of the Korea Industrial Information Systems Research, 15(4), 83-101.

Kim, S.S., & Son, J.Y. (2009, March). Out of Dedication or Constraint? A Dual Model of Post-Adoption Phenomena and its Empirical Test in the Context of Online Services. MIS quarterly, 33(1), 49-70.

Kumar, M.S., & Krishnan, S.G. (2020). Perceived Usefulness (Pu), Perceived Ease of Use (Peou), and Behavioural Intension to Use (Biu): Mediating Effect of Attitude Toward Use (AU) with Reference to Mobile Wallet Acceptance and Adoption in Rural India. TEST Engineering & Management, 83, 933-941.

Lee, Y.H., Hsieh, Y.C., & Hsu, C.N. (2011). Adding Innovation Diffusion Theory to the Technology Acceptance Model: Supporting Employees' Intentions to use E-Learning Systems. Journal of Educational Technology & Society, 14(4), 124-137.

Leong, L.Y., Ooi, K.B., Chong, A.Y.L., & Lin, B. (2013). Modeling the stimulators of the behavioral intention to use mobile entertainment: Does gender really matter?. Computers in Human Behavior, 29(5), 2109-2121.

Liao, C., Palvia, P., & Chen, J.L. (2009). Information technology adoption behavior life cycle: Toward a Technology Continuance Theory (TCT). International Journal of Information Management, 29(4), 309-320.

Liao, Y.W., Huang, Y.M., Wang, Y.S. (2015). Factors Affecting Students' Continued Usage Intention Toward Business Simulation Games: An Empirical Study. Journal of Educational Computing Research, 53(2), 260-283.

Ling, C.H., Teo, P.C., Ho, T.C.F., & Choo, L.S. (2020). Value-Based Adoption Model on E-Wallet in Malaysia: A Conceptual Paper. In 2020 International Conference on Decision Aid Sciences and Application, 501-503.

Lu, H.P., Hsu, C.L., & Hsu, H.Y. (2005). An empirical study of the effect of perceived risk upon intention to use online applications. Information Management & Computer Security, 13(2), 106-120.

Menon, N.M., & Sujatha, I. (2021). Influence of Rogers' theory of innovation of diffusion on customer's purchase intention – a case study of solar photovoltaic panels. In IOP Conference Series: Materials Science and Engineering, 1114.

Miller, R.L. (2015). Rogers' Innovation Diffusion Theory (1962, 1995). Information seeking behavior and technology adoption: Theories and trends, 261-274.

Moore, G.C., & Benbasat, I. (1991). Development of an Instrument to Measure the Perceptions of Adopting an Information Technology Innovation. Information Systems Research, 2(3), 192-222.

Volume: 3, No: 7, pp. 2196 – 2212
ISSN: 2752-6798 (Print) | ISSN 2752-6801 (Online)
https://ecohumanism.co.uk/joe/ecohumanism
DOI: https://doi.org/10.62754/joe.v3i7.4371

Moses, P., Wong, S.L., Bakar, K.A., & Mahmud, R. (2013). Perceived Usefulness and Perceived Ease of Use: Antecedents of Attitude Towards Laptop Use Among Science and Mathematics Teachers in Malaysia. The Asia-Pacific Education Researcher, 22, 293-299.

Muangmee, C., Kot, S., Meekaewkunchorn, N., Kassakorn, N., & Khalid, B. (2021). Factors Determining the Behavioral Intention of Using Food Delivery Apps during COVID-19 Pandemics. Journal of Theoretical and Applied Electronic Commerce Research, 16(5), 1297-1310.

Nguyen, D.M., Chiu, Y.T.H., Vu, H.Q., & Nguyen T. (2022). Toward a unified theory of technology continuance: Effects of conscious versus unconscious factors. Journal of Consumer Behaviour, 21(5), 1219-1235.

Oliver, R. L. (1980). A Cognitive Model of the Antecedents and Consequences of Satisfaction Decisions. Journal of Marketing Research, 17(4), 460-469.

Paramasatya, A. (2019). The Influence of Relative Advantage, Compatibility, and Complexity on Consumers' Intention to Adopt Mandiri e-Money (A Case Study of Universitas Gadjah Mada Students). Retrieved August 3, 2023, from http://etd.repository.ugm.ac.id/

Park, J., Kim, J., & Koh, J. (2010). Determinants of continuous usage intention in web analytics services. Electronic Commerce Research and Applications, 9(1), 61-72.

Pathania, A.K., Goyal, B., & Saini, J.R. (2017). Diffusion of adoption of solar energy – a structural model analysis. Smart and Sustainable Built Environment, 6(2), 66-83.

Hsieh, J.J.P., and Wang, W. (2007). Explaining employees' Extended Use of complex information systems. European Journal of Information Systems, 16(3), 216-227.

Regmi, P.R., Waithaka, E., Paudyal, A., Simkhada, P., & Teijlingen, E.V. (2016). Guide to the design and application of online questionnaire surveys. Nepal Journal of Epidemiology, 6(4), 640-644.

Rezaei, S., Amin, M. & Herjanto, H. (2024). Pay-per-click (PPC) advertising and continuous banking service intentions. J Financ Serv Mark.

Rogers, E.M. (1983). Diffusion of Innovations (3rd ed.). New York: The Free Press.

Rogers, E.M., Singhal, A., & Quinlan, M.M. (2014). Diffusion of Innovations. In An Integrated Approach to Communication Theory and Research, 432-448.

Rotchanakitumnuai, S. (2019). Mobile banking acceptance for continuing usage of Thai Commercial Banks. Journal of Business Administration The Association of Private Higher Education Institutions of Thailand, 8(2), 10–21.

Sarassina, R.R.F. (2022). Understanding Mobile Payment Continuance in Indonesia: A Brand Equity Perspective Continuance Model. CommIT (Communication and Information Technology) Journal, 16(1), 105-115.

Saunders, M.N.K., Lewis, P., Thornhill, A., & Bristow, A. (2015). Understanding research philosophy and approaches to theory development. Harlow: Pearson Education, 122-161.

Senali, M.G., Iranmanesh, M., Ismail, F.N., Rahim, N.F.A., Khoshkam, M., & Mirzaei, M. (2023). Determinants of Intention to use e-Wallet: Personal Innovativeness and Propensity to Trust as Moderators. International Journal of Human–Computer Interaction, 39(12), 2361-2373.

Slevitch, L. (2011). Qualitative and Quantitative Methodologies Compared: Ontological and Epistemological Perspectives. Journal of Quality Assurance in Hospitality & Tourism, 12(1), 73-81.

Srivanich, P. (2023). Growing together towards sustainability in Thailand. Retrieved June 29, 2023 from https://www.worldfinance.com/banking/growing-together-towards-sustainability-in-thailand.

Sukaris, S., Renedi, W., Rizqi, M.A., & Pristyadi, B. (2021). Usage Behavior on Digital Wallet: Perspective of the Theory of Unification of Acceptance and Use of Technology Models. Journal of Physics: Conference Series, 1764.

Suri T., & Jack W. (2016). The long-run poverty and gender impacts of mobile money. Science, 354(6317), 1288-1292.

Tan, T., Zhang, Y., Heng, C.S., & Ge, C. (2020). Empowerment of Grassroots Consumers: A Revelatory Case of a Chinese FinTech Innovation. Journal of the Association for Information Systems, Forthcoming. Retrieved August 3, 2023 from https://ssrn.com/abstract=3563373

Tang, K.L., Tan, P.M., & Fong, C.L. (2022). Impact of Perceived Severity and Susceptibility of Covid-19 Pandemic on m-Payment Continuance Intention: Using Technology Continuance Theory. The Journal of Management Theory and Practice, 3(3), 1-9.

Tavakol, M., & Dennick, R. (2011). Making sense of Cronbach's alpha. International Journal of Medical Education, 2, 53-55.

Techsauce Team. (2016). ประเทศไทยกำลังเข้าสู่ยุคแห่งสังคมไร้เงินสด (Cashless society) แล้วจริงหรือ? Retrieved November 8, 2023 from https://techsauce.co/pr-news/moving-to-a-cashless-society

The Nation (2022). Thailand 3rd highest user of e-payments globally. Retrieved June 29, 2023 from https://www.nationthailand.com/in-focus/40016831

To, A.T., & Trinh, T.H.M. (2021). Understanding behavioral intention to use mobile wallets in vietnam: Extending the tam model with trust and enjoyment. Cogent Business & Management, 8(1).

Tsai, Y.T., & Tiwasing, P. (2021). Customers' intention to adopt smart lockers in last-mile delivery service: A multi-theory perspective. Journal of Retailing and Consumer Services, 61.

Udayana, I. B. N., Cahya, A. D., & Aqdella F. A. (2022). The Effect of Perceived Usefulness, Perceived Ease of Use on Behavioral Intention to Use Through The Intervening Attitude Toward Using Variables in the Study of ShopeePay E-Wallet Services (Case Study on ShopeePay Users in Yogyakarta). Journal of Applied Management and Business, 8(1), 29-40.

Ullman, J.B., & Bentler, P.M. (2012). Structural Equation Modeling. Handbook of Psychology, Second Edition, 2, 661-690.

Vărzaru, A.A., Bocean, C.G., Rotea, C.C., & Budică-Iacob, A.F. (2021). Assessing Antecedents of Behavioral Intention to Use Mobile Technologies in E-Commerce. Electronics, 10(18), 2231.

Veedvil. (2016). Statistic of mobile and smartphone users of Thailand in 2016. Retrieved November 8, 2023 from https://ethesisarchive.library.tu.ac.th/thesis/2016/TU_2016_5802040427_6002_4593.pdf

Journal of Ecohumanism
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DOI: https://doi.org/10.62754/joe.v3i7.4371

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. (2003). User Acceptance of Information Technology: Toward a Unified View. MIS Quarterly, 27(3), 425-478.

Venkatesh, V., Thong, J. Y. L., & Xu, X. (2012). Consumer Acceptance and Use of Information Technology: Extending the Unified Theory of Acceptance and Use of Technology. MIS Quarterly, 36(1), 157-178.

Wang, Y., Meister, D., & Wang, Y. (2008). Relative Advantage and Perceived Usefulness: The Adoption of competing ICTs. DIGIT 2008 Proceedings, 6.

Widjojo, R. (2020). The Development of Digital Payment Systems in Indonesia: a Review of Go-Pay and Ovo E-Wallets. Economic Alternatives, 3, 384-395.

Xu, C., Ryan, S., Prybutok, V., & Wen, C. (2012). It is not for fun: An examination of social network site usage. Information & Management, 49(5), 210–217.

Yang, J., & Jong, D. (2021). Understanding Continuance Intention Determinants to Adopt Online Health Care Community: An Empirical Study of Food Safety. International Journal of Environmental Research and Public Health, 18(12), 6514.

Zhou T. (2013). An empirical examination of continuance intention of mobile payment services. Decision Support Systems, 54(2), pp. 1085-1091.