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RESEARCH ARTICLE

Associated Factors to the Behavioral Intention of Using Non-Cash Payment Methods: A Comparison between Digital Wallet and Mobile Money

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ARTICLE INFO	ABSTRACT
  *Corresponding Authors: phuong.nm@tmu.edu.vn	Non-cash payment has been proven for its convenience in the location and time of the transaction, ease of managing expenses, and crime avoidance. In Vietnam, social distancing and government support have boosted its development. This study aims to test two models to identify the associated factors to Vietnamese people's behavioral intentions when using digital wallets or mobile money with the moderating effects of perceived risk. The time frame for this cross-sectional study was September through October 2024. An online survey was conducted with 521 participants using the digital wallet and 545 participants using mobile money. The structural equation modeling (SEM) method was applied to validate the assumptions. The findings revealed that (1) behavioral intention had significant and positive effects on hedonic motivation, facilitating conditions, and performance expectancy in two groups of participants; (2) the relationship between hedonic motivation and behavioral intention among digital wallet users was significantly moderated by perceived risk. The results correspond with the Unified Theory of Acceptance and Use of Technology (UTAUT) model and provide several important implications, including 1) an increase in performance expectancy will increase customers' trust and intention to use, and 2) technological investment to increase transaction security.

INTRODUCTION

Technology development brings significant changes to various industries, including the payment industry. Cash payment was step-by-step reduced and replaced by non-cash payments. In developed countries, the use of cash is reduced and has become unpopular[1, 2]. In emerging countries, cash payment is the most common method due to the low quality and infrastructure investment [3]. However, there has been significant growth in cashless payments recently. This phenomenon can be explained by: 1) the promotion of information technology (IT) and fintech companies through mobile payment [4] and quick response (QR) codes[5]; 2) the COVID-19 pandemic has significantly changed customers' behaviors, which is the manner of payments from contact to contactless[6]. Among non-cash payment methods, digital wallet (DW) [7]and mobile money (MM) [8]are two popular services that have been adopted quickly worldwide[9-12].

In Vietnam, due to the effects of coronavirus infectiousness, customers have changed and adapted to new payment methods, such as DW and MM, especially among loving technology youth[13, 14]. Besides the convenience, the widespread of these payment methods can result from the decision to

support the project on improving non-cash payments in Vietnam from 2021 to 2025 [15]. This decision facilitates a positive change in non-cash payment in the economy and makes it easy to approach customers in remote areas[16-18]. A report by the Ministry of Information and Telecommunications stated that the amount of Mobile Money subscribers quadrupled in April 2022 since the service was launched in January 2021, 67 percent of whom were from rural, mountainous, border, island, and remote areas[19]. Regarding digital wallets, by the end of the first quarter of 2020, 13 million e-wallet accounts were being activated and used, with an estimated USD 57.8 million in their total wallet[20].

Numerous studies have examined cashless and digital payments in both developed and developing countries and identified various factors that can affect consumer intention and behavior toward these payment methods. The findings confirm the performance expectancy (PE)[21-23], hedonic motivation[24], and facilitating conditions [22, 25, 26] directly affect customers' behavioral intention in using DW and MM. Perceived risk (PR) is considered the moderating factor that could change the relationships among the variables[27, 28]. Moreover, these studies mainly focus on one payment method, DM or MM. Little relevant research is being conducted on the same customer groups using DW and MM in Vietnam. The comparison is essential in order to determine the appropriate model to explain behavioral intention in the situation of Vietnam. This finding could contribute to service providers or policymakers pushing the development of cashless payment methods. Besides, the data was collected during the period of social distancing; the results might explore whether the effect of variables on behavioral intention changes in a different context, particularly during the COVID-19 period. This study aims to examine the associated factors with customers' behavior in using DW and MM and the moderating effect of perceived risk in the link between hedonic motivation and behavioral intention.

LITERATURE REVIEW

Theoretical background

Individual plans to adopt new technology are defined and examined via the technology acceptance model (TAM)[29]. This study proved that user acceptance of new information technology is influenced by perceived usefulness and simplicity. Venkatesh et al. (2003a) presented a broaden version of TAM dubbed the unified theory of acceptance and application of technology (UTAUT) in order to undertake the shortcomings of TAM. The finding showed four main core factors (effort expectancy, performance expectancy, social influence, and facilitating conditions) associated with intention and usage and four moderators of a critical relationship, i.e., gender, age, experience, and voluntariness of use.

TAM and UTAUT might serve as a fundament for research on behavioral intention when applying non-cach payment[30]. Several research includes variables in the TAM because it may lack sufficient significant factors to explain behaviour intention when using an e-wallet. Therefore, several add other variables to the UTAUT for a better explanation, such as perceived risks, trust [31, 32], and trust and enjoyment[33]. Hence, this study adds hedonic motivation as a new variable into the TAM to explore the efficiency of UTAUT2 in clarifying behaviour intention to use DW and MM. Moreover, this study explores the role of moderating variables, particularly perceived risk, in the relationship between performance expectancy and behavioral intention.

Theoretical framework and research hypothesis

Hedonic motivation and behavioral intention

The term "intention" has been defined as a function of individual attitudes towards the performance of behaviour based on subjective norms. Venkatesh et al. [34]defined behavioral intention as (BI) "the individual's chance of utilizing internet banking service" in a manner comparable to prior studies.

Hedonic motivation (HM) was mentioned as an incorporation of the delight or pleasure obtained from utilizing technology which was characterized as the adoption and application of technologies by users in the unified theory (e.g., mobile SMS). It has also been demonstrated to have a crucial impact on determining technological adoption and utilization[35]. The bigger the enjoyment value of mobile banking, the more customers' acceptance intention to use internet banking. This also implies that adopting such technologies might hasten additional intrinsic drive[36].

HM has been identified to be the most critical predictor of BI and significantly impacts consumers' technology acceptance[7, 36, 37]. Currently, most mobile services provide the origin pure utilitarian or transactional orientation without entertainment or fun purposes[38]. Previous research indicated that the more the enjoyment value of a mobile service, the bigger the acceptance intention of clients[39]. Besides, Alalwan, Dwivedi [40]concluded that the higher users' hedonic motivation is, the higher the benefits users will perceive, which will impact their performance expectancy.

Hypothesis 1a: Hedonic motivation positively affects the performance expectancy

Hypothesis 1b: Hedonic motivation positively affects behavioral intention

Performance expectancy

Venkatesh, Thong [36]indicated that performance expectancy (PE) is the degree of benefit of the new technology provided to customers. In addition, Chao [41]revealed that PE is the extent to individual's belief in how technology will enable them to accomplish more demanding performance jobs. It evaluates the advantages gained when initiatives are approved or implemented. Previous studies have discovered a strong positive correlation between PE and BI [41, 42].

Venkatesh et al. (2003) noticed that PE is a crucial component of intention in the original UTAUT model. PE has encouraged BI to adopt mobile services such as mobile banking[43], mobile cloud services[44], mapping apps [45] and mobile learning[46]. A study conducted in Vietnam proved that PE significantly affects BI among youth aged 18 to 25 using e-wallets[47]. Therefore, the hypothesis is as follows:

Hypothesis 2: Performance expectancy positively affects behavioral intention

Facilitating conditions

Venkatesh, Morris [34]define facilitating conditions (FC) is a person's conviction that a technological and organizational infrastructure is in place to facilitate the utilization of the system. In addition, they represent users' perceptions of the technical infrastructure that supports their system's usage[36, 48]. SMS messages require specific abilities, such as using an intelligent device, entering the recipient's cell number, and writing/inserting the text. Users are more probably to adopt internet banking if they can access a encouraging set of supporting circumstances, such as online mobile banking tutorials, demos, or help chat. A previous study looked at the connetcion between enabling conditions and the intention to use mobile banking[49]. Thus, facilitating factors might have effects on behavioral intention is the hypothesis.

Hypothesis 3: Facilitating conditions positively affect behavioral intention

Perceived risk

Risk considerations are essential to mobile services, and the lesser the desire to utilize new technology, the greater the risk of utilizing it[50]. Perceived risk (PR) has been researched into six components: security, privacy, financial, social, time/convenience, and performance risk[51]. PR might strongly impact personal decision to use compared to the benefit factor[52, 53]. Hanafizadeh, Behboudi [54] came up with the concept of "moderating impact of perceived risk" because of customers' common concerns such as privateness difficulties, system malfunctions, lost passwords, discordance of apps and services, anti-malware, and poor system quality. In cases of mobile payment, PR negatively affects the customer's using intention[55]. Moreover, customers still doubt the safety

of virtual money transactions in mobile shopping systems[56]. Consequently, the following is the theory:

Hypothesis 4a: Perceived risk moderates the effect of hedonic motivation on behavioral intention

Conceptual framework

A research model that clarifies the variables that affect BI and their proposed relationships is shown in Figures 1 and 2. The variables in Model 1 are categorized based on factors (hedonic motivation, performance expectancy, and facilitating conditions). Perceived risk was added to Model 1 as a moderator between behavioral intention and performance expectancy (Figure 2). In Figures 1 and 2, the conceptual framework is shown. The research hypotheses are represented by the connections between the constructs (arrows).
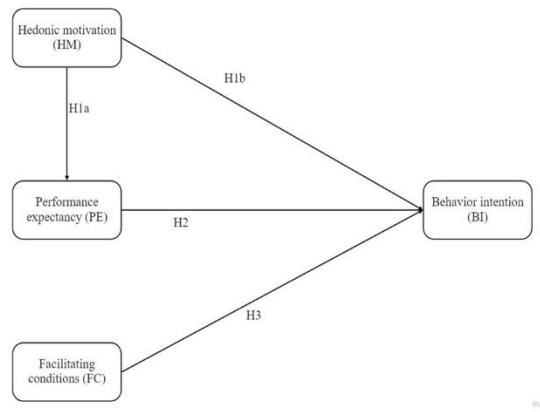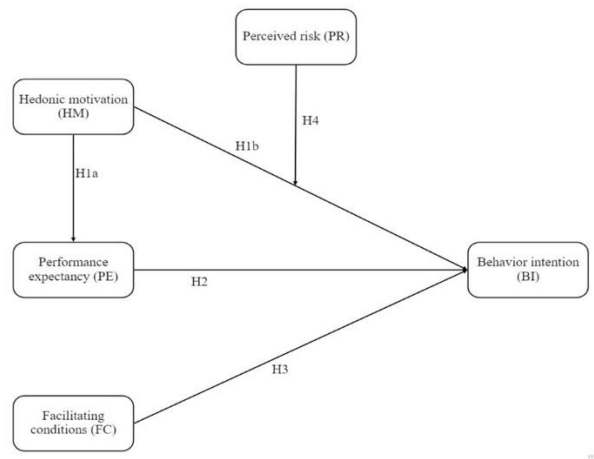

Fig 1. Model 1's theoretical framework

Fig 2. Model 2's theoretical framework

Ethical approval

This research complied with accepted ethical standards by the Institutional Review Board of the Institute of Theoretical and Applied Research committee (No. 2705QD/2021/HDKH-DHDT).

METHODOLOGY

Sample and data collection

The research subjects of this study were Vietnamese adults. The data collection was processed from September to October 2024 using online convenience network sampling. This is a subset of purposive

sampling in which the participants were asked to send the Google link form to their acquaintances they knew would be suitable for the research. The criteria included: 1) Vietnamese individuals above 18 years old, 2) having spent at least six months in Vietnam up to the time, 3) the capacity to read and respond to inquiries, and 4) agreement to take part in the research [57].

DW and MM, based on the following reasons, were selected. First, the Vietnamese Government supported these two non-cash payment methods[58]. Second, there are numerous advantages that non-cash payment brings, such as comfortability in payment, low or free service fees, and help control illegal income[59]. Finally, the COVID-19 pandemic has changed the behaviour of people switching from cash to cashless payment[6].

Instrument

A self-administered questionnaire was used for to collect participants' information. A pre-test was done to ensure the questionnaire was understandable before collecting the data. At this point, confusing or ambiguous words or statements were eliminated. The completed data collection questionnaire had several sections. The respondents' demographic information, including gender, highest education level, place of residence, average monthly income, length of time having a bank account, and age group, were questioned in the first section. The respondents' experience with DW or MM was questioned in the following sections. Respondents took a total of 10 to 15 minutes to complete the questionnaire.

Measurement

The measures were modified from earlier studies and were translated from English to Vietnamese using a reverse translation method to ensure similarity [60]. The studies of Venkatesh, Morris [34] and Venkatesh, Thong [36] to capture Performance expectancy and Behavioral intention was adopted. Following Luarn and Lin [61] andVenkatesh, Thong [36], a four-item scale captures the facilitating conditions. Perceived risk is captured by the studies of Featherman and Pavlou[62], Lu et al.[55], Martins et al.[63], Yang et al.[64], and Lingying Zhang et al.[65]. Meanwhile, hedonic motivation is captured by Beza et al.' scale[66]. 5-point Likert scale was applied to assess all measures in which 1 = strongly disagree and 5 = strongly agree. Detailed information on the scale can be found in *Table 2*.

Data analysis

The descriptive statistics for participants' profiles were computed using STATA 16 (STATA Corp Ltd) s (frequency and percentages). Statistical significance was determined as a p-value of 0.05.

In the beginning, exploratory factor analysis (EFA) was applied to develop and validate measurement[67]. The factor loading of the indicator should be at least 0.6 since lower values show that the items are not contributing to measuring the construct[68]. After that, composite reliability[60], Cronbach Alpha, and the average variance extracted (AVE) [69]were evaluated[70]. The value of AVE fluctuates from 0 to 1 and should exceed 0.50 to be adequate for convergent validity[70]. The composite reliability (CR) or Cronbach Alpha values were greater than 0.7[70, 71].

The proposed hypotheses were tested using structural equation modeling (SEM). The goodness of fit (GoF) test was applied to ascertain whether sample data fits a distribution from a certain population.[72]. Four indices included chi2/df, the Tucker–Lewis index (TLI), the root mean square error of approximation (RMSEA), and the comparative fit index (CFI).

RESULTS

The general characteristics of participants is shown in Table 1. 521 and 545 respondents chose digital wallets and mobile money, respectively. The majority of them were females (more than 60 percent). The average ages of the two groups were 25 and 27 years old. The respondents spent around 8 hours a day using the Internet. Three-quarters of the participants are living in urban areas. Most of them

hold a bachelor's degree or above (around 65 percent). The remaining respondents had at least a high school or vocational degree (34.55 percent). The participant's time spent using a bank account focuses from 1 to 3 years (37.43 percent), followed by more than five years (34.13 percent).

Table 1: General demographic characteristics of two groups

Demographic characteristics	Digital wallet (n = 521)		Mobile money (n = 545)		
	No.	Percentage	No.	Percentage	
Gender					0.001
Male	135	25.91	191	35.05	
Female	386	74.09	354	64.95	
Highest educational level					0.006
Highschool/vocation	180	34.55	233	42.75	
Undergraduate or higher	341	65.45	312	57.25	
Living location					>0.05
Urban	368	70.63	392	71.93	
Rural	153	29.37	153	28.07	
Average monthly income					>0.05
Under $658.91	297	57.01	277	50.83	
From $658.91 to $1,317.82	145	27.83	176	32.29	
Higher $1,317.82	79	15.16	92	16.88	
Time using the bank account					0.001
Less than 1 year	72	13.82	60	11.01	
From 1 to 3 years	238	45.68	204	37.43	
From 3 to 5 years	83	15.93	83	15.23	
More than 5 years	116	22.26	186	34.13	
Not sure	12	2.3	12	2.2	
	Mean	SD	Mean	SD	p-value**
Age (years old)	25.60	8.74	27.65	9.64	0
Average time spending for using the Internet (hours/day)	8.26	3.69	8.16	3.74	>0.05
* chi-squared test, ** Mann Whitney ranksum test					

Table 2: Measuring scales and references for the proposed constructs

Construct	Corresponding items	Items sources
Performance expectancy (PE)	(PE1) I find digital wallet/mobile money services helpful in my day-to-day existence	Venkatesh, Thong [36], Venkatesh, Morris [73]
	(PE2) I become more productive when I utilize these services	
	(PE3) I find it more convenient to use a digital wallet or mobile money	
Facilitating conditions (FC)	(FC1) I have the resources required to use a digital wallet or mobile money	Venkatesh, Thong [36], Luarn and Lin [61], Venkatesh, Morris [73]
	(FC2) I am aware of the requirements to use a digital wallet or mobile money	
	(FC3) The mobile wallet and other technologies I use are compatible with digital wallets.	
	(FC4) When I have issues utilizing digital wallet or mobile money services, I can receive assistance from others	
Perceived risk (PR)	(PR1) I will not feel entirely secure sharing personal information through the mobile money/digital wallet system	Lu, Yang [55], Featherman and

	(PR2) I am concerned about the use of mobile money/digital wallets in the future because I fear that someone else may be able to access my data	Pavlou [62], Martins, Oliveira [63], Yang, Lu [64], Zhang, Tan [65]
	(PR3) I do not feel secure when transferring private information through the digital wallet/mobile payment system,	
	(PR4) There is a strong chance that the digital wallet/mobile money system will have a problem	
Hedonic motivation (HM)	(HM1) I feel fun when using digital wallet/mobile money services is fun	Beza, Reidsma [66]
	(HM2) I enjoy when using digital wallet/mobile money services is enjoyable	
	(HM3) I feel entertained when using digital wallet/mobile money services	
Behavioral intention (BI)	(BI1) I plan to continue using digital wallet/mobile money in the future.	Venkatesh, Thong [36], Venkatesh, Morris [73]
	(BI2) I will always attempt to use digital wallet/mobile money daily.	
	(BI3) I intend to use digital wallet/mobile money frequently.	

The related components were examined using convergent validity and reliability as two critical criteria [74] (Table 3). Reliability was examined using three assessment disabilities: Cronbach's Alpha, composite reliability, and factor loadings. Results showed that all three indices adapted required cut-off values. More accurately, the Cronbach's Alpha, CR, and factor loadings ranges for people choosing DW were 0.867–0.906, 0.872–0.909, and 0.436–0.821, respectively. For Mobile money, the ranges of Cronbach's Alpha, CR, and factor loadings were 0.864–0.916, 0.872–0.909, and 0.417–0.792, respectively. Average variance explained with an expected result greater than 0.5 was used to gauge convergent validity[69]. Results revealed that all latent variables in the two models had satisfactory AVEs (0.644–0.926 for Model 1 and 0.617–0.785 for Model 2), satisfying the convergent validity requirements[75, 76].

Table 3: Quality criteria and factor loadings

Construct	Items	Digital wallet				Mobile money			
		AVE	CR	Cronbach's alpha	Loadings	AVE	CR	Cronbach's alpha	Loadings
Performance expectancy (PE)	PE1	0.732	0.891	0.884	0.602	0.734	0.892	0.888	0.746
	PE2				0.436				0.612
	PE3				0.604				0.757
Facilitating conditions (FC)	FC1	0.627	0.870	0.867	0.680	0.684	0.896	0.894	0.689
	FC2				0.767				0.691
	FC3				0.716				0.659
	FC4				0.611				0.527
Hedonic motivation (HM)	HM1	0.770	0.909	0.906	0.556	0.785	0.916	0.916	0.665
	HM2				0.629				0.700
	HM3				0.419				0.616
Perceived risk (PR)	PR1	0.641	0.877	0.875	0.721	0.617	0.865	0.864	0.701
	PR2				0.806				0.792
	PR3				0.821				0.775

	PR4				0.751				0.734
Behavioral intention (BI)	BI1	0.695	0.872	0.869	0.485	0.725	0.888	0.887	0.417
	BI2				0.676				0.614
	BI3				0.685				0.621
KMO				0.932				0.933	

The structural model analysis tested all the relationships suggested in the conceptual model. Asymptotic t-statistics produced by this analytical process were used to calculated the GoF of the path coefficients. T-tests were used to examine standard errors[77]. Path coefficients were calculated by analyzing the SEM analysis's inner model. The significance of those coefficients and their use in testing proposed relationships. The results demonstrated that all hypotheses were accurate.

More specially, in Model 1 applied for participants choosing a DW, HM significantly impacted PE (β = 0.86). HM (β = 0.54), PE (β = 0.19), and FC (β = 0.19) had significant effects on BI. Similarly, in Model 1 applied for participants choosing MM, HM significantly impacted PE (β = 0.81). HM (β = 0.50), PE (β = 0.18), and FC (β = 0.26) had significant effects on BI.

In Model 2, the moderate effect of PR on the relationship between HM and BI was tested. For participants choosing DW, HM significantly impacted PE (β = 0.76). HM (β = 0.44), PE (β = 0.28), and FC (β = 0.27) had significant influences on BI. Meanwhile, for participants choosing MM, HM significantly impacted PE (β = 0.72). HM (β = 0.41), PE (β = 0.32), and FC (β = 0.26) had significant effects on BI.

Consequently, the findings demonstrate that all hypotheses were supported (see Table 4a, 4b and Fig. 3a, 3b, 4a, and 4b

Table 4a: Hypotheses testing Model 1

Pathway	Hypo thesis	Digital Wallet					Mobile money				
		Coef.	SE.	P	95% CI	Decision on hypothesis	Coef.	SE.	P	95% CI	Decision on hypothesis
HM->PE	H1a	0.86	0.02	***	(0.82; 0.89)	Accepted	0.81	0.02	***	(0.77; 0.85)	Accepted
HM->BI	H1b	0.54	0.09	***	(0.37; 0.71)	Accepted	0.50	0.07	***	(0.36; 0.64)	Accepted
PE->BI	H2	0.19	0.07	***	(0.06; 0.33)	Accepted	0.18	0.05	***	(0.08; 0.29)	Accepted
FC->BI	H3	0.19	0.07	***	(0.05; 0.33)	Accepted	0.26	0.06	***	(0.14; 0.38)	Accepted
*** p < 0.01											

Table 4b: Hypotheses testing Model 2

Pathway	Hypoth esis	Digital Wallet					Mobile money				
		Coef.	S.E.	P	95% CI	Decision on hypothesis	Coef.	S.E.	P	95% CI	Decision on hypothesis
HM->PE	H1a	0.76	0.03	***	(0.71; 0.81)	Accepted	0.72	0.03	***	(0.66; 0.78)	Accepted
HM->BI	H1b	0.57	0.08	***	(0.41; 0.73)	Accepted	0.38	0.08	***	(0.21; 0.54)	Accepted

				** *	(0.07; 0.26)	Accepted	0.21	0.04	***	(0.14; 0.29)	Accepted
PE->BI	H2	0.17	0.05								
FC->BI	H3	0.27	0.05	** *	(0.18; 0.36)	Accepted	0.26	0.04	***	(0.18; 0.35)	Accepted
PR->BI	H4	0.17	0.09	**	(0.01; 0.34)	Accepted	0.01	0.09	0.907	(-0.17; 0.19)	Reject
PR*HM ->BI		-0.04	0.02	*	(-0.08; 0)			0.01	0.02	0.602	(-0.03; 0.06)	
*** p < 0.01, ** p < 0.05, * p < 0.1											

Although all the hypotheses in Model 1 and Model 2 for participants choosing DW and MM services were supported by the data, hence, the model fit indices were applied to identify whether the PR leads to a stronger relationship between PE and BI.

Model fit indices, presented in Table 5, indicated that for respondents using DW or MM services, model 1 is better than model 2.

Table 5. GoF

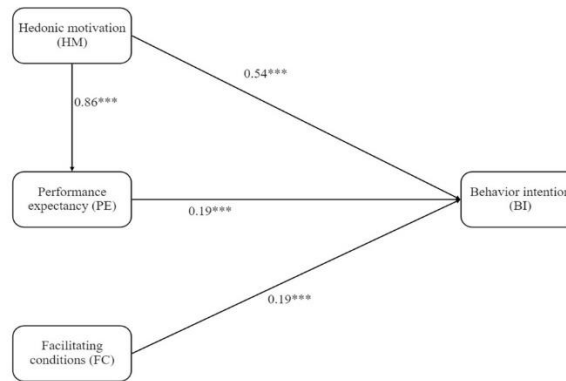| Index	Model 1		Model 2	
	Digital wallet	Mobile money	Digital wallet	Mobile money
chi2/df	4.58	6.18	3.06	4.11
RMSEA	0.083	0.098	0.063	0.076
CFI	0.961	0.95	0.966	0.954
TLI	0.949	0.934	0.958	0.942

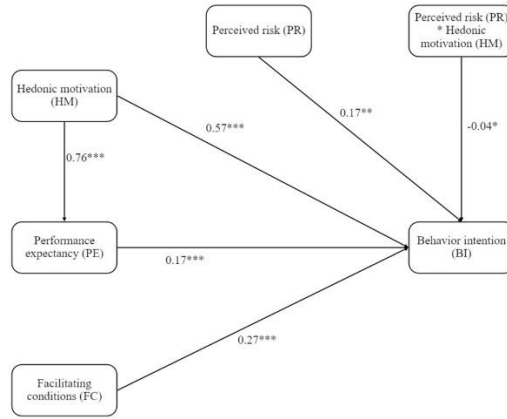**Fig 3a. Digital wallet – Model 1**

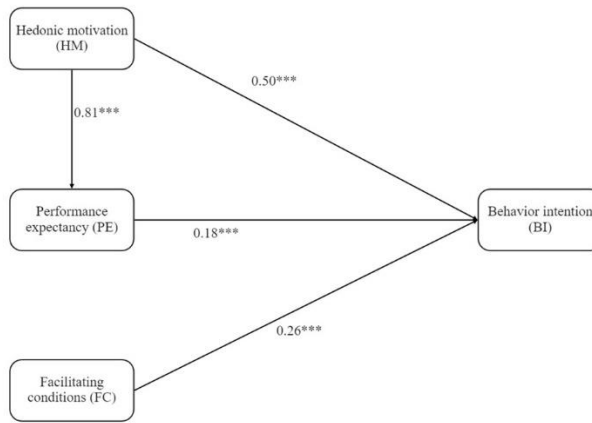**Fig 3b. Digital wallet – Model 2**
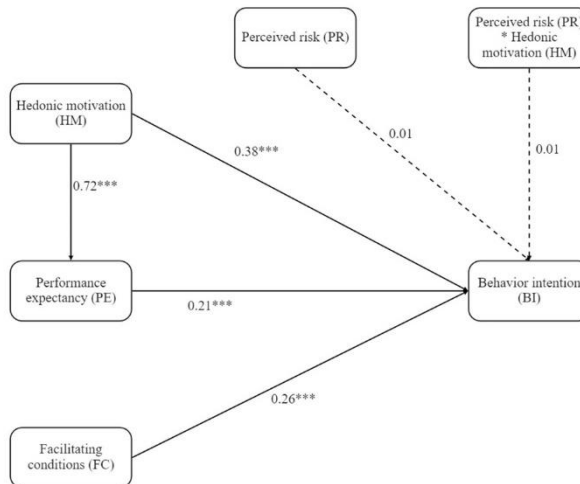

Fig 4a. Mobile money – Model 1

Fig 4b. Mobile money – Model 2

DISCUSSION

This study intends to determine the appropriateness of models 1 and 2 for two groups of clients utilizing mobile money and digital wallet services. Model 2 demonstrates that perceived risk moderates the impact of performance expectation on the behavioral intention for both services.

Perceived risk improves the goodness of fit metrics in both service groups, making model 2 meaningful for both groups.

The impact of performance expectancy on behavioral intention increased from 0.19 to 0.28 and from 0.18 to 0.32 with the digital wallet service and mobile money service, respectively. Meanwhile, the influence of hedonic motivation on performance expectancy reduced from 0.86 to 0.76 with the digital wallet service and from 0.81 to 0.72 with the mobile money service. The R-squared values of performance expectancy and behavioral intention are more significant than 0.1, showing the good explanatory power of model 2. With the lower p-value and better fitness index, model 2 has explained 66 percent of customers' behavioral intention of using digital wallet services and 69 percent of the behavioral intention of customers using mobile money services[78]. The findings show remarkable similarities in the results of the two services.

Our findings illustrate that hedonic motivation directly and positively affects behavioral intention. This result is consistent with previous studies evaluating the effect of customers' hedonic motivation on behavioral intention[7, 79-81]. With hedonic adaption, users have a higher motivation while using services[82-84]. Similarly, our results confirm that hedonic motivation positively affects performance expectancy, which is similar to previous studies[8, 81, 85, 86].

The presence of perceived risk as a mediator variable was not established. In order to find such an effect, perceived risk must operate as a predictor variable for the dependent variable of behavioral intention. Previous research has shown that perceived risk has a negative influence on behavioral intention, which means the greater the perceived risk, the lower the behavioral intention[87-89]. It is worth noting that when the perceived risk variable is included, the impact from performance expectancy to behavioral intention significantly increases with both services. Besides, a deeper understanding of the potential risks helps customers increase their vigilance and learn more about their services. This process helps the service spread and easily reach end users.

The notable finding of this study is that perceived risk has moderating influence on the linkage between hedonic motivation and behavioral intention among DW customers, whereas MM does not. The study contributed theoretical implications when asserting that hedonic motivation, performance expectancy, and facilitating conditions affect behavioral intention. An increase in performance expectancy will increase customers' trust and intention to use these services[46, 90]. Besides, performance expectancy is influenced by hedonic motivation.

Likewise, some practical implications could be drawn up. Scams and frauds using high technologies in Vietnam have increased in recent years[91, 92]. Even though official social media warnings on this issue have been given, many customers still lose money because of fraud. Therefore, strengthening individuals' perceived risk is necessary[63]. Electronic, non-cash transactions are an inevitable trend that comes with the advancement of technology. Therefore, being equipped with safe financial practices is essential. The banking industry inherently needs a high level of security. Besides, technology needs to be invested in enhancing customers' safety and giving them a feeling of security while using services to protect the bank and its customers. Regarding management, the hedonic motivation, performance expectancy, and facilitating conditions factors also need to be improved for customers to increase their intention to use services. Investing in technology systems and enhancing the friendliness of the service's interface would make customers feel more satisfied and secure[93-95].

It is plausible that several limitations may influence the results obtained. First, two groups of customers are only asked to send feedback about one out of the two services. Therefore, this study has not compared which service customers prefer. However, the results show that the indicators of the two service groups are similar. Further research can investigate customers using both services to make the necessary comparisons to determine behavioral intention differences. In addition, the convenience sampling technique might bring potential bias in the analysis due to the social distance of COVID-19.

Further study should apply another data collecting method, such as probability sampling, to increase and make statistically solid inferences about the population. Finally, this is a cross-sectional study, so exploring cause-and-effect relationships among variables is complex. Longitudinal research could be used to track the evolution of variables over time.

CONCLUSION

Digital payment has become more popular, especially in emerging economies like Vietnam. Digital wallets and mobile money were chosen to be studied in the context of the COVID-19 pandemic, while the government encourages using non-cash payment. The study demonstrated the influence of hedonic motivation, performance expectancy, and facilitating conditions on behavioral intentions. Moreover, the perceived risk does not moderate the relationship between hedonic motivation and behavioral intention among MM users.

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