

-RESEARCH ARTICLE-

IMPACTS OF PROMOTIONAL BENEFIT ON ACTUAL USE BEHAVIOR OF MOBILE WALLET: EVIDENCE FROM VIETNAM

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—Abstract—

In the context of Vietnam, this study provides a mechanism by which advertising advantage influences actual usage behaviour. Using Partial Least Square-Structural Equation Modelling, 182 observations from an online survey were analyzed (PLS-SEM). Actual use behaviour is significantly explained by desire to use, facilitating situation, and affective experience, according to this study. In addition, compatibility and social influence significantly affect the association between intention to use and promotion benefit. The outcomes of this study give mobile wallet providers an understanding of how to integrate promotional perks to sustain current customers' intent to use mobile wallets and expand their actual usage patterns.

Keywords: Mobile wallet, Promotional benefit, Intention to use, Actual use behaviour

1. INTRODUCTION

Globally, cashless transactions are becoming a necessity in the 4.0 era (Bank, 2020; Facebook, 2020). Recent growth in mobile payment in Vietnam can be attributed to the fact that more than half of the country's population owns a mobile phone (Morgan, 2019; PWC, 2019). In comparison to the same period in 2019, the quantity and value of mobile

Citation (APA): Nguyen, O. T. K., Nguyen, H. T. (2022). Impacts of Promotional Benefit on Actual Use Behavior of Mobile Wallet: Evidence from Vietnam. *International Journal of eBusiness and eGovernment Studies*, 14 (3), 530-559. doi:10.34111/ijepeg.202214144

device-based transactions increased by 123.9% and 125.9%, respectively (Minh, 2020). Mobile wallets, the most recent form of mobile payment defined as an application installed on a smartphone that enables consumers to deposit money and make online payments for various purchases of goods, services, and digital content regardless of time and place (Deka, 2020; GSMA, 2012; Sharma et al., 2018; Shin, 2009; K. Yadav, 2016), have gained popularity as non-cash payment has become an inevitable trend worldwide (Bank, 2020; Dahlberg et al., 2008; Facebook, 2020; Mombeuil, 2020). Over 85% of users in Vietnam own at least one mobile wallet or payment app, and over 42% use mobile contactless payments (VISA, 2020). As of December 31, 2018, 4.24 million confirmed mobile wallets were linked to bank accounts nationwide (VNBA, 2019). In 2017, the value of mobile wallets exceeded 53 trillion US dollars, an increase of 64 percent compared to 2016. (Standard.Chartered, 2019). Since COVID-19, the use of mobile wallets has increased significantly. Popular mobile wallet Momo grew its number of new users by 30-40% during the COVID-19 outbreak and achieved 20 million members in 2020 with a growth rate that was double that of 2019 to reach 20 million users. Other mobile wallets such as Moca, Zalo Pay, and AirPay undergo comparable modifications (Hong, 2020).

Prior research on mobile wallet acceptance has been undertaken in both developed and developing nations (Aydin et al., 2016; Johnson et al., 2018; Kaur et al., 2020; Kumar et al., 2018; W. R. Lin et al., 2020; Mombeuil, 2020; Shaw, 2014; Shin, 2009; Slade et al., 2015; Soodan et al., 2020; Tun, 2020; K. Yadav, 2016). Some are derived from the Technology Acceptance Model (TAM) created by Davis (1989), the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Venkatesh et al. (2003), and an expanded version to explain the intention to use a wallet (Amin et al., 2015; Phutela et al., 2019; Shin, 2009), while other studies integrated constructs originated from the Diffusion of Innovation (DOI) created by (Chen et al., 2008; Rogers, 1983; Thakur et al., 2014). Such studies have investigated a variety of mobile wallet acceptance factors, including perceived usefulness (Aji et al., 2020; N. Singh et al., 2020), perceived ease of use (Phutela et al., 2019), social influence (Megadewandanu, 2016; K. Yadav, 2016), compatibility (Aydin et al., 2016), perceived cost (P. Yadav, 2017), and facilitating conditions (P. Yadav, 2017). (Chawla et al., 2019, 2020). In addition, because mobile payment demands personal and sensitive financial information, security concerns may inhibit technological adoption. Consequently, literature has addressed trust and security concerns, or perceived threats associated with mobile wallets (Shaw, 2014; S. Singh et al., 2014; Soodan et al., 2020). Several further studies investigate the relationship between mobile wallet adoption satisfaction and continuation intent (Kumar et al., 2018). Previous research has examined technology adoption in the context of digital banking (Nguyen et al., 2020), mobile banking (Le et al., 2020), and mobile payment (Liu et al., 2016) in Vietnam, but there are few studies on mobile wallets (Phuong et al., 2020). In general, past research has focused mostly on the design of mobile wallet

systems for usability, diversity of services, trust and security challenges, or the evaluation of user satisfaction with this technology.

Nonetheless, promotional issues have begun to receive attention, but they remain scarce in the context of mobile wallets. This is due to the fact that perceived ease of use and perceived usefulness, two vital and robust predictors of technology acceptance in the early introduction of new technologies, are dominant (Davis, 1989; Venkatesh et al., 2003; Venkatesh et al., 2012), appear to gradually lose their power of explanation due to the popularity of mobile wallets (Amin et al., 2015; LI et al., 2019; H.-F. Lin, 2011; Megadewandanu, 2016; K. Yadav, 2016) investigated a direct effect of promotional benefits on the intention to use mobile wallets, as opposed to a method through which promotional benefits link with actual usage behaviour. In the context of Vietnam, where mobile wallet services have strengthened their competitiveness with 33 licensed service providers, promotional perks may be a significant influence (Nguyen et al., 2020). These providers have increased the capability and scope of their mobile wallets to include a variety of financial transactions, such as car-booking services, food-ordering services, and ticket purchases, as well as the payment of power, water, tuition, etc (Thanh, 2020). As a result, service providers seek alternatives to attract clients and compete for market share by introducing numerous enticing promotions to increase payment volume by delivering gifts, rebates, vouchers, and free transactions on a regular basis (Amin et al., 2015; Anh, 2021; Ha, 2020).

According to Cimigo (2019)'s analysis, enticing promotions are crucial for mobile wallet adoption in Vietnam. Indeed, Vietnamese individuals are inclined to save money and take advantage of monetary incentives to minimize the cost of their payment transactions. Therefore, promotional activities can be viewed as a short-term strategy for attracting new clients and retaining existing ones. Despite the significance of promotional benefits, there are few studies on the process by which promotional benefits influence the actual use of mobile wallets. In addition, prior research on the influence of promotional benefits on the adoption of mobile wallets has shown conflicting results. Deka (2020) and K. Yadav (2016) conclude that promotional benefit is a requirement for mobile wallet adoption. Similarly, Hoang et al. (2020) did a study to determine the impact of promotion benefits on the adoption of mobile wallets in Vietnam. Additionally, Prabhakaran et al. (2020) found that the promotional benefit has a significant impact on the intention to utilize mobile wallets. Aydin et al. (2016), in contrast, discover no relationship between the benefits of tangible incentives and the intention to use mobile wallets. Consequently, this study seeks to comprehend the process by which the promotional advantage influences the mobile wallet's actual usage behaviour.

Consequently, the purpose of this study is to examine the mechanism by which the advertising benefit influences the actual usage behaviour of the mobile wallet. The purpose is articulated by the following research questions:

- (1) What factors affect the actual use behavior of the mobile wallet in Vietnam?
- (2) To what extent do those factors affect the actual use behavior of mobile wallets in Vietnam?

Utilizing snowball sampling techniques, an online survey questionnaire was distributed to users of mobile wallets. Using the analytical software program Smart-PLS 3.0, the data are analyzed utilizing Partial Least Square-Structural Equation Modelling (PLS-SEM). In the context of mobile wallets, our research provides a method by which the promotional advantage influences actual usage behavior. In the context of the mobile wallet, actual use behavior is explained by intention to use, facilitation condition, and affective experience, according to the study. In addition, compatibility and social influence, which mediate the relationship between promotional advantage and desire to use, determine usage intent (Alzahrani et al., 2021).

Our study contributes in numerous ways. We emphasize the significance of promotional benefit on actual usage behavior in the context of mobile wallets as competition amongst mobile wallets increases. In this context, the study's originality comes in demonstrating that alignment between the marketing benefit and compatibility and social impact is more likely to influence the mobile wallet users' propensity to use. In addition, the finding identifies a crucial influence of affective experience on actual use behavior, which has been neglected in previous research. The study adds to the growing corpus of knowledge regarding behavior intentions and actual usage behavior (Bhatiasevi, 2016; W. R. Lin et al., 2020; Oliveira et al., 2016; Shaw, 2014; Slade et al., 2015; Venkatesh et al., 2003).

The remainder of the paper's format is as follows: This part provides an overview of the present economy of Vietnam (section 2), a literature review and research hypothesis development (section 3), research methodology (section 4), data analysis and findings (section 5), and a discussion and conclusion (section 6). (section 6).

2. THEORETICAL BACKGROUND

Various theories have been used in the past to explain actual use behaviour, including the Technology Acceptance Model (TAM) developed by Davis (1989), the Unified Theory of Acceptance and Use of Technology (UTAUT) proposed by Venkatesh et al. (2003), and the Diffusion of Innovation (DOI) developed by Rogers (1983). The early TAM (Davis, 1989) recognized perceived ease of use (PEOU) and perceived usefulness (PU) as major factors of the intention to adopt a new system. Subsequently, the TAM was expanded by other researchers. Additional factors (such as trust, security, and social influence) were added to the framework to explain the technology acceptance in various contexts (Venkatesh et al., 2008; Venkatesh et al., 2000), including online shopping (Kalina et al., 2017), fin-tech service (Chuang et al., 2016), and digital banking (Riza, 2019; Venkatesh et al., 2008). However, TAM does not account for psychological

elements that could considerably influence the adoption intention of mobile wallets (Amin et al., 2015; Mathieson et al., 2001; Shin, 2009; Trivedi, 2016).

The UTAUT model introduced by Venkatesh et al. (2003) evaluates the intention to use a new technology and its subsequent actions, based on an aggregation of eight commonly-utilized earlier models (see Fig. 1). Four primary categories, including effort expectancy (substituted for perceived ease of use), performance expectancy (substituted for perceived usefulness), enabling factors, and social impact, account for up to 70% of the variance in predicting intention to use new technology. UTAUT and its variants have been used to explain why various information systems are used, such as online ticket purchase (Escobar-Rodríguez et al., 2014), mobile banking (Bhatiasevi, 2016), and mobile payment (Escobar-Rodríguez et al., 2014; Slade et al., 2015).

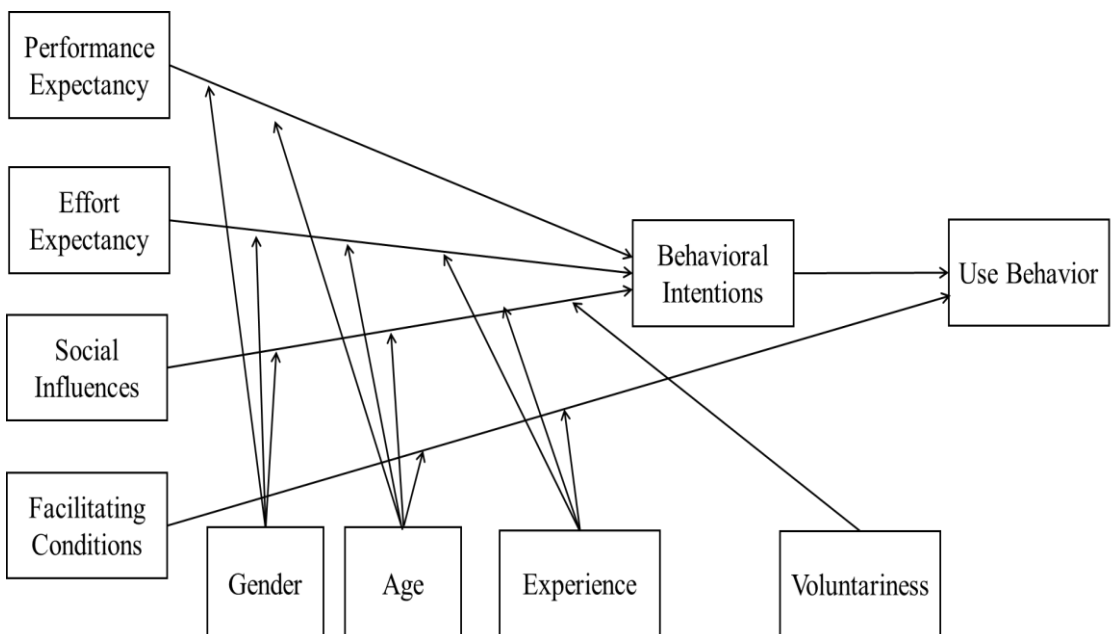


Fig 1. UTAUT Model (Venkatesh et al., 2003)

The initial UTAUT model presented to explain technological acceptance disregarded characteristics associated with client adoption processes; Venkatesh et al. (2012) updated this model, which they dubbed UTAUT2. The UTAUT2 added seven constructs, including routine, effort expectation, hedonic motivation, enabling condition, performance expectation, perceived value, and social impact. Despite its improvement, the framework's major flaw is that it does not account for cultural influences (K. Yadav, 2016).

Rogers (1983)'s DOI is a common theory for understanding how innovation is implemented and diffused in a social environment. When selecting whether to accept or reject new technology, humans engage in a perceptual process that includes learning

about the notion, establishing an attitude toward it, deciding whether to accept or reject it, putting the new idea into action, and confirming their decision (Rogers, 1983). Also, DOI confirms five crucial constructs used by previous academics to determine the diffusion extent of a novel system, including compatibility, trainability, relative advantage, complexity, and observability (Moore et al., 1991). DOI and UTAUT can be paired to provide more thorough explanations for mobile payment intent to use and actual use behaviour (W. R. Lin et al., 2020; Oliveira et al., 2016).

2.1 Conceptual Framework and Hypothesis Formulation

2.1.1 Conceptual Framework

Fig. 2 depicts the proposed framework created from hypotheses based on TAM, UTAUT, and DOI as a mechanism between promotional benefit and actual mobile wallet use behaviour. We hypothesize that advertising advantage influences actual use behaviour via intention to use, compatibility, and social influence. In addition to enabling conditions and emotional experience, actual use behaviour is also influenced by facilitating conditions and experience.

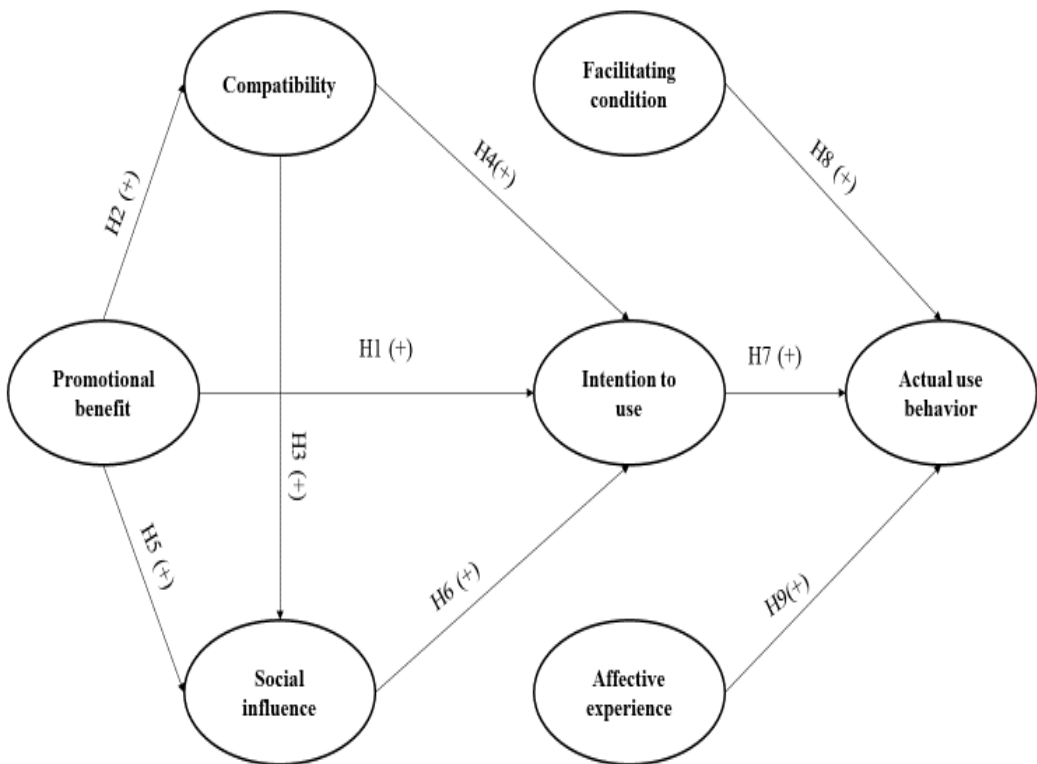


Fig 2. Conceptual Model of the Research

2.1.2 Promotional Benefit and Intention to Use

Promotional advantages are monetary and non-monetary gains received from the act of temporarily lowering prices in order to increase the effectiveness of efforts to sell products to price-sensitive consumers (Sunny et al., 2018). The promotion advantage comprises hedonistic and utilitarian values. The former includes chances for value expression, amusement, and discovery, while the latter may include cost savings, improved product quality, and shopping convenience (Chandon et al., 2000). Kim et al. (2014) demonstrate that customers try to obtain concrete benefits and pay close attention to advertising that offers incentives. Popular practical incentives in the mobile wallet service, such as monetary rewards, discounts, coupons, cashback, merchant partnerships, etc., significantly motivate people to install and utilize the service (Prabhakaran et al., 2020). The following describes the relationship between promotion benefit and intent to utilize mobile wallet:

H1: Promotional benefit positively affects intention to use mobile wallet.

2.1.3 Promotional Benefit and Compatibility

Compatibility is defined as "the extent to which the use of a new system (an innovation) is considered to align with an individual's existing values, beliefs, experiences, and needs" (Moore et al., 1991). For promotional programs to be successful, they must align with the consumer's needs, beliefs, and regulatory orientation. According to Ramanathan et al. (2010), the congruence between marketing messages and consumers' current motives might increase the size and composition of the entire basket. According to the research, consumers with an emphasis on promotions choose promotions with gain-related signals, such as buy one get one free. In contrast, consumers with a focus on prevention are interested in non-loss-oriented promotions, such as 5% savings.

Tversky et al. (1988) proposed that consumers value the size of an object more when it is congruent with or close to their objective. When the promotional gift corresponds with the marketed product's benefits, sales campaigns are more successful. Similarly, congruency effects proposed by Chandon et al. (2000) indicated that non-monetary promotions tend to be employed for customers who prefer hedonic products, whereas monetary promotions are used for customers who prefer utilitarian products.

According to Huynh (2016), the efficacy of a promotion stems on its compatibility with cultural traits. In the retail industry, rural clients respond better to monetary promotions, whereas urban customers prefer non-monetary promotions. Not only does compatibility relate to the promotion message, but it also influences the effectiveness of promotion types. Winterich et al. (2011) investigated the impact of social identifications on customer choice for discount- and donation-based promotions. Consumers with interdependent self-construal appreciate donations more than those with separate self-construal, according to the research.

In the context of mobile wallet services, tangible incentives are anticipated to reduce costs and provide customers with utilitarian and hedonic value, hence enhancing customers' perceptions that mobile wallet is suitable with their lifestyle and their desired value. As a result, the following relationship is hypothesized between the promotional advantage and compatibility:

H2: Promotional benefit positively affects compatibility.

2.1.4 Compatibility and Social Influence

It is feasible to get a high level of compatibility to facilitate interpersonal communication in the exchange and evaluation of information. (M.-J. J. Lin et al., 2009), who studied the factors driving information sharing in virtual communities, theorized that when members of virtual communication find knowledge sharing consistent with their beliefs and needs, they are more likely to actively accept and promote it.

Fu et al. (2017) investigated the psychological incentives for Facebook-based knowledge sharing. Self-interest and communal incentives were found to be significant predictors of user intents to spread commercial messages and ideas via Facebook, depending on the type of content. Self-interest motivations (such as success, self-expression, and solitude) influenced Facebook users' willingness to post commercial messages and consumer views, whereas communal motivations (such as attachment, altruism, and community delight) influenced Facebook users' willingness to post lifestyle interests and consumer comments. This study suggested that individuals engage in behavioural sharing when they are aware of the compatibility of psychological motivation, social capital focus, and content kind.

Compatibility also affects how customers evaluate product reviews and how this evaluation contributes to the review's persuasiveness. Zhang et al. (2010) studied data gathered from lab trials and genuine online merchants and discovered that positive ratings are more persuasive than negative evaluations for buyers evaluating products linked with promotion consumption aims. Conversely, customers who evaluate products for avoidance consumption purposes find unfavourable reviews more convincing than positive ones.

Compatibility has a significant impact on sharing and valuing knowledge, or, in other words, compatibility can boost social influence; therefore, the following hypothesis is established.

H3: Compatibility positively affects social influence.

2.1.5 Compatibility and Intention to Use

Adoption is contingent upon the compatibility of a product or service with the consumer's lifestyle. Rogers (1983) highlighted compatibility as one of the most influential factors in predicting new technology adoption. In mobile and financial

services, interoperability positively affects intent to use (Chen et al., 2008; Mallat, 2007). In the context of mobile payments, consumers' lifestyles have a significant impact on their acceptance of the technology. Customers who are accustomed to conducting online transactions via smartphones, such as online shopping, product, and service ordering remotely, are likely to readily accept new payment systems, such as mobile wallets, because it will take less time and effort for them to learn or alter their behaviour.

In numerous prior research, compatibility was identified as a crucial element influencing mobile payment acceptance, alongside perceived usability and perceived utility (W. R. Lin et al., 2020; Oliveira et al., 2016). H.-F. Lin (2011) observed comparable effects on the uptake of mobile banking. In addition, Chen et al. (2008) noted that compatibility is the most significant factor influencing American customers' intent to utilize mobile payments. S. Singh et al. (2014) observed that compatibility, security, and social influence positively influence the propensity to utilize mobile banking, with compatibility being the most significant predictor. Aydin et al. (2016) suggested that compatibility has a significant effect on perceived usefulness, attitudes toward, and usage intentions among non-users and users of mobile wallets in India.

In the current study, compatibility is incorporated into the conceptual model as an effective mediator between the promotional benefit and the inclination to use a mobile wallet. Customers are aware of discounts from mobile wallet providers that complement their lifestyles and boost their performance, hence encouraging them to embrace mobile wallets.

H4: Compatibility positively affects intention to use mobile wallets.

2.1.6 Promotional Benefit and Social Influence

Social influence is "the extent to which a person feels that influential others believe he or she should adopt the new system" (Venkatesh et al., 2003). Promotional perks may have a favourable effect on word-of-social mouth's influence. Glynn Mangold et al. (1999), who conducted qualitative study on stimulants of word-of-mouth communication in the marketplace, concluded that promotional efforts by corporations may somewhat stimulate customers' word-of-mouth.

Through the mediating role of perceived support from companies and among consumers, Casaló et al. (2019) discovered that promotions provided by online travel agencies encourage customers to engage in consumer voluntary behaviours such as word-of-mouth, recommendations, and social media interactions. This conclusion was interpreted in accordance with the idea of social exchange, which states that consumers are more likely to adopt company-beneficial behaviours if they believe the company values and treats them fairly and responsibly. Consequently, voluntary client activities were viewed as types of reciprocity that generate benefits for businesses.

Bond et al. (2019) examined whether free or paid mobile apps are favored for word-of-mouth transmission and customer motivation to do so. The results revealed that customers are more willing to provide feedback on free products than on paid ones. Regarding mobile wallets, Hoang et al. (2020)'s quantitative study on mobile wallet adoption in Vietnam found that promotion statistically and significantly generates favourable social influences.

As customers tend to notice references from valued resources or individuals, marketing can be more effective if they encourage favourable consumer word-of-mouth. Consequently, the following hypothesis is proven:

H5: Promotional benefit positively affects social influence.

2.1.7 Social Influence and Intention to Use

Individuals' decisions and behaviours are impacted by the opinions, recommendations, and ideas of other influential people in addition to their own perspectives (friends, family, colleagues, and social networks). In the spread of mobile wallets, social influence is regarded as a major factor motivating people to use them for financial transactions. Prior to selecting to utilize a mobile wallet system, customers typically seek the opinions of those in their immediate vicinity; services with favorable evaluations are chosen. Previous empirical evidence demonstrates a strong impact of social influence on mobile wallet acceptance (Chawla et al., 2019, 2020; Soodan et al., 2020; Tun, 2020; K. Yadav, 2016). Similarly, Tu (2019) found that social impact increases consumers' inclination to adopt mobile wallets in Ho Chi Minh City, Vietnam. Therefore, it is anticipated that social influence has a beneficial effect on the intention to use.

H6: Social influence positively affects intention to use mobile wallets.

2.1.8 Intention to Use Mobile Wallet and Actual Use Behaviour

Intention to use refers to the strength of a person's intent to engage in a particular conduct (Ajzen, 1991). Consistently, it has been determined to be a good indicator of actual technology usage (Ajzen, 1991; Davis, 1989; Venkatesh et al., 2000; Venkatesh et al., 2003; Venkatesh et al., 2012). Shin (2009) and Amoroso et al. (2012) found that mobile wallet use behaviour is highly influenced by the user's intent. In this study, the intention to use mobile wallets is established as a key factor that drives actual usage behaviour and is influenced by promotional advantage, compatibility, and social influence.

H7: Intention to use positively affect actual use behaviour of mobile wallets.

2.1.9 Facilitating condition and actual use behaviour

Facilitating conditions refer to "a person's view of the resources and assistance available to complete a behaviour" (Venkatesh et al., 2003). It is discovered that facilitating condition has a considerable impact on the actual use behaviour of an information system

(Venkatesh et al., 2003; Venkatesh et al., 2012). According to previous research, enabling conditions enable users to engage in mobile banking and mobile wallet transactions. Alalwan et al. (2017) used UTAUT2 to demonstrate that the actual use of mobile banking can be predicted based on behavioural intention and conducive conditions. Nguyen et al. (2020) discovered that use intention, facilitating situation, and habit are three crucial determinants of actual use behaviour in the context of digital banking in Vietnam. In this paper, enabling circumstance is regarded as a crucial factor of actual usage behaviour; thus, the following hypothesis is proposed:

H8: Facilitating conditions positively affect the actual use behaviour of mobile wallets.

2.1.10 Affective Experience and Use Behaviour

Along with cognitive experience, emotional experience is a crucial aspect of the online consumer experience (Rose et al., 2011). Affective experience involves "one's affective system through the production of moods, feelings, and emotions" (Rose et al., 2012). It has been statistically demonstrated that affective components positively influence cognitive components (Rose et al., 2012). Barari et al. (2020) discovered that emotive experiences are more effective at boosting customer satisfaction and generating positive word-of-mouth. Similarly, scientific data suggests that emotive experiences improve the whole customer experience (Arnold et al., 2003; Shobeiri et al., 2014) and produce consumer delight (Chitturi et al., 2008).

Emotional considerations are crucial to the process of adopting new technologies. The hedonic motivation, defined as "the fun or pleasure obtained from utilizing a technology" (Venkatesh et al., 2012), has a substantial impact on the adoption of mobile payment (W. R. Lin et al., 2020), digital banking (Le et al., 2020), and mobile wallets (W. R. Lin et al., 2020). (Megadewandanu, 2016; Soodan et al., 2020). Saadon et al. (2020) found that perceive delight, a related idea to hedonic promotion, positively and unquestionably motivates undergraduates to use mobile wallets. In fact, young people believe that mobile wallets are not only practical but also give thrilling experiences; hence, they are willing to accept this new form of payment. Verkijika (2020) attempted to comprehend the impact of emotive elements in the adoption of mobile payment systems. Consistently, the empirical findings confirmed that affective reaction is critical for determining behavioural intention and intention to propose mobile payment.

Although it is reasonable to assume that emotive experience has a significant impact on mobile payment acceptance in general and mobile wallet in particular, researchers have paid little attention to this element. Koenig-Lewis et al. (2015) suggested that the evaluation of rational and logical views is overemphasized in mobile payment acceptance research, whereas emotive elements are grossly underexplored. Verkijika (2020) expressed the same concern when he reviewed approximately 95 published papers on mobile payment adoption. Only more than ten articles mentioned the effects of emotion-related factors such as anxiety, affective, hedonic, etc., indicating that

academics still do not comprehend affective experience in this new industry in depth. Perceptions of emotive experience are inevitably accumulated gradually throughout time. Continually, clients select whether to accept or reject mobile payment forms, notably mobile wallets, based on how great or negative these experiences were. Therefore, the emotive experience model assumes that this variable will have a positive and significant effect on mobile wallet behaviour.

H9: Affective experience positively affect use behaviour of mobile wallets.

3. RESEARCH METHODOLOGY

3.1 Instrument development

This research includes seven constructs: promotional advantage, intention to use, compatibility, affective experience, social impact, facilitating condition, and actual use behaviour. Measures of social influence, intention to use, and facilitating condition were adapted from [Venkatesh et al. \(2012\)](#). The measure of promotional benefit scales was adapted from [Aydin et al. \(2016\)](#) and [Deka \(2020\)](#). The measure of affective experience was modified from [Barari et al. \(2020\)](#). The measure of compatibility was adapted from [W. R. Lin et al. \(2020\)](#). On a seven-point Likert scale ranging from "strongly disagree" to "strongly agree," actual usage behaviour was assessed for all construct questions. The frequency of actual mobile wallet usage was measured using a five-point Likert scale: 1-Rarely (0-10% of total transactions), 2-Occasionally (10-30% of total transactions), 3-Often (30-50% of total transactions), 4-Frequently (50-70% of total transactions), and 5-Always (>70% of total transactions). In Appendix A, all constructs' elements are described in detail.

3.1.1 Questionnaire Design, Sample Selection, and Data Collection

Using the back-translation approach, the questionnaire was originally created in English before being translated into Vietnamese ([Usunier, 1998](#)). Prior to the formal distribution of the survey, the translated questionnaire was pilot-tested, and respondents were questioned qualitatively to ensure that it is completely understandable.

Using snowball sampling approaches, a survey package containing a brief overview of the study, a cover letter, and a web link (made with Google Form) was sent to possible participants via the authors' Facebook participants, the most prominent social network in Vietnam, in October 2021.

When utilizing Smart-PLS for data analysis, the minimum sample size required should be "at least 10 times the largest number of inner model paths directed at a given inner model construct" ([Barclay et al., 1995](#); [Henseler et al., 2009](#)). The conceptual model ([Fig. 2.2](#)) demonstrates that the maximum inner model path is three, resulting in a minimum sample size of thirty.

Within four weeks, 182 of the initial 238 surveys issued were deemed usable for a variety of reasons (e.g., respondents either have never heard of or used mobile wallets before and some people decided to reject this service). [Table 1](#) contains descriptive information about the respondents.

Table 1. Descriptive Statistics of Respondents (n=182)

		Frequency	Percentage
Gender	Males	104	57
	Females	78	43
Age	18-30	157	86
	30- over 50	25	14
Job situation	Students	96	52.7
	Working	86	47.3
Mobile wallet use	Less than 6 months	40	22.2
	6 months to 1 year	26	14.2
	1-3 years	98	53.8
	More than 3 years	18	9.8
Number of mobile wallets used	1 wallets	58	31.8
	2 wallets	51	28.0
	3 wallets	73	40.1
Education	Undergraduate	128	70.3
	Post-graduate	30	16.5
	Others	24	13.2
Frequently used mobile wallets	Momo	95	52.2
	Airpay	61	33.5
	Others (Viettelpay, Moca, Zalo Pay)	26	14.3

3.2 Data Analysis

PLS-SEM is utilized to evaluate the acquired data using SMART PLS 3.0 because to its capacity to deal with non-normal distribution data, short sample size, and complex models ([Hair et al., 2019](#)). Using the measurement model and the structural model, data are examined ([Hair et al., 2019](#)).

3.2.1 Measurement Model

Using reliability, convergent validity, and discriminant validity, the measurement model is used to evaluate the unidirectional link between items that measure a single construct ([Hair et al., 2019](#)). The model retains items with outer loadings more than 0.70 (T-

statistics greater than 1.96). The estimation of the measurement model is shown in [Table 2](#): Composite reliability ranging from 0.865 to 0.946 and Cronbach Alpha ranging from 0.7 to 0.924 demonstrate each construct's internal consistency reliability ([Bagozzi et al., 1988](#); [Hair Jr et al., 2021](#); [Hulland, 1999](#)). Therefore, the structural model's measurement reliabilities for all model constructs are sufficient for future testing.

In terms of convergent validity, [Table 2](#) confirmed the constructs' convergent validity: the total variance extracted (AVE) of the constructs was greater than 0.5, and all AVE values were between 0.575 and 0.76. ([Fornell et al., 1981](#)).

Table 1. Estimation of the Measurement Model (n=182)

Construct	Cronbach's Alpha	CR	AVE
PROMO	0.782***	0.87	0.692
SI	0.849***	0.898	0.688
COM	0.881***	0.927	0.810
INTENT	0.836***	0.924	0.859
FC	0.822***	0.876	0.640
AEXP	0.924***	0.946	0.815
BEHAV	0.793***	0.865	0.616

Source: Author's Survey. Significance at ***P < 0.001, **P < 0.01

PROMO: Promotional benefit; SI = Social influence; COM = Compatibility; INTENT = Intention to use; FC = Facilitating condition; AEXP = Affective experience; BEHAV = Actual use behaviour

Regarding discriminant validity, [Table 3](#) showed all the square roots of AVE higher than 0.5 (from 0.785 to 0.927). For each factor, the square root of AVE is higher than the correlation coefficient of other factors in the same column [Fornell et al. \(1981\)](#).

Table 3. Discriminant Validity: Fornell- Larcker Criterion

	AEXP	BEHAV	COM	FC	INTENT	PROMO	SI
AEXP	0.903						
BEHAV	0.484	0.785					
COM	0.710	0.551	0.900				
FC	0.570	0.462	0.718	0.800			
INTENT	0.591	0.516	0.527	0.430	0.927		
PROMO	0.403	0.213	0.317	0.353	0.337	0.832	
SI	0.510	0.386	0.406	0.360	0.453	0.394	0.829

Source: Author's Survey

Additionally, [Table 4](#) confirmed all Heterotrait - Monotrait Ratio (HTMT) values less than 0.85 ([Henseler et al., 2015](#)). Hence, all constructs attained discriminant validity.

Table 4. Discriminant validity: Heterotrait - Monotrait Ratio (HTMT)

	AEXP	BEHAV	COM	FC	INTENT	PROMO	SI
AEXP							
BEHAV	0.558						
COM	0.783	0.655					
FC	0.642	0.517	0.831				
INTENT	0.672	0.629	0.612	0.514			
PROMO	0.439	0.264	0.348	0.422	0.397		
SI	0.565	0.474	0.458	0.383	0.522	0.485	

Source: Author's Survey

3.2.2 Structural Model

Before examining relationships between constructs, multi-collinearity was identified: VIF of the constructs ranging from 1 to 1.891 shows that there is no multi-collinearity (Hair et al., 2019). For 182 observations, the bootstrapping procedure was executed 5000 times to determine the relevance of inner routes. Each endogenous variable in the structural model was assigned an R2 value (Hair et al., 2019; Henseler et al., 2009).

4. RESULTS

4.1 Hypothesis Testing

R2 adjusted for actual use behaviour, intention to use, and social influence 0.34, 0.346, and 0.235 respectively, which maintains moderate explanation power. However, R2 adjusted for compatibility was 0.095 which is relatively weak in its explanation power (Henseler et al., 2009).

The results of hypothesis testing and R squares are presented in Table 5. First, actual use behaviour is positively associated with intention to use ($\beta = 0.320$, $p < 0.01$), facilitating condition ($\beta = 0.231$, $p < 0.01$), and affective experience ($\beta = 0.163$, $p < 0.05$), which supported H7, H8, and H9 respectively. Second, although there was no statistical association found between intention to use and promotional benefit when H1 was not supported ($\beta = 0.116$, $p > 0.05$), the relationship between these two variables is mediated by compatibility and promotional benefit. Concerning the mediating effect of compatibility, the promotional benefit had a direct positive effect on compatibility ($\beta = 0.317$, $p < 0.01$), then in turn compatibility had a direct positive effect on the intention to use ($\beta = 0.389$, $p < 0.01$). These agree on hypotheses H2 and H4. Moreover, compatibility can strengthen the social influence in the context of mobile wallets ($\beta = 0.313$, $p < 0.01$), which supported H3. Regarding the mediating effect of social influence, the findings confirm the hypotheses H5 ($\beta = 0.295$, $p < 0.01$), and H6 ($\beta = 0.250$ and $p < 0.01$), which indicates that promotional benefit positively affects social influence, in turn, leading to a positive effect on the intention to use.

Table 5. Results of the Hypothesis Testing from the Structural Model

Paths	Hypothesis	β	t-value	P value	Supported
PROMO -> INTENT	H1	0.116	1.426	.077	No
PROMO -> COM	H2	0.317	4.392	.000	Yes
COM -> SI	H3	0.313	4.301	.000	Yes
COM -> INTENT	H4	0.389	5.889	.000	Yes
PROMO -> SI	H5	0.295	3.930	.000	Yes
SI -> INTENT	H6	0.250	3.225	.001	Yes
INTENT -> BEHAV	H7	0.320	4.133	.000	Yes
FC -> BEHAV	H8	0.231	2.843	.002	Yes
AEXP -> BEHAV	H9	0.163	2.028	.021	Yes

Source: Author's Survey. Significance at ***P < 0.001, **P < 0.01

5. DISCUSSIONS AND IMPLICATIONS

5.1 Discussions

The most intriguing conclusion of the study relates to the mechanism by which promotional advantage positively influences actual usage behaviour. First, our research revealed that promotional incentives had no direct impact on the intention to utilize mobile wallets. The result is compatible with [Aydin et al. \(2016\)](#), but contradictory to the findings of [Deka \(2020\)](#), [LI et al. \(2019\)](#), and [P. Yadav \(2017\)](#). The demographic features of samples (such as income, age, education, and culture) may influence the effectiveness of promotional strategies. [Fam et al. \(2019\)](#) discovered that geography (country and culture) has a significant impact on the perception and value of specific sales promotional strategies. For example, New Zealanders place a higher value on discounts and a lower value on free samples than the other countries tested. [Fam et al. \(2019\)](#) have noted that a failing to comprehend the cultural environment may be the cause of sales marketing failure. In addition, [Nitzl et al. \(2016\)](#) indicated that when there are no connections between two variables, it may be because they are mediated by a third variable. Therefore, focusing simply on direct impacts and ignoring mediating effects may result in considerable bias in the interpretation of the data. As a result, the inconsistency in the findings of previous studies regarding the relationship between the promotional advantage and intention to use may be attributable to the omission of mediating variables like compatibility and social impact.

Consistent with the findings of [Hoang et al. \(2020\)](#), it was discovered that the promotional advantage has a strong and beneficial effect on social influence. In general, when there is an enticing campaign, consumers recommend more mobile wallets to their friends since they anticipate that their relatives will need to utilize and benefit from such promotions, just as they did in the past ([Hoang et al., 2020](#)). From a business-consumer perspective, word-of-mouth recommendations and suggestions are possible forms for

consumers to recompense service producers when they perceive advantage or assistance from the business (Casaló et al., 2019).

The promotional advantage also had significant effects on the perception of compatibility in the context of mobile wallets. The promotional advantage not only generates utility value, such as decline loss in payment transactions, but also engenders pleasure (Chandon et al., 2000). These perks are unquestionably consistent with the lifestyles of younger clients who are enthusiastic about new and exciting experiences. In addition, it is anticipated that promotions that align with the regulatory emphasis orientation (promotion focus and prevention focus) will improve the frequency with which mobile wallets are used and encourage users to use both promoted and unpromoted services (Ramanathan et al., 2010). This has significant implications for service providers. Promotions can be made more effective by using "gain" and "non-loss" messages in a manner that suitably addresses individuals' regulatory orientation.

Compatibility seems to be the most dynamic indicator of mobile wallet adoption intent. (Chen et al., 2008; Schierz et al., 2010; S. Singh et al., 2014). Similarly, interoperability is a significant indicator of mobile wallet uptake (Aydin et al., 2016; Chawla et al., 2019, 2020). Similar to the adoption of other technologies, compatibility is a crucial factor in the spread of mobile wallets. Recognizing that new technology can adapt to current behavioural value facilitates user acceptance. Compatibility modifies consumers' preferences, values, and experiences with a technology, hence increasing their intent to embrace it (Chawla et al., 2019).

Intriguingly, the study discovered a considerable correlation between compatibility and social impact. The result corroborates the prior findings of Fu et al. (2017) and M.-J. J. Lin et al. (2009). By sharing information, individuals aimed to meet both personal and social goals. Therefore, they favoured sharing content that was congruent with their motivations (Fu et al., 2017). Members with a great willingness to offer their skills are those who utilize information sharing as a competent, superior, and compatible means of reaching personal goals (M.-J. J. Lin et al., 2009).

In keeping with recent findings by Phutela et al. (2019); Soodan et al. (2020), social influence is highlighted as a positive factor for the intention to use mobile wallets. Prior research elucidates the considerable impact of social influence on the diffusion of new information technologies (Venkatesh et al., 2003; Venkatesh et al., 2012). Observably, the opinions of family, friends, peer groups, and virtual communities on social networks are seen as credible references and have a substantial impact on consumer behaviour. Consequently, favourable word-of-mouth from these sources can have a more motivational effect on others' decisions to adopt or reject a new technology (K. Yadav, 2016).

The study identified intention to use, facilitating conditions, and affective experience as important predictors of actual use behavior. Davis (1989), Venkatesh et al. (2003), and

Venkatesh et al. (2003) all indicate intention to use as a major predictor of use behaviour 2012. In the context of mobile wallets, this finding is confirmed further in this study. Secondly, facilitating conditions are powerful motivators of conduct. This finding is comparable to that of Nguyen et al. (2020) and Venkatesh et al. (2012). The availability of essential resources facilitates user access and increases their confidence while using mobile wallets. The favourable influence of affective experience on use behaviour was subsequently quantitatively confirmed. Similar to the conclusion of Rose et al. (2012), increasing the frequency of conduct is a normal consequence of affective experience. In addition to appreciating the cognitive experience, consumers are interested with the affective value of mobile wallets.

5.2 Theoretical Implications

This study contributes to the body of knowledge addressing factors influencing the intention to use mobile wallets in Vietnam. First, the study adds into the conceptual model the promotional benefit that is less prominently highlighted in the literature. The results not only validated the prior conclusion of Aydin et al. (2016) that promotional advantage had no direct effect on intention to use, but also demonstrated that the effect of promotional benefit on intention to use is mediated by social influence and compatibility. Prior research has indicated that social influence and compatibility play significant roles in understanding mobile payment usage intentions (Chawla et al., 2019; S. Singh et al., 2014). As a supplement to prior findings, this study demonstrated that social influence and compatibility are crucial mediators between promotional effects and intent to use.

The study also found variables that have favourable effects on actual mobile wallet usage behaviour. In addition to intention to use and facilitating condition, the study presents empirical evidence that affective experience is an influential dimension of use behaviour. Affective experience, which was discovered to influence consumer behaviour in the context of online buying (Barari et al., 2020), is found to play a significant impact in predicting the actual usage behaviour of the mobile wallet.

5.3 Practical Implications

The study's findings have significant consequences for practitioners. First, the findings suggest that social influence and compatibility moderate the effect of promotional benefit on the intention to use mobile wallets, which has significant implications for boosting promotional efficacy. Consequently, marketing strategies should be planned to encourage positive word-of-mouth and raise consumer awareness regarding product suitability with their lifestyles.

First, understanding that promotional benefits positively enhance social influence, it can be advantageous for service providers to conduct promotions that provide gifts, vouchers, and discounts in exchange for mobile wallet referrals. In addition, because

social media is an important communication channel, service providers can also conduct promotion programs, such as offering gifts and vouchers if individuals engage with or share fan pages on social networks, to encourage suggestions, social interaction on social media, or virtual communities among service users. It is anticipated that these types of activities will increase the effectiveness of the promotion effort. Moreover, to increase the perception of compatibility, promotional messages might be varied between "gain" and "non-loss" in accordance with the customer's regulatory attitude. In addition, mobile wallet service providers can combine several forms of advertising, such as personal promotions and community-oriented promotions (sponsorship), to accommodate varying degrees of user's personal- and social-oriented values.

Second, social influence and compatibility continue to be crucial factors in promoting the intention to use mobile wallet services. To produce positive word-of-mouth recommendations from consumers, it is essential to pay close attention. The emphasis should be placed both on-site and online. Empirical findings, on the other hand, suggested that mobile wallet procedures should be developed to be compatible with consumption patterns and cognitive processes to encourage the acceptance of mobile wallets. It is vital to incorporate new capabilities into a mobile wallet that enable clients to purchase and transact without requiring complicated steps, additional equipment, or training. Mobile wallets must be engaging and contribute to the consumer's lifestyle image (Chen et al., 2008).

Finally, to increase the frequency of mobile wallet usage, service providers should work on improving both the facilitating conditions and the affective experience. In terms of facilitating conditions, technical and informational support should be readily accessible and simple to locate so that the client may acquire assistance when necessary. Additionally, it is vital to consider the emotional experiences of customers. To enhance the client experience, service providers should develop interactive and affective enhancements.

6. CONCLUSIONS, LIMITATIONS, AND FUTURE RESEARCH

6.1 Conclusions

The results offer a mechanism through which promotional incentives influence actual mobile wallet usage. First, actual use behaviour in the context of the mobile wallet is favourably influenced by users' purpose to use, facilitating conditions, and affective experience. Second, promotional incentives do not immediately influence the intention to utilize the mobile wallet. This connection is rather mediated by social influence and compatibility. Compatibility is the main element influencing mobile money usage intentions and has a large impact on social influence.

The aforementioned facts aid practitioners in increasing customer adoption of mobile wallets. To increase consumer motivation to adopt mobile wallets, they might adapt

promotional strategies to be consistent with consumers' lifestyles and encourage suggestions, social interaction, and positive word-of-mouth. In addition, because compatibility has a significant impact on the adoption of mobile wallets, mobile wallets should be developed to align with consumption patterns and cognitive processes. Practitioners must also consider the emotional experience of consumers and ensure the availability of support channels to assist consumers with mobile wallet-related issues.

6.2 Limitations

The study has several drawbacks. First, the sample size is limited, with just 182 observations, compared to the large number of mobile wallet users in Vietnam. Second, the results of the survey suggest merely connections, not causation, between the postulated constructs in the conceptual model.

6.3 Future Research

The concept of promotional benefit is well-known in marketing and technology adoption, but its incorporation into research models for mobile wallets is restricted. The correlations between promotional advantage and other variables, such as perceived usefulness, attitude, and habit, are not predicted and retested in this study. Determining the relationship between promotional benefits and other dimensions necessitates additional qualitative and quantitative research.

ACKNOWLEDGEMENTS

This research is funded by International School, Vietnam National University, Hanoi (VNU-IS) under project number CS.2021-06.

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Appendix A. Construct measurement.

Constructs	Items	References
Promotional benefit (PROMO)	If no promotions were offered, I would not (have) download mobile wallets. I use mobile wallets because of the promotional offers. I gain benefits from the promotional offers when using mobile wallets.	(Aydin et al., 2016; Deka, 2020)
Compatibility (COM)	Using mobile wallets is appropriate for my daily consumption patterns (purchasing online goods and services, purchasing goods at the traditional market, supermarket, convenience stores, and bill payments). Using mobile wallets is compatible with my lifestyle. Using mobile wallets is compatible with my working style.	(W. R. Lin et al., 2020)
Social influence (SI)	My family members who are using mobile wallets (parents, siblings, wife, husband, relatives) suggest that I should use mobile wallets. People close to me who are using mobile wallets (my peer, friends, colleague, acquaintances...) recommend me to use mobile wallets. Groups that I interact with on social media suggest I use mobile wallets. When I see people around me using mobile wallets, I would like to use them.	(Venkatesh et al., 2012)
Intention to use (INTENT)	I intend to continue using mobile wallets in my daily life. I plan to continue to use mobile wallets more frequently	(Venkatesh et al., 2012)
Facilitating condition (FC)	I have the resources necessary to use mobile wallets (smartphone, banking account, mobile app...) I have the knowledge necessary to use mobile wallets (user manual, terms, and conditions of mobile wallet users and service providers). Mobile wallet services are compatible with other systems I use (Example: banking service, food delivery apps, car-order apps...) Support of users or service is available when problems are encountered with mobile wallet services.	(Venkatesh et al., 2012)
	I have had many fun experiences when using mobile wallets.	(Barari et al., 2020)

Affective experience (AEXP)	<p>I have had many exciting experiences when using mobile wallets.</p> <p>I have had many delightful experiences when using mobile wallets.</p> <p>I have had many enjoyable experiences when using mobile wallets.</p>	
Actual Use behavior (BEHAV)	<p>I am frequently using mobile wallets to make payments for purchasing online goods and services (shopping on e-commerce websites, ordering food, booking cars).</p> <p>I am frequently using mobile wallets to make bill payments (electricity, water, internet, top-up...).</p> <p>I am frequently using mobile wallets to make payments at stores (convenience stores, restaurants, supermarkets, petrol stations...).</p> <p>I am frequently using mobile wallets to buy movies ticket, airline tickets, and hotel reservations.</p>	<p>(Kim et al., 2014; Venkatesh et al., 2012)</p>