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AN INVESTIGATION OF STUDENTS' INTENTION TO USE E-PAYMENT SERVICE IN MOBILE WALLET IN HO CHI MINH CITY

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ARTICLE INFO	ABSTRACT
	E-payment services have witnessed a surge in demand in recent years due to their convenient cashless transaction mode. Several studies have investigated the influence of the intention of individuals to use mobile wallets. However, the study aims to examine the key factors that impact students' intention to use E-payment services in Ho Chi Minh City, Vietnam. The Technology Acceptance Model combines two factors from the extended version of TAM including perceived convenience and trust to develop a conceptual model for this study. The online survey of 310 students from some universities collected the data and the Smart PLS was used to analyze the data. The results of the study showed that perceived ease of use, perceived usefulness, trust, and perceived convenience have a positive influence on behavioral intention to use mobile wallets, while trust shows no positive effect on perceived usefulness.

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1. Introduction

The need for cashless transactions has sped up the development of the digital wallet. According to Williams (2019), digital wall offers payment services for electronic devices and that it enables users to transfer money from one account to another and pay for items they buy online without using cash. Electronic wallets, often known as digital wallets, have taken the place of more conventional payment methods including plastic cards and leather wallets (Leong et al., 2013). Customers or users may quickly install electronic wallet applications on their smartphones, allowing them to directly link their bank accounts and add money to their wallets. To complete an online transaction or make an online payment, users must provide their phone number, email address, and scan a QR code (Singh et al., 2017). Electronic transactions are considered as popular payment method in many countries and electronic wallets make online transactions and product purchases more convenient (Rathore, 2016).

The marketplace for smartphones has become an appealing environment for providers and investors to enter the Vietnam market since electronic payments have been rising in Vietnam since 2008, although the number of individuals who have bank accounts is low. According to Nikkei, "Only around forty percent of Vietnam's ninety-five million residents have bank accounts, mainly in urban areas, while there are about 120 million mobile phone subscriptions, and the telecoms network covers the entire nation" (Justina Lee, 2019). As a result, many service providers are investing in electronic payments, and a remarkable index of smartphone usage has been rising with a rate of 53.8% (Nguyen et al., 2020). Many individuals like utilizing their mobile devices to carry out daily tasks and satisfy demands like finding information and entertainment. Sharma et al. (2018) argue that electronic wallets and M-wallets may replace both physical payment and the conventional payment method. People can download an application for mobile devices, keep money there, and then conduct transactions straight from the app. In Vietnam, E-payment services are becoming more popular to replace traditional wallets, minimize expenses and enhance financial services. It is designed to offer users quick, simple, and effective services for transactions and purchases. The majority of people use mobile wallets (M-wallets) to make payments for online purchases and money transfers.

The trend of trend of cashless transactions is increasingly widespread among young people in Vietnam. E-payment has increasingly become one of the important services or tools for people in Vietnam to make transactions without cash including Internet banking, bank cards, and mobile payment. Using E-payment services provides numerous benefits to users, for example, customers can make payment transactions quickly and easily, the information of payment is assured with high security, the sellers and buyers are protected in their rights in doing business activities. There has been a rise in demand for E-payment services because of their benefits. The individuals' behavioral intention to use and accept E-payment has experienced an extreme transformation. Therefore, researchers are drawn to the study of customers' intention to use E-payment and their adoption of this practice, which will aid service providers in better understanding their clients. The TAM has been used in previous research on electronic payments and mobile wallets in many different nations, including India (Singh & Sinha, 2020; Singh et al., 2020; Chawla & Joshi, 2019), China (Li et al., 2014), Singapore (Seetharaman et al., 2017), the United States (USA) (Bailey et al., 2014), Indonesia (Yakiob et al., 2017), and Malaysia (Alaeddin et al., 2018).

The purpose of the study is to discover the factors that impact to users' behavioral intention to use E-payment services in the university. The Technology Acceptance Model (TAM) is used to conduct the study on the customer's behavior and two main variables including Perceived Usefulness (PU) and Perceived Ease of Use (PEOU) are identified in TAM. Moreover, two constructs Trust and Perceived convenience are added to develop and propose the research model in this study after reviewing the literature in the past studies

on customer's behavioral intention. These two variables are proposed to develop the hypothesis and propose new research model to better understand and explain the individual's intention to use e-payment service in the mobile wallet in Ho Chi Minh City.

The structure of the article is presented as follows. Section 2 is the literature review on TAM and extends two factors that affect behavioral intention to use E-wallets and it also provides the hypothesis development and proposed research model. Section 3 explains the research methodology. Section 4 presents the results and discussion. The last section provides the conclusions, limitations, and future study.

2. Literature review

2.1. Mobile-Wallet

Mobile wallets (M-wallet)) are applications that exist on mobile phones and they allow users to perform payment transactions without cash users also can use their smartphones for online shopping. An M-wallet is proposed as "a form of an electronic card that may be used for making transactions online using a smartphone" (Aji & Adawiyah, 2021). The authors defined an M-wallet that comes from their study. An E-payment functions similarly to a credit card and debit card. If customers want to perform transactions with an e-wallet they must have a valid account in any bank because e-payment functions as applications on mobile phones and it is associated with the bank (Kumar et al., 2019). Using Mobile-wallets help users save their time in performing transaction and give the opportunity for users to perform money transactions to be safe, convenient and effective (Ryan, 2023).

2.2. Theory acceptance models

Davis (1989) developed the Theory acceptance model (TAM), which continues to be the most popular approach for defining and assessing a person's behavioral intention to accept new technologies. He argued that three variables, including attitude, perceived usefulness, and perceived ease of use, influenced

an individual's behavioral intention. Perceived usefulness and perceived ease of use are the two main elements that Davis (1989) applied to explain customers' behavior. The two factors such as PU and PEU have a significant impact on user influence users' behavioral intention to accept and use new technology Davis (1989). The TAM model has been used to carry out the majority of earlier studies on consumers' acceptance of using mobile payment and e-wallets (Francisco et al., 2015; Cheng & Huang, 2013; Anh Tho & Thi Hong, 2021). Most authors argued that TAM had become the foundation theory to conduct the study on behavioral intention to use e-wallets, mobile wallets or e-payment (Oliveira et al., 2016; Zhou, 2011).

The TAM model is initially constructed to explain customers' behavior of using computers while UTAUT is also considered as a main theoretical foundation to conduct the study on mobile payment of behavior adoption. Venkatesh et al. (2003) proposed the unified theory of acceptance and use of technology (UTAUT) as an extended TAM because TAM has a limitation in explaining the customers' intention when it does not have a diversity of constructs in the model. This means that TAM does not include enough key or significant factors to predict the intention to use a new technology such as e-wallets or m-wallets. According to Shin (2009), both TAM and UTAUT provide a reasonable foundation theory for research on to use e-wallets, mobile payments or e-payments (Shin, 2009). TAM and UTAUT are considered as a solid theoretical foundation for investigating users' behavioral intentions (Shin, 2009). Therefore, many previous studies added some factors into the TAM such as perceived convenience (Ngoc Bich Do & Hai Ninh Thi Do,2020), perceived enjoyment (G. C. & Kumar, 2005; Childers et al., 2001) and perceived trust (Ngoc Bich & Hai Ninh,2020, To & Thi Hong Minh Trinh, 2021). This study added two variables: perceived trust and perceived convenience in the proposed research model to better understand and explain the users' intention to use M-wallets.

2.3. Conceptual model and hypothesis development

Perceived trust

Perceived trust is regarded as one of the critical aspects to effective mobile payment application development because users must provide the application with their personal information to utilize the payment service. Since customers usually do not feel secure to provide their information on mobile payment services, the security and privacy information are very crucial for customers to give them through the internet or online (Kim et al., 2009; Toufaily et al., 2013; Zhou, 2011). Customers want to feel secure when making purchases online and do not want unauthorized parties to access or disclose their personal data (Chellappa et al., 2002). As a result, trust has a significant impact on customer behavior when it comes to online or electronic payments (Jarvenpaa et al. 1999) and the adoption of mobile wallets (T Lee, 2005). According to earlier research, users' intentions to use an e-wallet are positively influenced by perceived trust (Gao and Waechter, 2017; Khalilzadeh et al., 2017; Shin, 2009; Luo et al., 2010; Zhang et al., 2010, D. Chawla and H. Joshi. 2019, N. Singh and N. Sinha, 2020, and Anh Tho To and Thi Hong, 2021).

Additionally, some research has shown that perceived usefulness is positively impacted by trust (Francisco et al., 2015), Gefen et al. 2003, and Pavlou 2003). As stated by Horst et al. (2007), trust was also found to function as the primary factor in determining perceived usefulness. Moreover, there has been much discussion of the relationship between perceived trust (PT) and TAM structures in a number of studies (Gefen et al., 2003; Pavlou, 2003; Wang and Benbasat, 2005; Wu and Chen, 2005). Based on several research (Corbitt et al., 2003; Kim et al., 2008; Lingyun and Dong, 2008), perceived trust and PU show a positive relationship. As a result, the hypothesis that follows is put forth:

Hypothesis H$_1$: Perceived trust is positively related to intention to use e-payment service.

Hypothesis H$_2$: Perceived trust is positively related to perceived usefulness.

Perceived usefulness

Perceived usefulness is the primary antecedent in TAM and is defined as the extent to which an individual considers that using specific technology could enhance his or her job performance (Davis, 1993; Redzuan et al., 2016). In other words, customers' perceptions of a system's usefulness have an impact on how they utilize it. According to some academics, perceived usefulness matches the performance expectancy in the UTAUT model. The high degree of performance that an individual can achieve with the help of cutting-edge technology is referred to as perceived usefulness.

In their empirical studies, several academics have examined the impact of perceived usefulness on consumers' intentions to use e-wallet and acceptability of adopting e-payment (Francisco et al., 2015; Cheng & Huang, 2013; Anh Tho & Thi Hong, 2021). For instance, Francisco et al. (2015) conducted a study on the correlation between perceived usefulness and consumers' attitudes toward adopting the payment tool. According to Francisco et al. (2015), they discovered that the relationship is unambiguously positive. Cheng and Huang (2013) demonstrated that PU had a direct impact on users' decisions to utilize mobile payment services in their research and came to the conclusion that perceived usefulness was favorably associated with mobile ticketing services (Cheng and Huang, 2013). Additionally,, Anh Tho & Thi Hong, (2021) discovered that perceived usefulness has a direct impact on a customer's behavioral desire for using a mobile wallet application. Thus, the following hypothesis is proposed:

Hypothesis H3: Perceived usefulness positively influences a customer's behavioral intention use e-payment service.

Perceived ease of use

The TAM model's perceived ease of use (PEOU) element is frequently used to perform research on consumer's behavior and intentions of technology utilization. PEOU was defined by Davis (1993) as "the consumer's perception on the extent of user-friendliness of specific

technology." Moreover, he keeps expanding the meaning of PEOU as an individual's judgment about the amount of effort required both mentally and physically to use a specific system" (Davis, 1993). Additionally, PU and PEOU are considered as two main constructs in TAM. Therefore, few studies used these two variables to conduct their relationship in the study on new technology (Anh Tho & Thi Hong, 2021, Vella, 2021). For example, Anh Tho & Thi Hong (2021) revealed a positive relationship between PEOU and perceived usefulness. Vella (2021) investigated the relationship between perceived ease of use and users' perceptions of the GoPay app's usefulness.

According to Longyara & Van (2015), innovative technologies need to be easy to use to increase acceptance. Ivan and Miharni(2020) argued that if an innovative technology becomes simple, individuals are willing to spend more time learning how to utilize it. Users will be more likely to pay intention to use mobile wallets if they are effortless to apply and use Some prior studies have focused on the relationship between perceive ease of use and behavioral intention to use mobile wallets and electronic wallets (Jayasingh & Eze, 2015; Pousttchi & Wiedemann, 2007; Rigopoulos & Askounis, 2007). They proved that perceived ease of use was positively correlated with behavioral intention to use it. Based on the previous studies, the following hypotheses are postulated:

Hypothesis H4: Perceived ease of use positively influences a customer's intention to use e-payment service.

Hypothesis H5: Perceived ease of use positively influences perceived usefulness.

Perceived convenience

The new technology is considered an important strategy of the development of the process and product to attract consumers to choose and use it (Byun and Kyung, 2020).

Therefore, perceived convenience plays an important role to attract users to select innovative technology products (2013). Perceived convenience is defined by Olsen and Mai, (2013) "the degree to which users reduce the amount of time and effort when adopting new technology". Olsen and Mai, (2013) argued that perceived convenience is important to help users feel convenient and easy to choose and adopt the new products with high technology because it helps them to save time of using.

The concept of perceived convenience and TAM are common in some studies on individual's intention to use electronic wallets, mobile commerce and online shopping. Some scholars proved that individuals' perception regarding convenience had a positive relationship with customers' intention to adopt new technology products in their study on mobile wallet and electronic wallet (Liu & Tai, 2016, Xu et al. 2019, Ozkan & Solmaz, 2015). For example, Xu et al. (2019) concluded that perceived convenience has become one of important factors to customers to choose electronic service toward mobile payment of their credit card. Besides, Liu and Tai (2016) looked at the relationship between customers' perception toward convenience and their intention to use innovative technology processes and products. They confirmed that there was a positive relationship between these two variables. Following up this line of examination, Ngoc Bich Do and Hai Ninh Thi Do (2020) have examined the correlation between perceived convenience and customers' intention to use electronic wallets. They concluded that perceived convenience had a positive relationship with customers' intention to use electronic wallet in their study. Thus, the following hypothesis is proposed.

Hypothesis H6: Perceived convenience is positively related to customers' behavioral intention to use e-payment service.
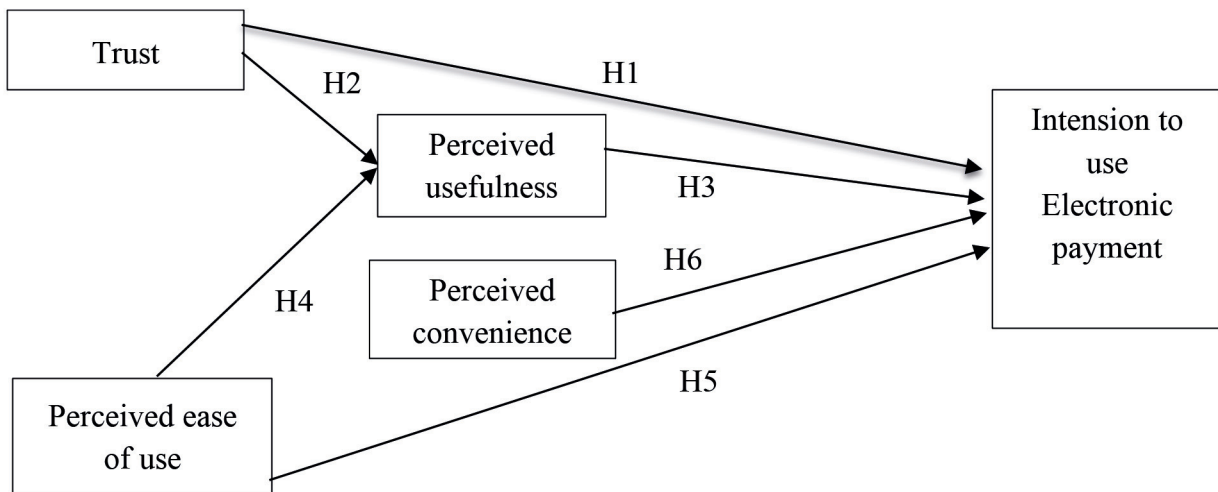
Figure 1. The conception model is proposed

3. Research methodology

The study employed a quantitative method for testing the hypothesis of the proposed conceptual framework. The proposed model has 5 main constructs including perceived usefulness, perceived ease of use, perceived convenience, trust, and behavioral intention to use. A total of 24 scale items were adopted from the prior related studies (Davis, 1989; Venkatesh et al., 2012; Gia-Shie Liu & Pham Tan Tai, 2016; Matemba & Li, 2018; Alalwan et al., 2018; Singh et al., 2020). The 5-point Likert scale items (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree and 5 = strongly agree) were used to measure the scales. The structure of the survey questionnaire was designed in two sections. The first section contains questions about the demographic characteristics of student users including gender, major, and name of university. The second section contains the 24 statements that relate to 5 constructs.

The link to the online survey questionnaire was designed and distributed to the respondents. We used the method of simple random sampling to collect the data because this method will give an equal chance to select the respondents. The target respondents of the study consist of students who have the intention to use e-wallets and they are from different universities in Ho Chi Minh City, Vietnam because they have prior knowledge and experience using e-payment services in mobile wallets. The respondents in this study were chosen based on the criteria of being students who make use of smart mobile phones and e-payment services. The snowball method was used to collect the data from the online survey via Google Forms. This method is carried out by choosing the first respondents based on the author's student in the university and then asking those respondents to provide this form to the subsequent participants in the study. The data was collected between November 2022 to January 2023. In total 335 online survey questionnaires were sent the link to respondents, but 310 responses were obtained to use for data analysis.

The Smart-PLS program (version 4.0) software was used to analyze the data collection. We presented a two-step modeling approach for testing the hypothesis in the proposed model. First, we examine the measurement model to test Factor Loadings (FL), Cronbach's Alpha (CA), Composite Reliability (CR) and Average Variance Extracted (AVE). The acceptance levels would be used to be greater than 0.70 for FL, CA and CR and above 0.50 for AVE. Second, we examined the structural model path coefficients assessment of the model that carried on by means of the bootstrapping procedure. The bootstrapping result showed the significance of the t statistic associated with path coefficients and the hypothesis.

4. Results

4.1. Results of data analysis

(see Appendix 1 online) The number of respondents of this study was 310 in total. More than half of the respondents were female (n= 207; 8%) and the rests of the respondents were male (n= 103, 33%). In terms of university, the majority of respondents were from Ho Chi Minh City, Open University (n =124, 40%). The next was from the University of Economics Ho Chi Minh City (n =45, 14.5%). The third was from Ho Chi Minh City, University of Technology (n =28, 9%). The fourth was from the University of Social Science and Humanities (n =20, 6.5%). The rest of the respondents were from other universities (n =93, 30%). On the level of major in the university, most of the respondents were in business administration showing n =110, 32%, the finance and banking major was the second group showing n =55, 18%. The third major was in English showing (n =48, 15%). The next major was in accounting with n =35, 12%. The rest was other major showing (n=62, 20%)

The SmartPLS program was employed to analyze the collected data. The data was analyzed in two steps to estimate the structure models.

First, the reliability analysis was determined by internal consistency reliability to assess the latent variables. Cronbach's Alpha was used to measure internal consistency. According to Mitchell and Jolley (2010), Cronbach's Alpha value is at least 0.7 to measure the construct to be valid and reliable and the composite reliability can be used to replace Cronbach's alpha in Smart-PLS and the composite reliability value must be greater than 0.7 (Hair et al. 2014). The results of Cronbach's Alpha and composite reliability are shown in the above table 2. All 5 variables are higher than 0.7. We can conclude that all variables satisfy validity and reliability. Second the AVE score is recommended to be at least 0.5 (Hair et al., 2009) to indicate the convergent validity of the latent variables. Table 2 also presents the AVE scores of the variables. The AVE values are shown higher than 0.5 for all 5 constructs *(see Appendix 2 online).*

The bootstrapping procedure was performed to assess the structure models. The path coefficient in the bootstrapping will provide results such as standard deviation, t-value, and p-value. Based on the results of the path coefficient, the author can verify the hypothesis for the proposed model in the study

Table 1. Structural model result

Constructs	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Decision
Trust=> Perceive usefulness	0.027	0.028	0.038	0.710	0.478	Rejected
Trust=> Behavioral intention	0.283	0.284	0.058	4.916	0.000	Accepted
Perceive usefulness=>Behavioral intention	0.195	0.197	0.079	2.459	0.014	Accepted
Perceive ease of use=> Perceive usefulness	0.820	0.819	0.036	22.989	0.000	Accepted
Perceive ease of use=>Behavioral intention	0.261	0.254	0.084	3.088	0.002	Accepted
Perceive convenience =>Behavioral intention	0.157	0.160	0.066	2.378	0.017	Accepted

4.2. Discussion

The objective of this research is to investigate the factors influencing the behavioral intention to use e-payment services. Four factors are identified to understand better the students' intention of using e-payment services in the university. The results show that all four factors play an important role in the intention of using e-payment service

First, with regard to trust, the result showed that it did not have a significant influence on perceived usefulness (TR→PU; p=0.478); thus, H1 is not supported where TR has no relationship with perceived usefulness. This result is in contrast to the findings of Setyadinsa et al. (2018), Anh Tho To & Thi Hong Minh Trinh (2021). Despite that, trust had a significant influence on behavioral intention to use e-payment services (TR→BI, P-value = 0.000); thus H2 is supported. This finding is in line of the results from Duane et al. (2014) and Shaw (2014). They confirmed that trust had a positive impact on individuals' behavioral intentions. It provided strong evidence about the role of trust to behavioral intention because trust might increase individuals' intention to adopt new technology.

Besides, the result in the table of the structural model also showed that perceived usefulness has a significant influence on behavioral intention (PU→BI, P-value =0.014), thus H3 is supported where perceived usefulness has a positive relationship with behavioral intention. It provided strong evidence about the role of perceived usefulness to behavioral intention because perceived usefulness. The finding is in line with the prior research by Anh Tho To & Thi Hong Minh Trinh, (2021), Ngoc Bich Do & Hai Ninh Thi Do (2020). It implies that if customers find that electronic wallet technology is more useful in making the payment process faster, therefore thus customers will have more intention to use it

As hypothesized in H4 and H5 regarding perceived ease of use, we found there were positive and significant relationships (PE→PU, P-value =0.000). Thus, H4 is confirmed. We also found the existence of a positive relationship between PEOU with the behavioral intention to use electronic wallets service (PE→BI, P-value <0.002), therefore H4 and H5 are supported. Similarly, the results from previous studies of Anh Tho To & Thi Hong Minh Trinh (2021), Chawla and Joshi (2019), and Lew et al., (2020). They also confirmed that PEOU has a positive relationship of PE with behavioral intention to use electronic payment services

Finally, perceived convenience had a positive and significant effect on students' behavioral intention to use electronic wallets (PC→IN, P-value =0.002), hypothesis 6 is supported. This finding confirmed previous studies by Dziallas & Blind (2019), Ngoc Bich Do & Hai Ninh Thi Do (2020). They also proved that perceived convenience had a positive influence on users' behavioral intention to use. This reveals that individuals will perceive the application of E-payment is useful and convenient for them in daily activities such as shopping cashless payment. they are likely to have more intention to adopt and use it

5. Conclusion

5.1. Summary findings and implications

The main purpose of this study is to explain how the new technology driven users-students intend to adopt and use E-wallets in the university in Vietnam.We used the Technology Acceptance Model (TAM) with the consideration related variables in the model including perceived usefulness and perceived ease of use and we also added two variables including trust and perceived convenience for an extended model of TAM to motivate Vietnamese students to adopt the mobile payment applications regarding technology. Two main variables of TAM including perceive usefulness and perceived ease of use are used as antecedents to predict the student's behavioral intention for using E-wallet in the university in Ho Chi Minh City. The result of the study showed that both perceived usefulness and perceived ease of use had a positive and significant influence on students' behavioral intention to use E-wallet services. The results

are compatible with the traditional TAM (Davis et al., 1989) and with the prior study on the intention of mobile technology (Francisco et al., 2015; Cheng & Huang, 2011, by Anh Tho To & Thi Hong Minh Trinh, 2021; Ngoc Bich Do & Hai Ninh Thi Do, 2020; and Phuong et al., 2020). The findings reveal that TAM has become one of the robust models for scholars and academics to conduct research on the intention to use mobile payment application regarding technology.

In addition, two variables from extended TAM, trust and perceived convenience also had a positive and significant effect on students' behavioral intention to use E-payment services. According to Alkhowaiter (2020) study, trust and perceived convenience were considered as the best antecedents to predict the digital payment, including E-payment services (Alkhowaiter, 2020). Therefore, the results are in line with prior study on the positive relationship of trust and perceived convenience with individuals' behavioral intention to use E-wallet services (Ngoc Bich Do & Hai Ninh Thi Do, 2020, Chawla and Joshi, 2019, Singh and. Sinha, 2020). Moreover, perceived ease of use also showed that it had a positive relationship with perceived usefulness (Yi-Hsuan, 2013). In contrast, trust had no positive influence on perceived usefulness which is different from prior studies (Yi-Hsuan, 2013, Anh Tho To & Thi Hong Minh Trinh, 2021). These studies proved that the relationship between trust and perceived usefulness were positive and significant. This means that individuals feel safe in using M-wallet services to perform their transactions.

This research provides some practical implications for mobile wallet providers in Vietnam to attract more users. First, the findings clearly proved that two main constructs of TAM such as perceived usefulness and perceived ease of use are considered as key antecedents of customers' behavioral intention to use M-wallets. Therefore, the providers of M-wallets should develop and upgrade their

service in mobile payment applications with high usefulness, more advanced and benefits to satisfy students or young customers in Ho Chi Minh City. Furthermore, trust and perceived convenience had a positive influence on behavioral intention to use. This helps service providers and application developers to increase customers' trust and improve the quality and strategies of their M-wallets.

5.2. Contribution

By developing an integrated research model, this study makes a contribution to the existing body of research on the Technology Acceptance Model (TAM). The theoretical model was established to direct the path of customers' intention taken by the independent variables including perceived usefulness, perceived ease of use, trust, and perceived convenience. The development of the conceptual model was accomplished by the incorporation of the two listed variables above. The results of the study is suitable for the theory being investigated when the hypothesis of the study has been confirmed. This study could contribute to the researchers in the future in order to examine and conduct relevant studies on the factors that influence the desire to use an e-payment service mobile wallet.

5.3. Limitation and future research

The current research has several limitations. First, we conduct the study under the students in the university and the sample size consists of mostly students pursuing a university in Ho Chi Minh City. Therefore, the target population is not a representative sample of all universities in Vietnam. Future research should use a larger sample size so the findings would get better benefits. Second, the study used some main constructs to develop the proposed framework, next study could consider a number of factors such as perceived risk, perceived enjoyment and compatibility that affect behavioral intention to use E-wallets. Finally, if it is possible to generalize the research model to various consumer groups and new technological mobile applications.

References

Anh, T.T & Minh T.T.H. (2021). Understanding behavioral intention to use mobile wallets in Vietnam: Extending the tam model with trust and enjoyment, *The Journal of Cogent Business and Management,* 8: 1891661.

Amoroso, D. L., & Watanabe, R. M. (2012). Building a research model for mobile wallet consumer adoption: The case of mobile Suica in Japan. *Journal of Theoretical and Applied Electronic Commerce Research*, 7(1), 94–110. https://doi.org/10.4067/S0718-18762012000100008

Bich, D.N & Ninh. D.T.H (2020). An investigation of Generation Z's intention to use Electronic Wallets in Vietnam, *Journal of Distribution Science* 18-10, 89-99.

Chellappa, R., Pavlou, K., & Paul, A. (2002). Perceived information security, financial liability and consumer trust in electronic commerce transactions. *Logistics Information Management*, 15(5/6), 358–368. https://doi.org/10.1108/09576050210447046

Chuttur, M. Y. (2009). Overview of the technology acceptance model: Origins, developments and future directions. *Working Papers on Information Systems,* 9(37), 9–37. http://adam.co/lab/pdf/test/pdfs/ TAM Review.pd

Dahlberg, T., Mallat, N., Ondrus, J., & Zmijewska, A. (2008). Past, present and future of mobile payments research: A literature review. *Electronic Commerce Research and Applications*, 7(2), 165–181. https://doi.org/10.1016/j.elerap.2007.02.001

Dahlberg, T., Mallat, N., & Öörni, A. (2003). Trust enhanced technology acceptance model consumer acceptance of mobile payment solutions: Tentative evidence. *Stockholm Mobility Roundtable*, 22(1), 145.

Dai, H., & Palvi, P. C. (2009). Mobile commerce adoption in China and the United States: A cross-cultural study. *ACM SIGMIS DATABASE: The DATABASE for Advances in Information Systems*, 40(4), 43–61. https://doi.org/ 10.1145/1644953.1644958

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Q*, 13(3), 319–340. https://doi.org/10. 2307/249008

Davis, F. D. (1993). User acceptance of information technology: System characteristics, user perceptions and behavioral impacts. *International Journal of ManMachine Studies*, 38(3), 475–487. https://doi.org/10.1006/imms.1993.1022

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. https://doi.org/10.1287/mnsc.35.8.982

Dwivedi, Y. K., Rana, N. P., Jeyaraj, A., Clement, M., & Williams, M. D. (2019). Re-examining the unified theory of acceptance and use of technology (UTAUT): Towards a revised theoretical model. *Information Systems Frontiers*, 21(3), 719–734. https://doi.org/10.1007/s10796-017-9774-y

Gefen, D., Karahanna, E., & Straub, D. W. (2003). Trust and TAM in online shopping: An integrated model. *MIS Quarterly*, 27(1), 51–90. https://doi.org/10.2307/30036519

Hair Jr, J., Hair Jr, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt, M. (2021). *A primer on partial least squares structural equation modeling (PLS-SEM)*. Sage publications.

Horst, M., Kuttschreuter, M., & Gutteling, J. M. (2007). Perceived usefulness, personal experiences, risk perception and trust as determinants of adoption of e-government services in The Netherlands. *Computers in Human Behavior*, 23(4), 1838-1852. https://doi.org/10.1016/j.chb.2005.11.003

Hossain, M. M. & Prybutok, V. R. (2008). Consumer acceptance of RFID technology: An exploratory study. *IEEE Transactions on Engineering Management, 55*(2), 316-328. http://dx.doi.org/10.1109/TEM.2008.919728

Hsu, H. H., & Chang, Y. Y. (2013). Extended TAM model: Impacts of convenience on acceptance and use of Moodle. *Online Submission, 3*(4), 211-218.

Jayasingh, S., & Eze, U. C. (2015). An empirical analysis of consumer behavioral intention towards mobile coupons in Malaysia. *International Journal of Business and Information*, 4(2), 221-242. https:// www.researchgate.net/ publication/267206478

Khayati, S., & Zouaoui, S. K. (2013). Perceived usefulness and use of information technology: The moderating influences of the dependence of a subcontractor towards his contractor. *Journal of Knowledge Management, Economics and Information Technology, 3*(6), 68–77. https://citeseerx.ist.psu.edu/viewdoc/download?

Kim, G., Shin, B., & Lee, H. G. (2009). Understanding dynamics between initial trust and usage intentions of mobile banking. *Information Systems Journal*, 19(3), 283–311. https://doi.org/10.1111/j.1365-2575.2007.00269.x

Koenig-Lewis, N., Marquet, M., Palmer, A., & Zhao, A. L. (2015). Enjoyment and social influence: Predicting mobile payment adoption. *The Service Industries Journal*, 35(10), 537–554. https://doi.org/10.1080/ 02642069.2015.1043278

Lee, T. (2005). The impact of perceptions of interactivity on customer trust and transaction intentions in mobile commerce. *Journal of Electronic Commerce Research*, 6(3), 165. http://www.jecr.org/sites/default/files/06_3_ p01.pdf

Longyara, T., & Van, H. T. (2015). Diffusion of innovation in Asian: A study of mobile NFC (near field communication) payment in Korea and Thailand. *International Journal of Managerial Studies and Research (IJMSR)*, *3*(10), 36-42.

Liu, G. S., & Tai, P. T. (2016). A study of factors affecting the intention to use mobile payment services in Vietnam. *Economics, 4*(6), 249-273.

Kumar, M. S., & Krishnan, D. 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*. http://dx.doi.org/10.2139/ssrn.3640059

Madan, K., & Yadav, R. (2016). Behavioral intention to adopt mobile wallet: A developing country perspective. *Journal of Indian Business Research*, *8*(3), 227–244. https://doi.org/10.1108/JIBR-10-2015-0112

Naufaldi, I., & Tjokrosaputro, M. (2020). Pengaruh perceived ease of use, perceived usefulness, dan trust terhadap intention to use. *Jurnal Manajerial Dan Kewirausahaan*, *2*(3), 715-722.

Phuong, N. N. D., Luan, L. T., Dong, V. V., & Khanh, N. L. N. (2020). Examining Customers' Continuance Intentions towards E-wallet Usage: The Emergence of Mobile Payment Acceptance in Vietnam. *The Journal of Asian Finance, Economics, and Business,* 7(9), 505-516.

Pousttchi, K., & Wiedemann, D. G. (2007). *What influences consumers' intention to use mobile payments*. LA Global Mobility Round table, 1–16. https://www.researchgate.net/profile/Key_Pousttchi/publication/ 228453033_ What_influences_consumers'_intention_to_use_mobile_payments/links/ 0fcfd50f93b6775b68000000.pdf

Redzuan, N., Razali, A., Muslim, A., & Hanafi, W. (2016). Studying perceived usefulness and perceived ease of use of electronic human resource management (e-HRM) with behavior intention. *International Journal of Business Management (IJBM)*, *1*(2),118–131. https://dokumen.tips/documents/studyingperceived-usefulness-and-perceived-ease-ofvolume-1-issue-2-20166intention.html

Rigopoulos, G., Askounis. (2007). D. A TAM framework to evaluate users' perception towards online electronic payments. *Journal of Internet Banking and Commerce*, *12*(3), 1–6. https://www.researchgate.net/publication/ 37406649_A_TAM_Framework_to_Evaluate_Users'_Perception_towards_Online_Electronic_Payments

Rouibah, K., Lowry, P. B., & Hwang, Y. (2016). The effects of perceived enjoyment and perceived risks on trust formation and intentions to use online payment systems: New perspectives from an Arab country. *Electronic Commerce Research and Applications*, *19*, 33–43. https://doi.org/10.1016/j.elerap.2016.07.001

Schierz, P. G., Schilke, O., & Wirtz, B. W. (2010). Understanding consumer acceptance of mobile payment services: An empirical analysis. *Electronic Commerce Research and Applications*, *9*(3), 209–216. https://doi.org/10.1016/j. elerap.2009.07.005

Setyadinsa, R., Shihab, M. R., & Sucahyo, Y. (2018). Individual factors as antecedents of mobile payment usage. *Proceeding of the Electrical Engineering Computer Science and Informatics*, *5*(5), 514–518. https://doi.org/10.11591/eecsi. v5.1678

Shaw, N. (2014). The mediating influence of trust in the adoption of the mobile wallet. *Journal of Retailing and Consumer Services*, *21*(4), 449–459. https://doi.org/10.1016/j.jretconser.2014.03.008

Singh, N., Sinha, N., & Liébana-Cabanillas, F. J. (2020). Determining factors in the adoption and recommendation of mobile wallet services in India: Analysis of the effect of innovativeness, stress to use and social influence. International Journal of Information Management, 50, 191-205. https://doi.org/10.1016/jijinfomgt

Thakur, R., & Srivastava, M. (2014). Adoption readiness, personal innovativeness, perceived risk and usage intention across customer groups for mobile payment services in India. *Internet Research*, *24*(3), 369–392. https://doi. org/10.1108/IntR-12-2012-0244

Van Der Heijden, H. (2004). User acceptance of hedonic information systems. *MIS Quarterly*, *28*(4), 695–704. https:// doi.org/10.2307/25148660

Shafira, V., & Yasri, Y. (2021). The influence of perceived ease of use, perceived usefulness, and perceived risk on intention to use Gopay on Gojek application users. *Operations Management and Information System Studies*, *1*(4), 240-249. https://doi.org/10.24036/omiss.v1i4.42

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. https://doi.org/10.2307/30036540

Venkatesh, V., Thong, J. Y., & 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. https://doi. org/10.2307/41410412

Vuong, B. N., & Giao, H. N. K. (2020). The impact of perceived brand globalness on consumers'purchase intention and the moderating role of consumer ethnocentrism: An evidence from Vietnam. *Journal of International ConsumerMarketing, 32*(1), 47-68.

Yoon, C., & Kim, S. (2007). Convenience and TAM in a ubiquitous computing environment: The case of wireless LAN. *Electronic Commerce Research and Applications,* 6(1), 102-112.