FACTORS AFFECTING INTENTION TO USE MOBILE WALLET IN VIETNAM

MASTER'S THESIS
FACTORS AFFECTING INTENTION TO USE MOBILE WALLET IN VIETNAM

MAJOR: BUSINESS ADMINISTRATION
CODE: 8340101.01.

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Hanoi, 2021
THESIS ACKNOWLEDGMENT

First and foremost, I would like to express my sincere gratitude to Prof. Tohru Inoue and Dr. Nguyen Thi Kim Oanh, who directly guided, advised and inspired me during my master thesis study. Thanks to their dedicated assistance, I was able to tackle challenges and complete the thesis on schedule.

I would like to thank the respondents who assisted me in completing the survey during the study period. I wish to express my appreciation to Huong-san, the MBA Program's assistant, and all of the MBA-04 class members. Thanks to them, my two years at Vietnam Japan University were unforgettable and meaningful.

I would like to express my deep gratitude to Vietnam Japan University, Yokohama National University, the Japan International Cooperation Agency, and the governments of Vietnam and Japan for providing us with favourable learning conditions in Vietnam Japan University. Your encouragement has provided me with a fantastic opportunity to immerse myself in an academic setting where I can acquire valuable knowledge and expand my horizons.

Finally, I am especially grateful to my parents and friends for their continued support and inspiration throughout my studies.
# TABLE OF CONTENTS

ABSTRACT ......................................................................................................................... i
LIST OF TABLES ................................................................................................................... ii
LIST OF FIGURES ................................................................................................................ iii
LIST OF ABBREVIATIONS ................................................................................................. iv
CHAPTER 1: INTRODUCTION ............................................................................................... 1
  1.1 Research background ................................................................................................. 1
  1.2 Practical necessity ..................................................................................................... 3
  1.3 Theoretical necessity ................................................................................................ 5
  1.4 Research objectives and research questions .............................................................. 6
  1.5 Scope of the research ............................................................................................... 7
  1.6 Research findings .................................................................................................... 7
  1.7 Research structure ................................................................................................... 7
CHAPTER 2: LITERATURE REVIEW ................................................................................... 8
  2.1 Mobile wallet .......................................................................................................... 8
  2.1.1 Definition of mobile payment .............................................................................. 8
  2.1.2 Definition of mobile wallet ................................................................................. 8
  2.1.3 The distinction between mobile wallet, mobile banking and mobile money .......... 9
  2.2 Theoretical framework ........................................................................................... 10
  2.2.1 The Technology Acceptance Model (TAM) ...................................................... 10
  2.2.2 The Unified Theory of Acceptance and Use of Technology (UTAUT) ............. 11
  2.2.3 The Diffusion of Innovation (DOI) .................................................................... 12
  2.2.4 Research model review ...................................................................................... 13
  2.3 Hypothesis formulation and conceptual framework ................................................. 14
  2.3.1 Promotional benefit and intention to use ............................................................ 14
  2.3.2 Promotional benefit and compatibility ............................................................... 15
  2.3.3 Compatibility and social influence .................................................................... 16
  2.3.4 Compatibility and intention to use .................................................................... 17
  2.3.5 Promotional benefit and social influence ........................................................... 18
  2.3.6 Social influence and intention to use ................................................................. 19
  2.3.7 Intention to use mobile wallet and use behaviour ............................................. 19
  2.3.8 Facilitating condition and use behaviour ........................................................... 20
  2.3.9 Affective experience and use behaviour ............................................................ 21
  2.3.10 Conceptual framework .................................................................................... 22
CHAPTER 3: METHODOLOGY ............................................................................................ 24
  3.1 Survey design ......................................................................................................... 24
  3.1.1 Research measurement ....................................................................................... 24
  3.1.2 Questionnaire design .......................................................................................... 26
  3.1.3 Sample and data collection ................................................................................ 27
ABSTRACT

One of the most recent applications that enable consumers to make online purchases using their mobile devices is mobile wallet. In the context of Vietnam, this study aims to empirically analyse the factors that affect consumer’s intention to use and behaviour frequency of mobile wallets. A total of 182 questionnaires that were collected from mobile wallet users were evaluated using Partial Least Square-Structural Equation Modelling (PLS-SEM). As a consequence of this, 8 of the 9 study hypotheses were approved. The findings indicate that the promotional benefit has no direct effect on the intention to use. However, the effect of promotional benefit on intention to use is mediated by social influence and compatibility. Simultaneously, compatibility along with promotional benefit have significant impact on social influence. In addition, intention to use, facilitating condition and affective experience are strong predictors of behaviour frequency. By incorporating new constructs into research models, the study contributes substantially to the theoretical relevance of mobile wallet adoption as well as reveals valuable implication for practitioners.

Keywords: mobile wallet, promotional benefit.
LIST OF TABLES

Table 3.1. Construct measures of the study .................................................................24
Table 4.1. Constructs coding ........................................................................................31
Table 4.2. Item loading, Cronbach’s alpha and composite reliability of the constructs .......32
Table 4.3. Convergent validity among constructs ..........................................................33
Table 4.4. Discriminant validity: Fornell- Larcker Criterion ........................................34
Table 4.5. Discriminant validity: Heterotrait - Monotrait Ratio (HTMT) .......................34
Table 4.6. Latent variable correlations .........................................................................35
Table 4.7. Collinearity statistics (VIF) of exogenous variables .......................................36
Table 4.8. R square ......................................................................................................36
Table 4.9. f square ........................................................................................................37
Table 4.10. Results of the hypothesis testing from the structural model .......................39
LIST OF FIGURES

Figure 2.1. UTAUT model (V. Venkatesh et al., 2003) .......................................................... 12
Figure 2.2. Conceptual model of the research ...................................................................... 23
Figure 4.1. The measurement model (PLS algorithm) .......................................................... 31
Figure 4.2. Structural model (PLS Bootstrapping one tail) .................................................. 35
LIST OF ABBREVIATIONS

PE Perceived usefulness
PEOU Perceived ease of use
PB Promotional benefit
PLS-SEM Partial Least Square-Structural Equation Modelling
SI Social influence
FC Facilitating condition
TAM The Technology Acceptance Model
UTAUT The Unified Theory of Acceptance and Use of Technology
DOI The Diffusion of Innovation
CHAPTER 1: INTRODUCTION

1.1 Research background

Non-cash payments are becoming an inevitable trend in the 4.0 era. A survey of World Bank (2020) reported that electronic transactions have grown in popularity as a means of payment in many countries around the world. Person-to-person transaction accounts for more than 90% of total daily payment transactions. In ASEAN, non-cash payment solutions are also being used more and more widely. Bain & Company cooperated with Facebook to survey about 16,500 digital consumers across six ASEAN countries: Vietnam, the Philippines, Thailand, Singapore, Malaysia, and Indonesia. Although Southeast Asia is still dependent on cash, the number of people who prefer to pay with cash has fallen to 34% from 40% in 2019, according to the report (Facebook & Bain&Company, 2020).

Vietnam is appreciated as a potential economy that has a fairly high growth rate and a rapid digital transformation. Following the trend of cashless payment in the world, Vietnam is also actively promoting non-cash payment. As more than half the population in Vietnam owns mobile devices (J.P.Morgan, 2019) mobile payment is a potential solution to replace physical cash. Mobile payments have recorded incredible growth in recent years. To illustrate, the State Bank (2020) announced that from January to the end of October in 2020, the number of payment transactions via mobile devices reached more than 918.8 million transactions with the value of nearly 9.6 million billion VND (up 123.9% in quantity and 125.4% in value compared to the same period in 2019) (Minh, 2020). Moreover, according to a PwC survey, the percentage of consumers using mobile payment in Vietnam has risen to 61 percent in 2019, up from 37 percent in 2018, making it the world's fastest-growing market (PwC, 2019).

In many forms of mobile payments, mobile wallet is a current smart cashless solution. In line with the remarkable growth of mobile payments, mobile wallets also recorded amazing figures. The report by Facebook and Bain&Company (2020) implied that 49% of urban consumers in Southeast Asia who are commercial bank customers have used mobile wallets, and forecasted this rate would reach 84% by 2025. In Vietnam,
according to State Bank, as of December 31, 2018, there were 4.24 million verified mobile wallets linked to bank accounts nation while (VNBA, 2019). In 2017, the value of mobile wallet transactions surpassed VND53 trillion (US$2.2 billion), a 64 percent increase over 2016 (Standard.Chartered, 2019). The rapid growth of mobile wallets in recent years can be attributed to the fact that these products have captured the general sentiment of users. Consumers can take numerous advantages from using mobile wallet such as high safety, ensuring the rights of both merchants and buyers, making payment quickly and conveniently. In addition, in the race to gain market share, mobile wallet providers regularly launch many attractive promotions to stimulate payment volume through offering gifts, cashback, vouchers, or free transactions (T. Anh, 2021).

The outbreak of COVID-19 has increased sharply the demand for digital payments in general, and transactions via mobile wallet, in particular. Indeed, the COVID-19 epidemic has motivated people to increasingly turn to mobile payment. A study from (VISA, 2020) found that more than 85% of Vietnamese consumers own at least one mobile wallet or payment app, with over 42% using mobile contactless payments. During the COVID 19 outbreak in Vietnam, the number of new users who approach service provided by Momo raised by 30-40%. The number of people using mobile wallets to pay monthly bills or invoices at restaurants, supermarkets, also increases. In addition, Momo has reached 20 million users in 2020 with a growth rate of 2 times compared to 2019. Not only Momo, a series of other mobile wallets such as Moca, Zalo Pay, AirPay ... experience similar changes in the context that businesses gradually transforming from traditional to online form (A.Hong, 2020).

However, mobile wallets face obstacles that the habit of using cash in transactions still persists in Vietnam to become more prominent. According to a report from Standard.Chartered (2019), in the ASEAN area, Vietnam maintains the highest rate of cash payments. The report reveals that among the six countries of ASEAN surveyed (Philippines, Indonesia, Thailand, Malaysia, Vietnam and Singapore, the highest percentage of cash delivery for internet purchases was 90.17 percent in Vietnam, which is obviously greater than the second-placed Indonesia, which had a rate of 65.30 percent. The survey conducted by IDG in 6 ASEAN countries (including Singapore, Thailand, Malaysia, Indonesia, Cambodia and Vietnam) witnessed a similar result. The study
reported that on average, the percentage of non-cash payment transactions in these countries is 36% and 64% is cash. Vietnam has a cash payment rate of 79% and non-cash payment is 21%, ranked 5/6 in the region (H. Ha, 2020). In addition, according to the State Bank's statistics, by 31 December 2019, the ratio of cash circulating on all means of payment is still at 11.33%, which is much higher than the goal stated in regulation 2545 / QD / TTG on approving the development of non-cash payment in Vietnam for 2016-2020 (should be lower than 10%) (Thanh, 2020). These figures imply that Vietnamese people still maintain the habit of paying by cash.

1.2 Practical necessity

The market for providing mobile wallet services in Vietnam is relatively competitive. The State Bank has licensed 37 organizations that are not banks to provide payment intermediary services, including 33 organizations that are allowed to provide mobile wallet services (Thu Nguyen, Thi Nguyen, Thi Mai, & Thi Minh Tran, 2020). Although the bustle of the mobile wallet market is a good signal for the fintech sector in Vietnam, it also expresses the fierce competition of this market in the near future. A comparison between the mobile wallet market in China and Vietnam can explicitly illustrate the aggressiveness. Specifically, there are more than 30 mobile wallet providers in Vietnam whose population is more than 97 million. On the contrary, China has more than 1.4 billion people but only a few mobile wallets occupy the dominant market share (T. Hoang, 2021).

Providers are implementing many solutions to promote payment transactions through mobile wallets. First and foremost, for many mobile wallet businesses, promotion is a vital first step in their competitive strategy. Promotions are carried out regularly and diversified in many forms such as giving money when opening a new account, discounts, cashback, vouchers when making payment through mobile wallet. Mobile wallet providers are said to be in a race to burn money with promotions. It is estimated that mobile wallet providers have to spend an average of 10 USD per consumer on promotion. The original purpose of tangible incentives is to motivate consumers to access the new payment channel, however, after millions of users are acquired, suppliers still constantly discount, give cash-back to attract new users as well as existing users to dominate market share (N. Ha, 2020).
Besides, service providers are attempting to build an ecosystem in which mobile wallets become a convenient and useful payment tool. Mobile wallet providers have made efforts to incorporate with banks, point of sales, e-commerce sites, and other service applications to expand capacity and scope to make transactions of mobile wallets. Consequently, users can easily make a variety of transactions such as payments from car-booking services, food ordering services, purchase tickets ... as well as pay for essential services in the family such as electricity, water, tuition, ... (Thanh, 2020).

In addition, mobile wallet providers have upgraded continuously security systems to preserve user information. Many mobile wallets are integrated with multi-layer security technology and authentication to satisfy the integrity and safety of personal information. For instance, Moca, MoMo or ZaloPay have passed the Payment Card Industry Data Security Standard which is a series of criteria that must be met in order for financial technology to meet data security standards. Obtaining certification helps to ensure a safe and fast transaction (N. Anh, 2020).

Although the mobile wallet market recorded impressive growth, it is observed that service providers have been on the way to find a sustainable business model. Generally, most mobile wallet companies recorded a loss in their financial statements. For example, MoMo’s revenue reached more than VND 4,233 billion in 2019, nearly double in 2018 of VND 2,368 billion. However, Momo recorded a loss of VND -854 billion and it had accumulated loss by 2019 was VND -1,860 billion. Simultaneously, other mobile wallet providers as ZaloPay, Moca, and VinID also recorded losses of VND 572 billion, VND 147 billion, and VND 30 billion, respectively. Airplay and Payoo are two rare brand names that recorded positive business results, with modest profit after tax despite trillions of revenues (Diep, 2020).

To be able to continue to exist and develop in the Vietnamese mobile wallet market, companies need to proactively capture customer needs to improve the acceptance of mobile wallets, thereby expanding the market share for their own products. As a rule, understanding why people prefer to use a mobile wallet can help companies establish strategies and communicate benefits to their customers more effectively. Therefore, this study focuses on investigating the intention to use mobile wallet in Vietnam.
1.3 Theoretical necessity

In spite of the apparent benefits and advantages of mobile payment, in general, and mobile wallets, in particular, a lack of widespread adoption has resulted in numerous empirical studies (Johnson, Kiser, Washington, & Torres, 2018; Kaur, Dhir, Bodhi, Singh, & Almotairi, 2020). The studies were carried out in diversifiable contexts, from developed countries such as the USA (Johnson et al., 2018), the United Kingdom (Slade, Dwivedi, Piercy, & Williams, 2015), Japan (Amoroso & Magnier-Watanabe, 2012) to developing countries such as Turkey (Aydin & Burnaz, 2016), Taiwan (W. R. Lin, Lin, & Ding, 2020). Previous studies also compare the adoption of specific technology and platforms such as NFC (Liébana-Cabanillas, García-Maroto, Muñoz-Leiva, & Ramos-de-Luna, 2020), QR code (Liébana-Cabanillas, Ramos de Luna, & Montoro-Ríos, 2015), mobile banking (H.-F. Lin, 2011).

Regarded as the latest innovation of mobile payment, mobile wallets allow users to utilize their mobile devices to access more traditional payment options (for example, debit cards, credit cards, mobile banking) (Johnson et al., 2018). Research on mobile wallet adoption attracts the attention of current researchers, especially in Asian countries where the explosion of this technology is witnessing, typical as India (Kaur et al., 2020; Kumar, Adlakaha, & Mukherjee, 2018; K. M. R. Yadav, 2016), China (Mombeuil, 2020), ASEAN member such as Indonesia (Megadewandanu, 2016), Thailand (Tun, 2020), Malaysia (Saadon & Long, 2020). In the context of Vietnam, although previous studies have looked at technology adoption in the context of digital banking (Thu Nguyen et al., 2020), mobile banking (Le, Pham, Chu, Nguyen, & Ngo, 2020) and mobile payment (Liu & Tai, 2016), there are few studies on mobile wallets. (Phuong, Luan, Dong, & Khanh, 2020) conducted a study to clarify the factors affecting continuance intention to use mobile wallet in Vietnam. Consequently, satisfaction and trust were found to be significant predictors of continuance intention. Also, perceived usefulness and perceived ease of use positively associated to satisfaction. The research also uncovers antecedents of perceived ease of use, perceived usefulness, and trust.

Many studies used endogenous structures derived from The Technology Acceptance Model, The Unified Theory of Acceptance and Use of Technology and expanded version to explain the intention to use a wallet (Amin, Azhar, Amin, & Akter, 2015;
Phutela & Altekar, 2019; Shin, 2009). Some model integrated constructs originated from The Diffusion of Innovation as an extension (Chen & Nath, 2008; Thakur & Srivastava, 2014). Such studies have looked into a wide range of factors that influence mobile wallet acceptance, namely perceived usefulness (Aji, Berakon, Md Husin, & Tan, 2020; N. Singh, Sinha, & Liébana-Cabanillas, 2020), perceived ease of use (Phutela & Altekar, 2019), social influence (Megadewandanu, 2016; K. M. R. Yadav, 2016), compatibility (Aydin & Burnaz, 2016), perceived cost (P. Yadav, 2017), facilitating conditions (Chawla & Joshi, 2019, 2020). Besides, since mobile payment requires personal and sensitive financial details, security issues may be a deterrent to technology adoption. As a result, trust and security issues, or perceived risk when using mobile wallets have been introduced to the literature (Shaw, 2014; N. Singh & Sinha, 2020; Soodan & Rana, 2020). Several other studies examine the linkage of satisfaction and continuance intention to adopt mobile wallet (Kumar et al., 2018). In general, previous studies mainly discuss about designing appropriate mobile wallet system towards ease of use, diversity of functions, trust and security issues, or measure satisfaction in this technology.

Nonetheless, it is observed that in promotional issues is lack of attention from scholars. Some previous paper attempted to investigate the associations between promotional benefit and the intention to use mobile wallets (Li & Shen, 2019; K. M. R. Yadav, 2016). However, the number of these studies is limited, and most of them focus on the direct effects of promotional benefits on the intention to use mobile wallet, with little attention paid to the construct's indirect effects. Therefore, the current research proposes a comprehensive model based on theoretical issues to clarify the impact of promotional benefit on intention to use in greater detail. Furthermore, the study would examine the influential constructs in their relationship with use intention and actual use behaviour that have never been considered before.

1.4 Research objectives and research questions

The aim of this research is presented as follow:

1. To identify the factors that affect intention to use mobile wallet and actual use behaviour on mobile wallet in Vietnam.
2. To identify relationships between those identified factors with intention to use mobile wallet and actual use behaviour on mobile wallet in Vietnam.
Two research questions were developed based on the objectives:

1. What factors do affect intention to use mobile wallet and actual use behaviour on mobile wallet in Vietnam?
2. To what extent those factors impact intention to use mobile wallet and actual use behaviour on mobile wallet in Vietnam?

1.5 Scope of the research

Place scope: Research was conducted in 3 regions in the Northern, Central, and Southern in Vietnam.

Time scope: The study was conducted from October 15 to April 30.

1.6 Research findings

This study's findings will aid mobile wallet service providers in identifying and prioritizing elements that influence the formation of intention to use and actual use behaviour. Especially, the study reveals the mechanism that promotional benefit affects intention to use mobile wallet through the role of social influence and compatibility. Simultaneously, the result shows that intention to use, facilitating condition and affective experience are critical predictors of actual use behaviour.

1.7 Research structure

There are five chapters in this paper. Chapter 1 presents the motivation and necessity to conduct the study, set goals and scope of implementation. The literature reviews are given in chapter 2 to describe the theoretical relevance in previous researches and to develop the hypotheses and conceptual model for further testing. In Chapter 3, research methodology, questionnaire design, data collection and data processing method are represented detail. Chapter 4 represents the sample profile and analytical results. Finally, in chapter 5, the finding of the research is discussed, conclusions are released to answer the research questions. Simultaneously, implications and recommendations for further research are also included in this section.
CHAPTER 2: LITERATURE REVIEW

2.1 Mobile wallet
2.1.1 Definition of mobile payment

Definitions of mobile wallets are developed through describing mobile payment systems by many researchers. Mobile payment is defined as “payments for goods, services, and bills with a mobile device (such as a mobile phone, smart-phone, or… [tablet]) by taking advantage of wireless and other communication technologies” (Dahlberg, Mallat, Ondrus, & Zmijewska, 2008). In other sources, mobile payments refer to a type of transaction made by connecting to a server via a mobile device and performing authentication, authorization, follow-up payments, and confirmation of completion (W. R. Lin et al., 2020). Mobile payment encompasses both pure mobile payment instruments such as mobile credit cards and mobile wallets, and mobilized physical payment instruments. In addition, account-based payment mechanisms such as direct debit assignments, Internet banking payments, money transfers, and electronic invoice acceptance are often available through mobile payments (Dahlberg et al., 2008). Basically, mobile payment includes technology systems that allow users to perform payment transactions by mobile devices. Therefore, mobile payment is a wider term that contains mobile wallet.

2.1.2 Definition of mobile wallet

Related to mobile wallet, many definitions have been involved. According to Shin (2009) mobile wallet is a form of payment that allows users to make electronic transactions using a mobile device instead of a physical wallet, allowing payment transactions to be done at a merchant's place. The GSMA (2012) defined mobile wallet based on Near Field Communication (NFC), a technology that is widely utilized in mobile wallets. Accordingly, mobile wallet is described as “a software application on a mobile handset that functions as a digital container for payment cards, tickets, loyalty cards, receipts, vouchers and other items that might be found in a conventional wallet. The mobile wallet enables the user to manage a broad portfolio of mobile NFC services from many different companies”. However, when many additional advanced technologies are applied to mobile wallet development (for example, QR code, cloud-
based technology,…(U.S.Payments_Forum, 2018)), the GSMA definition is insufficient to cover all of the conditions.

Many researchers agreed that a mobile wallet is an application installed in a smartphone or a tablet, has the ability to store money and making online payment transactions without being affected by space or time (K. M. R. Yadav, 2016). Transactions from consumer to consumer, consumer to enterprise, consumer to machine, and consumer to online are all possible with mobile wallets (Shin, 2009). Sharma, Mangla, Luthra, and Al-Salti (2018) mentioned that the mobile wallet is a prepaid account including four main components: user verification for authenticity, diverse features for making rapid and secure transactions at the point of sale or from a further distance, provision for making transaction and security provision. Deka (2020) built a more specific concept to explain the role and function of mobile wallet. Mobile wallets can be thought of as a medium to make instant purchases and conduct transactions using smartphones. Consumers can save their personal information and banking details, shopping detail, payment history, etc in mobile wallets and use their payment information for various transactions like bill payments, fund transfers, shopping payments, tickets booking, and so on. Overall, mobile wallet is considered as a digitized version of conventional wallets that run on mobile device (smartphone or tablet), generally is a mobile app that allows users to store money or link to their banking account, credit, and debit card to implement in-store and online payment transactions conveniently. In many mobile wallets, multiple layers of authentication are utilized to secure the user's account and personal information.

2.1.3 The distinction between mobile wallet, mobile banking and mobile money

Although mobile baking, mobile wallet and e-money are products of financial technology that can perform payment functions, they fundamentally have distinct characteristics. Chawla and Joshi (2019) differentiated these concepts based on their main functions. Accordingly, the term “mobile banking” refers to a system that allows customers to access banking functionalities via a mobile device (Koenig-Lewis, Marquet, Palmer, & Zhao, 2015). Instead of taking time to approach bank branches or physical ATMs of a certain commercial bank, users can use mobile banking to perform a variety of transactions such as account transfers, deposits, bill payments, withdrawals, and balance inquiries. In respect to mobile money, it is thought to be a precursor of
mobile wallet since it refers to a wide range of utilities, for instance, mobile banking, mobile transfers, and mobile money transfer that can be provided by a mobile phone. Meanwhile, mobile wallet can be thought of as an add-on to mobile banking that allows users to store personal information along with the information of different types of payments (Tun, 2020). Likewise, an electronic wallet can be thought of as a wider term in which money is stored digitally and payments are made via a desktop, laptop, or smartphone (Chawla & Joshi, 2019).

2.2 Theoretical framework

In interpreting the intention to adopt mobile wallets, The Technology Acceptance Model (TAM), The Unified Theory of Acceptance and Use of Technology (UTAUT) and The Diffusion of Innovation (DOI) are prevailing theories in the literature. Many researchers have extended these theories with factors such as perceived trust, security, cost and value or incorporate them to construct conceptual models that are appropriate to the mobile wallet development situation, demographic characteristics of users in a certain society (Shaw, 2014; Shin, 2009; Slade et al., 2015). In general, these studies have contributed substantially to identify the essential factors that influence both the intention to use and the actual use behaviour of mobile wallet.

2.2.1 The Technology Acceptance Model (TAM)

The TAM model which was developed by Davis (1989) is one of the widely used models in interpreting the adoption of a specific technology. The brilliant of the TAM model is the identification of two important determinants that affect the intention to use a new system. The two elements include perceived usefulness which is involved to “the extent to which a person believes that using a particular system would enhance his or her job performance” and perceived ease of use which is defined as “the degree to which a person believes that using a particular system would be free of effort”. TAM also asserts usage intention is a fundamental indicator that predicts actual use. V. Venkatesh and Davis (2000) and V. Venkatesh, & Bala, H. (2008) published theoretical extensions referred as TAM2 and TAM3, respectively, to explain the technology acceptance of individuals in the context of organizations. The original TAM and its enriched versions with additional factors such as trust, security, social influence is generally applied explaining the adoption of many new systems such as online shopping (Kalina &
Marina, 2017), fintech service (Chuang, Liu, & Kao, 2016), digital banking (Riza, 2019). In respect to mobile wallet, studies of Amin et al. (2015) and Trivedi (2016) proved that psychological factors in TAM model significantly affect to behaviour intention to adopt mobile wallets. However, some limitations of the TAM model were showed to debate that it is not a perfect model. Mathieson, Peacock, and Chin (2001) argued that two cognitive constructs of perceived usefulness and perceived ease of use are not persuasive enough to provide a comprehensive view to explain an individual's adoption of the technology. TAM often fails to take into account the social context in which new technology is being adopted (Shin, 2009).

2.2.2 The Unified Theory of Acceptance and Use of Technology (UTAUT)

The UTAUT model was proposed by V. Venkatesh, Morris, Davis, and Davis (2003) to interpret the intention to use an information system and their subsequent behaviours. This model which was aggregated from 8 previous models is used regularly by current researchers. UTAUT explains the intention to use an information system based on 4 major constructs including effort expectancy (substituted for perceived ease of use), performance expectancy (substituted for perceived usefulness), facilitating conditions and social influence. The variables clarified up to 70% of the variance in predicting intention to use new information technology when taken together. UTAUT and its variations have been used to clarify why various information systems are being used such as online purchasing tickets (Escobar-Rodríguez & Carvajal-Trujillo, 2014), mobile banking (Bhatiasevi, 2016) and mobile payment (Slade et al., 2015). It's worth mentioning that the initial UTAUT model was created to forecast technology acceptance in an organizational context, certain variables related to customer adoption processes were neglected. Hence, V. Venkatesh, Thong, and Xu (2012) improved the parsimony and robustness of the original UTAUT by extending it as UTAUT2 and introduced seven constructs including habit, effort expectancy, hedonic motivation, facilitating condition, performance expectancy, perceived value, and social influence. UTAUT and UTAUT2 have flaws, despite being a good model for illustrating intentions to implement new technologies. The failure to understand the importance of culture in the acceptance of new information systems is their greatest weakness (K. M. R. Yadav, 2016).
2.2.3 The Diffusion of Innovation (DOI)

DOI is a typical theory for explaining how an innovation is implemented and disseminated in a social system. Rogers (1983) who proposed this theory described innovation as a concept, process, or object that is viewed as novel by a single person or other unit of adoption. Diffusion is formed by extending and communicating an innovation among individuals through several certain channels in organizations or groups to further influence their willingness to use the innovation. When individuals make decisions whether accept or reject new technology, they involve in a perception process that includes everything from learning about the concept to developing an attitude toward it, deciding whether to embrace or reject it, putting the new idea into action, and confirming their decision (Rogers, 1983). DOI also validates 5 constructs that are important to determine the extent to diffuse a new system, including compatibility, trialability, relative advantage, complexity, and observability. Compatibility, perceived relative advantage, complexity was discovered to be three powerful dimensions of innovation adoption by Moore and Benbasat (1991). Additionally, previous studies have integrated DOI with other models to increase the ability to describe the desire to accept new technology. W. R. Lin et al. (2020) applied DOI as an addition combined with UTAUT2 to investigate determinants affecting the intention to accept mobile payment. The findings stated that factors derived from both models have a positive impact on the willingness to embrace mobile payment as well as improve the perceived usefulness. Similarly, the conceptual model which incorporates

![UTAUT Model](image_url)
DOI and UTAUT2 by Oliveira, Thomas, Baptista, and Campos (2016) showed that independent variables were able to explain 71.8% of individual intention to use and 61.2% of behavioural intention to recommend mobile payment.

2.2.4 Research model review

From reviewing prominent technology adoption theory, it is observed that many studies have demonstrated the significant effect of perceived ease of use (PEOU) and perceived usefulness (PU) in enhancing the behavioural intention of adopting payment systems in general and mobile wallets in particular. PU and PEOU is vital and robust predictors of technology acceptance in TAM and UTAUT model (Davis, 1989; V. Venkatesh et al., 2003; V. Venkatesh et al., 2012). In mobile wallet diffusion, these two constructs are determined as strong constructs to affects intention to use mobile wallet.

Nonetheless, as consumers become familiar with smartphones and their diversifiable applications, PU and PEOU seem not to be so important. PEOU is currently found to non-significantly influence mobile wallet acceptance (Amin et al., 2015; K. M. R. Yadav, 2016). Likewise, PU is proved empirically to not affect intention to use mobile wallet (Megadewandanu, 2016). W. R. Lin et al. (2020) noted that both PEOU and PU have no significant influence on behavioural intention to use mobile payment. As an explanation, Koenig-Lewis et al. (2015) debated that because the underlying technology, such as smartphones, is becoming more and more known to customers, the overall value of perceived ease of use in mobile payment adoption could be overstated. Indeed, almost all young people consider themselves to be very intelligent and experienced when it comes to smartphones, and they often use them for a variety of purposes, like installing applications, playing online games, and accessing the mobile internet. Moreover, as the mobile wallet market flourishes and grows rapidly, new entrants have entered this potential industry. Consequently, companies have to bear the enormous competitive pressure to maintain and expand their market share. Mobile wallet providers focus on upgrade their products with diversified functions and friendly interaction as it is a fundamental feature to compete with other services. This means that PU and PEOU are not enough to become prominent competitive advantages for mobile wallet service as well as create an impression in customer awareness.
Service providers are looking for alternatives to attract customers, for example, implementing promotion campaigns. The report by Cimigo (2019) reveals that attractive promotions are the necessary motivation for adopting mobile wallet in Vietnam. Indeed, Vietnamese people tend to save money. They are fascinated by monetary promotions that help them reduce the cost of making payment transactions. Therefore, numerous mobile wallet providers promotional campaigns as a short-term strategy to attract new customers and maintain the loyalty of current ones.

However, the mechanism that clarifies how promotional benefit affects intention to use mobile wallet is not explicitly represented. Promotional benefit is confirmed to be a prerequisite for the adoption of mobile wallets (Deka, 2020; K. M. R. Yadav, 2016). On the contrary, Aydin and Burnaz (2016) found no connection between the benefits of tangible incentives and the intention to use mobile wallets. Prabhakaran and Vasantha (2020) noticed that promotional benefit not only does it emphatically influence the intention to use mobile wallet, but it also helps to mediate partially the linkage between social influence and behavioural intention. H. Hoang and Le (2020) conducted a research project to find out the role of promotion benefit on mobile wallet adoption in Vietnam. The conclusion was that the promotional benefit has a clear and optimistic impact on the decision to use the mobile wallet. Perceived usefulness and habit both play a role in the effect of promotional benefits on intention to use.

This study uses a novel approach that begins with promotional benefit to identifying the factors affecting the intention to use mobile wallets to be more suitable with the actual situation of the mobile wallet development in Vietnam.

2.3 Hypothesis formulation and conceptual framework

2.3.1 Promotional benefit and intention to use

Promotion is the act of temporarily setting lower prices to improve the efficiency of efforts to sell products to cost-sensitive consumers (Sunny & George, 2018). Many businesses offer promotions as a sales effort when introducing a new product line to prospective buyers. Promotion is divided into monetary and non-monetary types. Promotional benefits are tangible benefits that customers get from promotions. Chandon, Wansink, and Laurent (2000) point out that promotion benefit includes hedonic and utilitarian values. Especially, hedonic values include opportunities for value
expression, entertainment, and discovery, while utilitarian values include cost savings, increased product quality, and shopping convenience.

Promotional benefit was argued to affect consumer purchase intention. Research by Kim and Han (2014) shows that customers tend to make effort to gain tangible benefits and advertising that contain incentives is generally paid attention to. In the mobile wallet service, popular tangible benefits such as monetary rewards, discounts, coupons, cashback, tie-up with merchants, etc dramatically inspire customers to install and use (Prabhakaran & Vasantha, 2020). Promotional benefit is revealed to be a significantly influential factor on intention to use mobile wallet (Deka, 2020; Li & Shen, 2019; K. M. R. Yadav, 2016). Based on the above rationale, since promotional benefit is regarded as a critical determinant of intent to use mobile wallet, the following hypotheses are formulated:

\[ H1: \text{Promotional benefit positively affects intention to use mobile wallet.} \]

2.3.2 Promotional benefit and compatibility

To achieve effective promotion campaigns, the promotion had better be compatible with the consumer's needs, beliefs, and regulatory orientation. Compatibility is defined as “the degree to which using a new system (an innovation) is perceived to fit with the existing values, beliefs, experiences, and needs of individuals” (Moore & Benbasat, 1991). Ramanathan and Dhar (2010) mentioned that compatibility between promotion messages and consumer's pre-existing motivations can sufficiently expand the size and composition of the overall basket. The research indicated that consumers who have promotion focus prefer promotions that contain gain-related messages, for example, buy 1 get 1 free. In contrast, consumers who have a prevention focus are interested in non-loss framed promotions, for instance, saving 5%.

Tversky, Sattath, and Slovic (1988) who proposed the compatibility principle argued that consumers more highly appreciated the dimension of an object when it is consistent with or close to their goal. People give compatible dimensions a lot of weight since they can be mapped more easily and confidently with the performance in question. These authors predicted that when the promotional gift is consistent with the benefits sought from the advertised product, sales promotions would be more successful. Likewise,
congruency effects proposed by Chandon et al. (2000) indicated that for hedonic products, non-monetary promotions are more successful because they provide more hedonic benefits that are compatible with those obtained from hedonic products; for utilitarian products, monetary promotions are more successful because they provide more utilitarian benefits that are consistent with those obtained from utilitarian products.

Huynh (2016) explored promotional tools suitable to Vietnamese in rural and urban areas in the retail industry. The results show that rural customers respond more to monetary promotions, while urban customers prefer non-monetary promotions. In addition, this study also confirmed that promotion suitable for cultural characteristics can improve effectiveness. Interestingly, the compatibility not only relates to promotion message but also affect the effectiveness of types of promotion. Winterich and Barone (2011) explored the influence of social identifications on customer preference for discount-based and donation-based promotions. According to the findings, consumers who have interdependent self-construal favour donations more than those who have separate self-construal.

In the context of mobile wallet services, tangible incentives are expected to save costs, bring utilitarian and hedonic values to customers, in turn, help improve customer perception that mobile wallet is compatible with their lifestyle and their pursued value. As a result, the following hypothesis is proposed:

**H2**: Promotional benefit positively affects compatibility.

### 2.3.3 Compatibility and social influence

A high level of compatibility is possible to facilitate interpersonal communication in sharing and evaluating information. M.-J. J. Lin, Hung, and Chen (2009) who studied the factors influencing information sharing in virtual communities, argued that when members of virtual communication find knowledge sharing is compatible with their individual values and needs, they tend to actively adopt and promote it.

Fu, Wu, and Cho (2017) explored the psychological incentives for knowledge sharing through Facebook. The results emerged that both self-interest and communal incentives are significantly linked to user intentions to share commercial messages and ideas through Facebook, but it depends on the type of content. In a more detail, self-interest
motivations (such as success, self-expression, and solitude) influenced the willingness to post commercial messages and consumer views of the Facebook users, while communal motivations (such as attachment, altruism, and community delight) influenced their willingness to post lifestyle interests and consumer comments. This study implied that people engage in behavioural sharing when they are aware of the compatibility between psychological motivation, social capital focus, and the type of content.

Compatibility also influences how customers assess product reviews and how this assessment contributes to the persuasiveness of the review. Zhang, Craciun, and Shin (2010) analysed data collected from lab experiments and actual online retailers and found that positive reviews are more convincing than negative reviews for customers evaluating goods aligned with promotion consumption objectives. On the other hand, consumers who assess goods for prevention consumption targets, consider negative reviews to be more convincing compared with positive ones.

From the above rationale, it can be seen that compatibility has a major impact on sharing and valuing knowledge, in short, compatibility can promote social influence, hence, the following hypothesis is formed:

\[ H3: \text{Compatibility positively affects social influence} \]

2.3.4 Compatibility and intention to use

The compatibility of a product or service with a consumer's lifestyle is crucial for adoption. Compatibility was identified by Rogers (1983) as one of the most important elements in predicting new technology adoption. In mobile and financial services, compatibility has a beneficial impact on the intention to use (Chen & Nath, 2008; Mallat, 2007). In the context of mobile payments, customers' lifestyles have a considerable impact on the willingness to accept the technology. Customers who get used to implementing online transactions via smartphones such as online shopping, product and service ordering remotely are likely to effortlessly accept new payment systems such as mobile wallets because it requires less time and effort to learn or change the current behaviour.
In many previous studies, compatibility was described as a critical factor affecting mobile payment adoption, as well as perceived ease to use and perceived usefulness (W. R. Lin et al., 2020; Oliveira et al., 2016). H.-F. Lin (2011) witnessed similar effects on mobile banking adoption. Furthermore, Chen and Nath (2008) pointed out that compatibility is the most robust influencer to intention to use mobile payment of the United State consumers. S. Singh and Srivastava (2014) noted that compatibility, security, and social influence positively influence the intention to use mobile banking in which compatibility is the strongest predictor. Aydin and Burnaz (2016) argued that compatibility had a substantial effect on perceived usefulness, attitudes toward and use intentions with both non-user and user groups in mobile wallet adoption in India.

In the current research, compatibility is constructed into the conceptual model as an effective mediator in the relation between the promotional benefit and the mobile wallet use intention. Customers are aware of diversified promotions from mobile wallet providers that match their lifestyles as well as enhance their performance, thereby, motivates them to adopt mobile wallet.

_H4: Compatibility positively affects intention to use mobile wallet._

**2.3.5 Promotional benefit and social influence**

The promotional benefit is thought to affect social influence, specially, benefits from promotion can influence other perceptions via word of mouth. Glynn Mangold, Miller, and Brockway (1999) who conducted qualitative research on stimulants of word-of-mouth communication on the marketplace suggested that promotional efforts of companies could partially stimulate the word of mouth of consumers.

Casaló and Romero (2019) found that promotions offered by online travel agencies inspire customers more presumably to perform consumer voluntarily behaviours such as word of mouth, suggestions, and social media interactions, via the mediating role of perceived support from companies as well as among consumers. This finding was interpreted based on the theory of social exchange which states that consumers are more likely to adopt behaviours that benefit the company if they feel the company values them and treats them equally and responsibly. Accordingly, voluntarily customer behaviours were considered as reciprocity forms that generate benefit for companies.
Bond, He, and Wen (2019) investigate whether free or paid mobile apps are preferred to transmit word of mouth and consumer motivation to do that. The results exposed that customers normally likely share their opinion on free products rather than paid products. In respect to mobile wallet, the quantitative study on mobile wallet adoption in Vietnam by H. Hoang and Le (2020) reported that promotion statistically and significantly creates positive social influences.

As consumers tend to notices references from appreciated resources or people, promotions can be more effective if it possibly motivates positive word of mouth among consumers. Therefore, the following hypothesis is established:

\[ H5: \text{Promotional benefit positively affects social influence.} \]

2.3.6 Social influence and intention to use

Social influence is referred as “the degree to which an individual perceives that important others believe he or she should use the new system” (V. Venkatesh et al., 2003). An individual's decisions and behaviours are not solely relating his individual perception but also influenced by the opinions, recommendations, and suggestions of other important people (friends, family, colleagues, social networks). In the diffusion of mobile wallets, social influence is considered a crucial construct that motivates customers to utilize to make payment transactions. Customers tend to seek comments on mobile wallets from people around them before deciding to use the system, in which the services that have received good views are preferred to use. Empirical evidence from previous research illustrates a significant effect of social influence in mobile wallet adoption (Chawla & Joshi, 2019, 2020; Soodan & Rana, 2020; Tun, 2020; K. M. R. Yadav, 2016). Similarly, Tu (2019) detected that social influence positively improve the intention to use mobile wallet of consumers in Ho Chi Minh City, Vietnam. Therefore, social influence is hypothesized to have a positive effect on the intention to use.

\[ H6: \text{Social influence positively affects intention to use mobile wallet.} \]

2.3.7 Intention to use mobile wallet and use behaviour

Intention to use refers to as the intensity of an individual's intention to perform a specific behaviour (Ajzen, 1991). It has consistently been concluded to be a positive indicator that predicts the actual use of a technology (Ajzen, 1991; Davis, 1989; V. Venkatesh &
Davis, 2000; V. Venkatesh et al., 2003; V. Venkatesh et al., 2012). Amoroso and Magnier-Watanabe (2012); (Shin, 2009) explored that use intention significantly influences the actual use behaviour of mobile wallets. Previous researches were implemented to identify the influential constructs of mobile wallet usage intention, in which various variables such as trust, perceived usefulness, social influence, perceived ease to use, … have been measured to determine behavioural intention towards mobile wallet adoption (Chawla & Joshi, 2019, 2020; Deka, 2020). Besides, trust, hedonic motivation is often incorporated into research models as complementary components to improve the ability to interpret this parameter. Intention to use mobile wallet is formed in the current paper as a strong determinant that drives the actual use behaviour and is influenced by promotional benefit, compatibility, and social influence.

H7: Intention to use positively affect use behaviour of mobile wallet.

2.3.8 Facilitating condition and use behaviour

Facilitating conditions refer to “an individual's perception of the resources and support available to perform a behaviour” (V. Venkatesh et al., 2003). Facilitating condition is found to significantly impact actual behaviour to use an information system. (V. Venkatesh et al., 2003; V. Venkatesh et al., 2012). Previous researches also claimed that facilitating conditions encourage customers to make transactions through mobile banking and mobile wallet systems. Alalwan, Dwivedi, and Rana (2017) utilized UTAUT2 and SEM to analyse the acceptance behaviour of mobile banking. The result in addition to figure out 5 antecedents (price value, performance expectancy, hedonic motivation, effort expectancy, and trust) that capture use intention, verified that actual use of mobile banking can be forecasted by behavioural intention and facilitating condition. Thu Nguyen et al. (2020) applied the UTAUT2 model to investigate the determinants that driver digital banking adoption in Vietnam. The research, on the one hand, stated that use intention along with facilitating condition and habit are three important factors in explaining the actual use, on the other hand, facilitating condition is found to be a non-significant influencer on the behavioural intention of digital banking in the context of Vietnam. This paper considers facilitating condition as a critical predictor of usage behaviour, therefore, the following hypothesis is established:

H8: Facilitating condition positively affect use behaviour of mobile wallet.
2.3.9 *Affective experience and use behaviour*

In the online context, customer experience is a critical aspect that decides the success of companies, and managing customer experience effectively can sustainably maintain their competitive advantages. Online customer experience is described as “the customer's affective and cognitive evaluation of direct or indirect interaction with a company” (Rose, Hair, & Clark, 2011). The cognitive dimension is concerned with the efficient procurement of goods and services (Frow & Payne, 2007), with the consumer as a rational actor who only considers the economic aspects of purchase, such as price and quality, and seeks to maximize his or her product and service shopping (Frow & Payne, 2007). The affective experience involves “one's affective system through the generation of moods, feelings and emotions” (Rose, Clark, Samouel, & Hair, 2012). Opreana (2013) implied that people who have numerous experiences in using the internet and online retailing willing to accept and gradually increase the frequency of using e-commerce services. Customer experience also reduces awareness of risks associated with online shopping as well as positively impacts online shopping intentions regardless of the category of product and gender (Dai, 2007).

Previous research implies that consumers value the affective experiences more than the cognitive ones. Rose et al. (2012) noted that outcomes of customer experience in the online purchase landscape are satisfaction, trust, and repurchase intention. Specifically, cognitive and affective experience directly impacts customer satisfaction, thereby motivates trust and repurchase intention. Additionally, affective components have been statistically proven to positively influence cognitive components as well as have a stronger effect on dependent variables. Barari, Ross, and Surachartkumtonkun (2020) also partially concreted with previous literature and remarked that in the successful online retailing context, affective experiences are more conclusive in enhancing customer satisfaction and inspiring positive word of mouth. Likewise, empirical evidence indicates that affective experiences contribute to improving customer overall experience (Arnold & Reynolds, 2003; Shobeiri, Mazaheri, & Laroche, 2014) and create customer delight among customers (Chitturi, Raghunathan, & Mahajan, 2008).

In relation to mobile payment emotion-related factors are thought to be vital in the adoption process. The hedonic motivation which is construed as “the fun or pleasure
derived from using a technology” (V. Venkatesh et al., 2012) is recognized as one of the major factors that affect the acceptance of mobile payment (W. R. Lin et al., 2020) digital banking (Le et al., 2020) and mobile wallet (Megadewandaru, 2016; Soodan & Rana, 2020). Saadon and Long (2020) pointed out that perceive enjoyment- a similar concept to hedonic promotion positively and undoubtedly inspire intention to use mobile wallets among undergraduates. Indeed, young people perceived that mobile wallet is not only useful but also provide exciting experiences, therefore, they are ready to actively accept this new type of payment. Verkijika (2020) tried to understand the role of affective factors in mobile payment adoption. The empirical result consistently agreed that affective response is essential to determine the behavioural intention as well as intention to recommend mobile payment.

Although it is comprehensible to consider that affective experience has a notable effect on mobile payment acceptance, in general, and mobile wallet, in particular, there is inadequate attention from scholars to study this aspect. Koenig-Lewis et al. (2015) argued that evaluation of rational and logical perspectives is over-highlighted while affective factors are highly underexplored in mobile payment adoption studies. Verkijika (2020) expressed the same concern when he reviewed approximately 95 published papers about mobile payment adoption, only more than 10 articles mentioned the effects of emotion-related factors such as anxiety, affective, hedonic, and so on, which showed that the academic still does not profoundly understand affective influence in this new industry. Naturally, perceptions of affective experience are accumulated gradually from time to time. Depending about how positive or negative those experiences were, customers decide on continuously their use behaviour or reject mobile payment forms, especially mobile wallet. Therefore, affective experience is modelled on the assumption that this variable will positively and significantly affect mobile wallet behaviour.

\[ H9: \text{Affective experience positively affect use behaviour of mobile wallet.} \]

2.3.10 Conceptual framework

The above hypotheses are represented in the model drawn in figure 2.1.
Figure 2.2. Conceptual model of the research
CHAPTER 3: METHODOLOGY

3.1 Survey design

3.1.1 Research measurement

There are 7 constructs in this research: promotional benefit, intention to use, compatibility, affective experience, social influence, facilitating condition and use behaviour. Majority scales were modified from relevant literature. Measurement items of social influence, intention to use and facilitating condition was altered from V. Venkatesh et al. (2012). The promotional benefit scales were adapted from Aydin and Burnaz (2016) and Deka (2020), scale for affective experience was altered from Barari et al. (2020). The 7-point Likert scales ranging from 1 to 7, respectively, from strongly disagree to strongly agree was utilized to measure 6 independent variables: promotional benefit, compatibility, social influence, affective experience, facilitating condition and one dependent variable intention to use. 5 items with 5-point scales was developed to measure the behaviour frequency of using mobile wallet, especially, 1- Seldom (0-10% of total transaction), 2- Occasionally (10-30% of total transactions), 3- Often (30-50% total transactions), 4- Frequently (50-70% total transactions) and 5- Always (>70% of total transactions). The measurement of all constructs is presented in the table below:

Table 3.1. Construct measures of the study

<table>
<thead>
<tr>
<th>Variables</th>
<th>Items</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Facilitating condition</td>
<td>1. I have resource necessary to use mobile wallet (smartphone, banking account, mobile app…)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2. I have knowledge necessary to use mobile wallet (user manual, terms and conditions of mobile wallet users and service providers, …).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>3. Mobile wallet services are compatible with other systems I use (Example: banking service, food delivery apps, car-order apps…)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>4. Support of an individual or service is available when problems are encountered with mobile wallet services.</td>
<td>(V. Venkatesh et al., 2012)</td>
</tr>
<tr>
<td>Variables</td>
<td>Items</td>
<td>References</td>
</tr>
<tr>
<td>---------------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------------------------------------------------</td>
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</tbody>
</table>
| Social influence    | 1. My family members who are using mobile wallet (parents, siblings, wife, husband, relatives) suggest that I should use mobile wallet.  
                       2. People close to me who are using mobile wallet (my peer, friends, colleague, acquaintances...) recommend me to use mobile wallet.  
                       3. Groups that I interact with on social media suggest I use mobile wallets.  
                       4. When I see people around me using mobile wallets, I would like to use it.                                                                 | (V. Venkatesh et al., 2012)                                                                        |
| Compatibility       | 1. Using mobile wallet is appropriate with my daily consumption patterns (purchasing online goods and services, purchasing goods at the traditional market, supermarket, convenience stores, bill payments, ...).  
                        2. Using mobile wallet can be accepted by merchants as well as other payment methods (Example: cash, debit or credit card).  
                        3. Using mobile wallet is compatible with my lifestyle.  
                        4. Using mobile wallet is compatible with my working style.                                                                                   | (W. R. Lin et al., 2020)                                                                                                                                   |
| Promotional benefit | 1. If no promotions were offered, I would not (have) downloaded mobile wallet.  
                        2. I use mobile wallet because of the promotional offers.  
                        3. I gain benefit from the promotional offers when using mobile wallet.                                                                         | (Aydin & Burnaz, 2016; Deka, 2020)                                                                                                                       |
| Intention to use    | 1. I intend to continue using mobile wallet in my daily life.                                                                                                                                              | (V. Venkatesh et al., 2012)                                                                        |
### Variables

<table>
<thead>
<tr>
<th>Items</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. I plan to continue to use mobile wallet more frequently.</td>
<td>(Barari et al., 2020)</td>
</tr>
<tr>
<td>1. I have many fun experiences when using mobile wallet.</td>
<td></td>
</tr>
<tr>
<td>2. I have many exciting experiences when using mobile wallet.</td>
<td></td>
</tr>
<tr>
<td>3. I have many delightful experiences when using mobile wallet.</td>
<td></td>
</tr>
<tr>
<td>4. I have many enjoyable experiences when using mobile wallet.</td>
<td></td>
</tr>
<tr>
<td>1. I am frequently using mobile wallet to make payments for purchasing online goods and services (shopping on e-commerce website, ordering food, booking cars, ...).</td>
<td>(Kim &amp; Han, 2014; V. Venkatesh et al., 2012)</td>
</tr>
<tr>
<td>2. I am frequently using mobile wallet to make bill payments (electricity, water, internet, top-up).</td>
<td></td>
</tr>
<tr>
<td>3. I am frequently using mobile wallet to make payments at stores (convenience stores, restaurants, supermarkets, petrol stations...).</td>
<td></td>
</tr>
<tr>
<td>4. I am frequently using mobile wallet to transfer money.</td>
<td></td>
</tr>
<tr>
<td>5. I am frequently using mobile wallet to buy movies ticket, airline tickets and hotel reservations.</td>
<td></td>
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#### 3.1.2 Questionnaire design

The questionnaire starts with a cover letter which aims to interpret the purpose of the study, the nature of the questions and its ethical deliberation. The questionnaire consists of 3 sections. Section 1 comprises screening questions to determine respondents who are using mobile wallet. Section 2 gathers demographic information like age, gender,
education, monthly income, occupation, location, and experience in using mobile wallet.

Part 3 consists of multiple-choice questions designed to collect reply on construct items.

Because the research was conducted in Vietnam, the questionnaire from original source in English was translated into Vietnamese. Before the survey is officially distributed, the translated questionnaire was pilot tested and respondents were qualitative interviewed to ensure that the translation is absolutely understandable.

3.1.3 Sample and data collection

Data collection: Data was collected through survey instrument. Online survey with closed-ended statements is formed by google form and distributed via Facebook which is the most favoured social network in Vietnam to approach potential participants who live in different areas in Vietnam.

Sample size: The study uses Partial Least Square-Structural Equation Modelling (PLS-SEM) to analyse the data. For a PLS model, the minimum sample size should be “at least ten times the largest number of inner model paths directed at a specific construct in the inner model” (Barcelay, Higgins, & Thomson, 1995; Henseler, Ringle, & Sinkovics, 2009). Based on the conceptual model, there are 3 direct paths to intention to use, which implies that a sample size of thirty should be used as a minimum standard. Therefore, the sample size is expected to be more than 30.

3.2 Data analysis with PLS-SEM using SMART PLS 3.0

Collected data are analysed by SMART PLS 3.0. The study uses PLS SEM to estimate and test the model's hypotheses. This method has been selected because it has the following outstanding advantages:

1) It can deal with non-normal distribution data.
2) It is possible to estimate complicated models with many factors, latent and observed variables, and structural path with small sample size.
3) PLS-SEM is a causal predictive approach to SEM that focuses on prediction in statistical model estimation (Hair, Risher, Sarstedt, & Ringle, 2019).

According to Hair et al. (2019), the PLS SEM model is assessed through the measurement model and the structural model.
3.2.1 Measurement model

The measurement model is used to assess the unidirectional relationship of items that measure a single construct. It is assessed through evaluating reliability, convergent validity and discriminant validity (Hair et al., 2019).

Firstly, observed variables have an outer loading index higher than 0.708 to provide sufficient item reliability that indicates the construct accounts for more than half of the variance in the indicator. Secondly, composite reliability and Cronbach Alpha is recommended in the interval from 0.7 to 0.95 to satisfy the internal consistency reliability.

Secondly, the convergent validity is used to determine the scale's validity. A construct with an average variance extracted (AVE) greater than or equal to 0.5 describes 50% or more of the variance of the elements that make up the construct (Fornell & Larcker, 1981).

Thirdly, discriminant validity clarifies that there is no correlation between the factors used to measure constructs. To evaluate discriminant validity, the square root of AVE for each construct is compared to the correlation between the construct or latent variable by Fornell and Larcker (1981). AVE is asked to be higher than all other constructs relative to the square root. However, Henseler, Ringle, and Sarstedt (2015) showed that the criterion by Fornell- Larcker fails miserably, especially when the indicator loadings on a construct differ only marginally (for instance, all the indicator loadings are in the range from 0.65 to 0.85). Henseler et al. (2015) proposed an indicator of HTMT which is referred as “the mean value of the item correlations across constructs relative to the (geometric) mean of the average correlations for the items measuring the same construct”. HTMT is required to be less than 0.85 when construct is conceptualized to be distinct. In this paper, both Fornell-Larcker Criterion and HTMT is applied to measure the discriminant of constructs.

3.2.2 Structural model

After the measurement model result is completed, structural model is utilized to test whether there are relationships between constructs. The evaluation criteria are as follows:
The collinearity problem of the structural model needs to be tested on the relationship between the factors. The variance magnification factor (VIF) is tested for multicollinearity. VIF values greater than 5 indicate that the predictor constructs are likely to be collinear. Nonetheless, collinearity may be a concerning issue when VIF is in the range from 3 to 5. VIF values should be equal to 3 and less than that (Hair et al., 2019).

R-square which measures the ability of independent variable to explain variance of dependent variable is an index to emerge the suitability of the model. Henseler et al. (2009) described R-square of 0.67, 0.33, and 0.19 in the PLS models as strong, moderate, and weak, respectively.

The $f^2$ effect size is utilized to evaluate how removing a predictive construct influences the $R^2$ value of an endogenous construct. Cohen’s (1988) via Hair et al. (2019) found that $f^2 = 0.02$, $f^2 = 0.15$, $f^2 = 0.35$, respectively, represents small, medium, and large effect of constructs' relevance in explaining a dependent construct in the structural model.

Path Coefficient of the PLS structure model which can be determined as the standard beta coefficient of regression least squares provide a valid confirmation of the hypothetical relationship between latent variables. In PLS path modelling, the nonparametric bootstrap approach can be used to generate confidence intervals for all parameter estimations, laying the groundwork for statistical inference. “Bootstrap samples are created by randomly drawing cases with replacement from the original sample. PLS estimates the path model for each bootstrap sample. The obtained path model coefficients form a bootstrap distribution, which can be viewed as an approximation of the sampling distribution. The PLS results for all bootstrap samples provide the mean value and standard error for each path model coefficient. This information permits a student’s t-test to be performed for the significance of path model relationships” (Henseler et al., 2015). With $t$-value $> 1.96$, the test has statistical significance at the 5% level.
CHAPTER 4: RESEARCH FINDING

4.1 Sample profile

The research questionnaire by Google Form was distributed via Facebook to selective participants from all geographic regions: Northern, Middle, and Southern. After more than 2 weeks of data collection, the study obtained 238 answers and 182 were usable questionnaire because 56 answers were omitted for several reasons, for example, respondents either have never heard or used mobile wallets before and some people decided to reject this service.

Gender: In the sample size of 182, there are 104 relatively 57% female respondents and 78 relatively 43% male respondents.

Age: The participants were from under 18 to over 50 years old, of which the most popular age group was between the ages of 18 and 29, accounting for 86.81%.

Education level: The research collects data on the highest educational attainment of the participants. There are 22 respectively 10.44% respondents had high school degree, 128 respectively 70.33% respondents had undergraduate and equivalent degree, 30 respectively 16.48% respondents had postgraduate degree, 2 respectively 1.65% respondents had junior high school degree.

Occupation status: 59 respondents relatively 32.42% are working for companies, 96 respondents relatively 52.75%, are students at distinct levels, 7 respondents relatively 3.85%. are business owner and the rest of 20 relatively 10.99% do other jobs.

Regarding the usage of mobile wallets, 23.08% of respondents have used mobile wallet for less than 6 months, 14.29% of respondents have used mobile wallet from 6 months to 1 year, 53.3% of respondents have used mobile wallet from 1 to 3 years 9.34% of respondents have used mobile wallet for more than 3 years. The proportion of respondents using 1, 2 and more than 2 mobile wallets is 31.87%, 28.02% and 40.11%, respectively. 95 respondents relatively 52% confirmed that Momo is the most frequently used mobile wallet, followed by Airpay with 61 answers, corresponding to 34%, the remaining 14% frequently use other mobile wallets, for instance, Viettelpay, Moca, Zalo Pay, …
4.2 Assessing PLS-SEM model

4.2.1 Analysis of measurement model

The analysis of the measurement model was based on suggestions of (F. Hair Jr, Sarstedt, Hopkins, & G. Kuppelwieser, 2014; Hair et al., 2019), includes testing reliability, convergent and discriminant validity.

Table 4.1. Constructs coding

<table>
<thead>
<tr>
<th>Exogenous constructs</th>
<th>Abbreviations</th>
<th>Exogenous constructs</th>
<th>Abbreviations</th>
</tr>
</thead>
<tbody>
<tr>
<td>Promotional benefit</td>
<td>PROMO</td>
<td>Facilitating condition</td>
<td>FC</td>
</tr>
<tr>
<td>Social influence</td>
<td>SI</td>
<td>Affective experience</td>
<td>AEXP</td>
</tr>
<tr>
<td>Compatibility</td>
<td>COM</td>
<td>Actual use behaviour</td>
<td>BEHAV</td>
</tr>
<tr>
<td>Intention to use</td>
<td>INTENT</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The first PLS algorithm shows that the outer loading of the observed variables was above 0.7. However, there were 2 items of COM2 and BEHAV4 that have outer loading less than 0.7. Therefore, these two items were eliminated. After removing the above 2 variables, the PLS algorithm was performed again and all the outer loadings were greater than 0.7.

Figure 4.1. The measurement model (PLS algorithm)
**Table 4.2.** Item loading, Cronbach’s alpha and composite reliability of the constructs

<table>
<thead>
<tr>
<th>Construct</th>
<th>Outer loading</th>
<th>T-statistics (Bootstrap)</th>
<th>Cronbach's Alpha</th>
<th>Composite Reliability</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEXP1</td>
<td>0.918</td>
<td>53.872</td>
<td>0.924</td>
<td>0.946</td>
</tr>
<tr>
<td>AEXP2</td>
<td>0.914</td>
<td>53.297</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEXP3</td>
<td>0.889</td>
<td>28.177</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AEXP4</td>
<td>0.889</td>
<td>50.625</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEHAV1</td>
<td>0.762</td>
<td>20.581</td>
<td>0.793</td>
<td>0.865</td>
</tr>
<tr>
<td>BEHAV2</td>
<td>0.799</td>
<td>23.951</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEHAV3</td>
<td>0.795</td>
<td>18.907</td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEHAV5</td>
<td>0.781</td>
<td>19.586</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM1</td>
<td>0.843</td>
<td>23.678</td>
<td>0.881</td>
<td>0.927</td>
</tr>
<tr>
<td>COM3</td>
<td>0.941</td>
<td>74.954</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM4</td>
<td>0.914</td>
<td>55.724</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC1</td>
<td>0.701</td>
<td>9.877</td>
<td>0.822</td>
<td>0.876</td>
</tr>
<tr>
<td>FC2</td>
<td>0.815</td>
<td>17.940</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC3</td>
<td>0.828</td>
<td>25.282</td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC4</td>
<td>0.848</td>
<td>30.207</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTENT1</td>
<td>0.925</td>
<td>62.829</td>
<td>0.836</td>
<td>0.924</td>
</tr>
<tr>
<td>INTENT2</td>
<td>0.929</td>
<td>73.884</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROMO1</td>
<td>0.743</td>
<td>11.365</td>
<td>0.782</td>
<td>0.87</td>
</tr>
<tr>
<td>PROMO2</td>
<td>0.877</td>
<td>24.173</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROMO3</td>
<td>0.869</td>
<td>28.911</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI1</td>
<td>0.799</td>
<td>20.244</td>
<td>0.849</td>
<td>0.898</td>
</tr>
<tr>
<td>SI2</td>
<td>0.876</td>
<td>37.496</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI3</td>
<td>0.869</td>
<td>42.543</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI4</td>
<td>0.769</td>
<td>15.950</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Source: PLS algorithm*
The results showed that all factors were reliable with Cronbach's Alpha (CA) greater than 0.7, specifically, all CA values are between 0.782 and 0.924. Composite reliability (CR) of all observed variables were satisfied to be greater than 0.7, specifically ranging from 0.865 to 0.946.

The results showed that the total variance extracted (AVE) of the constructs was higher than 0.5, all AVE values are between 0.575 and 0.766. (Hair et al., 2014). Therefore, it can be said that the constructs attained convergent validity.

**Table 4.3.** Convergent validity among constructs

<table>
<thead>
<tr>
<th></th>
<th>Average Variance Extracted (AVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEXP</td>
<td>0.815</td>
</tr>
<tr>
<td>BEHAV</td>
<td>0.616</td>
</tr>
<tr>
<td>COM</td>
<td>0.810</td>
</tr>
<tr>
<td>FC</td>
<td>0.640</td>
</tr>
<tr>
<td>INTENT</td>
<td>0.859</td>
</tr>
<tr>
<td>PROMO</td>
<td>0.692</td>
</tr>
<tr>
<td>SI</td>
<td>0.688</td>
</tr>
</tbody>
</table>

*Source: PLS algorithm*

According to the Fornell and Larcker Criterion in the table 4.3, all the square roots of AVE are higher than 0.5 (from 0.785 to 0.927). In each factor, the square root of AVE is higher than the correlation coefficient of other factors in the same column.
Table 4.4. Discriminant validity: Fornell- Larcker Criterion

<table>
<thead>
<tr>
<th></th>
<th>AEXP</th>
<th>BEHAV</th>
<th>COM</th>
<th>FC</th>
<th>INTENT</th>
<th>PROMO</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEXP</td>
<td>0.903</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEHAV</td>
<td>0.484</td>
<td>0.785</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM</td>
<td>0.710</td>
<td>0.551</td>
<td>0.900</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>0.570</td>
<td>0.462</td>
<td>0.718</td>
<td>0.800</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTENT</td>
<td>0.591</td>
<td>0.516</td>
<td>0.527</td>
<td>0.430</td>
<td>0.927</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROMO</td>
<td>0.403</td>
<td>0.213</td>
<td>0.317</td>
<td>0.353</td>
<td>0.337</td>
<td>0.832</td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>0.510</td>
<td>0.386</td>
<td>0.406</td>
<td>0.360</td>
<td>0.453</td>
<td>0.394</td>
<td>0.829</td>
</tr>
</tbody>
</table>

Source: PLS algorithm

Additionally, the HTMT values of the elements are all less than 0.85. Therefore, it can be observed that all constructs attained discriminant validity.

Table 4.5. Discriminant validity: Heterotrait - Monotrait Ratio (HTMT)

<table>
<thead>
<tr>
<th></th>
<th>AEXP</th>
<th>BEHAV</th>
<th>COM</th>
<th>FC</th>
<th>INTENT</th>
<th>PROMO</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEXP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BEHAV</td>
<td>0.558</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM</td>
<td>0.783</td>
<td>0.655</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td>0.642</td>
<td>0.517</td>
<td>0.831</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTENT</td>
<td>0.672</td>
<td>0.629</td>
<td>0.612</td>
<td>0.514</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROMO</td>
<td>0.439</td>
<td>0.264</td>
<td>0.348</td>
<td>0.422</td>
<td>0.397</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td>0.565</td>
<td>0.474</td>
<td>0.458</td>
<td>0.383</td>
<td>0.522</td>
<td>0.485</td>
<td></td>
</tr>
</tbody>
</table>

Source: PLS algorithm

Table 4.6 presents the correlation matrix of all constructs. The result shows the positive relationship between variables, for example, positive correlation between PROMO and INTENT (=0.337), positive correlation between PROMO and SI (=0.394), positive correlation between PROMO and COM (=0.317), positive correlation between COM and INTENT (=0.527), positive correlation between SI and INTENT (=0.453), positive correlation between INTENT and BEHAVE (=0.516), positive correlation between FC and BEHAVE (=0.462), and positive correlation between AEXP and BEHAVE.
(=0.484). In short, it could be explained that all of the correlations backed up the linear relationship of variables (Taylor, 1990), which was then double-checked with structural model analysis for further data explanation.

**Table 4.6. Latent variable correlations**

<table>
<thead>
<tr>
<th></th>
<th>AEXP</th>
<th>BEHAV</th>
<th>COM</th>
<th>FC</th>
<th>INTENT</th>
<th>PROMO</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEXP</td>
<td>1.000</td>
<td>0.484</td>
<td>0.710</td>
<td>0.570</td>
<td>0.591</td>
<td>0.403</td>
<td>0.510</td>
</tr>
<tr>
<td>BEHAV</td>
<td>0.484</td>
<td>1.000</td>
<td>0.551</td>
<td>0.462</td>
<td>0.516</td>
<td>0.213</td>
<td>0.386</td>
</tr>
<tr>
<td>COM</td>
<td>0.710</td>
<td>0.551</td>
<td>1.000</td>
<td>0.718</td>
<td>0.527</td>
<td>0.317</td>
<td>0.406</td>
</tr>
<tr>
<td>FC</td>
<td>0.570</td>
<td>0.462</td>
<td>0.718</td>
<td>1.000</td>
<td>0.430</td>
<td>0.353</td>
<td>0.360</td>
</tr>
<tr>
<td>INTENT</td>
<td>0.591</td>
<td>0.516</td>
<td>0.527</td>
<td>0.430</td>
<td>1.000</td>
<td>0.337</td>
<td>0.453</td>
</tr>
<tr>
<td>PROMO</td>
<td>0.403</td>
<td>0.213</td>
<td>0.317</td>
<td>0.353</td>
<td>0.337</td>
<td>1.000</td>
<td>0.394</td>
</tr>
<tr>
<td>SI</td>
<td>0.510</td>
<td>0.386</td>
<td>0.406</td>
<td>0.360</td>
<td>0.453</td>
<td>0.394</td>
<td>1.000</td>
</tr>
</tbody>
</table>

*Source: PLS algorithm*

### 4.2.2 Analysis of structural model

The structural model was evaluated using the 5000 times Bootstrapping technique after the measurement model's reliability and validity were assessed.

![Figure 4.2. Structural model (PLS Bootstrapping one tail)'](image-url)
Multicollinearity

Multicollinearity was detected before testing formulates hypotheses. The calculation of VIF values showed that the association between the predictors does not violate the assumption of multicollinearity, because all coefficients are in the acceptable range (VIF ranges from 1 to 1.891 < 3).

Table 4.7. Collinearity statistics (VIF) of exogenous variables

<table>
<thead>
<tr>
<th></th>
<th>AEXP</th>
<th>BEHAV</th>
<th>COM</th>
<th>FC</th>
<th>INTENT</th>
<th>PROMO</th>
<th>SI</th>
</tr>
</thead>
<tbody>
<tr>
<td>AEXP</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.891</td>
</tr>
<tr>
<td>BEHAV</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>COM</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.241</td>
<td>1.112</td>
<td></td>
</tr>
<tr>
<td>FC</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.510</td>
<td></td>
<td></td>
</tr>
<tr>
<td>INTENT</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1.568</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PROMO</td>
<td>1.000</td>
<td></td>
<td>1.227</td>
<td>1.112</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SI</td>
<td></td>
<td></td>
<td>1.321</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: PLS algorithm

The R squares

The inner path model estimates can be evaluated using reliable and accurate outer model estimations. The coefficient of determination (R²) of the endogenous latent variables is the most important criterion for this evaluation (Henseler et al., 2009). The analysis results show that the R² value in the use intention model and use behaviour model is 0.357 and 0.351, respectively, in other words, R² in the PLS path models is at moderate level (Henseler et al., 2009).

Table 4.8. R square

<table>
<thead>
<tr>
<th></th>
<th>R Square</th>
<th>R Square Adjusted</th>
</tr>
</thead>
<tbody>
<tr>
<td>COM</td>
<td>0.100</td>
<td>0.095</td>
</tr>
<tr>
<td>INTENT</td>
<td>0.357</td>
<td>0.346</td>
</tr>
<tr>
<td>SI</td>
<td>0.243</td>
<td>0.235</td>
</tr>
<tr>
<td>BEHAV</td>
<td>0.351</td>
<td>0.340</td>
</tr>
</tbody>
</table>

Source: PLS algorithm
The significance of the exogenous construct in describing the endogenous construct is indicated by the effect size $f^2$ (Hair et al., 2019). The result of $f^2$ size displayed in table 4.9 shows that the predictor constructs have weak and medium effects on the endogenous construct, exception for the path from PROMO to INTENT. The “weak” and “medium” imply that if an exogenous construct is removed from the model, it will affect weakly/moderately on the value of $R^2$, in other words, that exogenous construct has a small/medium effect size on the endogenous construct. For example, the exogenous constructs INTENT, FC, and AEXP have a small effect size on the endogenous construct BEHAV since the $f^2$ values range from 0.02 to 0.15. With regard to the endogenous constructs INTENT, the exogenous construct COM has a medium effect size since $f^2$ ranges from 0.15 to 0.33.

**Table 4.9. f square**

<table>
<thead>
<tr>
<th>Path</th>
<th>$f$ square</th>
<th>Effect level</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROMO $\rightarrow$ INTENT</td>
<td>0.017</td>
<td></td>
</tr>
<tr>
<td>PROMO $\rightarrow$ COM</td>
<td>0.112</td>
<td>Weak</td>
</tr>
<tr>
<td>COM $\rightarrow$ SI</td>
<td>0.116</td>
<td>Medium</td>
</tr>
<tr>
<td>COM $\rightarrow$ INTENT</td>
<td>0.189</td>
<td>Medium</td>
</tr>
<tr>
<td>PROMO $\rightarrow$ SI</td>
<td>0.103</td>
<td>Weak</td>
</tr>
<tr>
<td>SI $\rightarrow$ INTENT</td>
<td>0.073</td>
<td>Weak</td>
</tr>
<tr>
<td>INTENT $\rightarrow$ BEHAV</td>
<td>0.101</td>
<td>Weak</td>
</tr>
<tr>
<td>FC $\rightarrow$ BEHAV</td>
<td>0.055</td>
<td>Weak</td>
</tr>
<tr>
<td>AEXP $\rightarrow$ BEHAV</td>
<td>0.022</td>
<td>Weak</td>
</tr>
</tbody>
</table>

*Source: PLS algorithm*
Hypotheses testing

The estimated coefficients and p-value were computed to test the significance of the proposed hypotheses. The empirical evidence supported 8 of 9 hypotheses, as seen in table 4.8.

First, concerning the effects of promotional benefit on intention to use, the results do not support hypothesis H1 ($\beta = 0.116$ and $p>0.05$). That is, promotional benefit insignificantly influences the intention to use mobile wallet. Second, the finding confirms the hypothesis H2 ($\beta = 0.317$ and $p<0.01$), which means that promotional benefit has a positive effect on compatibility. Also, hypothesis H4 is endorsed ($\beta=0.389$ and $p <0.01$), therefore, it can be said that compatibility positively influences the intention to use. Due to the verification of hypotheses H2 and H4, it is concluded that compatibility mediates the impact of promotional benefit on intention to use.

Additionally, regarding the association between compatibility and social influence, since $\beta= 0.313$ and $p <0.01$, hypothesis H3 is approved. The result verifies that compatibility can strengthen the social influence in the context of mobile wallet. In respect to the relation between promotional benefit, social influence and intention to use, the findings confirm the hypothesis H5 ($\beta= 0.295$ and $p <0.01$), and H6 ($\beta=0.250$ and $p<0.01$), which indicates that promotional benefit affects intention to use through the mediating role of social influence. Antecedents together explain 34.6% of the variation of intention to use mobile wallet.

Furthermore, with ($\beta= 0.320$ and $p <0.01$) the finding supports hypothesis H7 and shows that intention to use is the strongest influencer on actual use behaviour. The results also confirm hypothesis H8 ($\beta= 0.231$ and $p<0.01$), consequently, it can be said that facilitating condition is an important antecedent of use behaviour. Finally, with the possibility of less than 0.05 the hypothesis H9 is supported ($\beta= 0.163$ and $p<0.05$), in other words, affective experience is determined to significantly affects use behaviour. Three variables explain 34% of the latter.
<table>
<thead>
<tr>
<th></th>
<th>Original Sample (O)</th>
<th>T Statistics</th>
<th>P Values</th>
<th>Conclusion</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROMO $\rightarrow$ INTENT</td>
<td>0.116</td>
<td>1.426</td>
<td>0.077</td>
<td>H1 is not supported</td>
</tr>
<tr>
<td>PROMO $\rightarrow$ COM</td>
<td>0.317</td>
<td>4.392</td>
<td>0.000</td>
<td>H2 is supported</td>
</tr>
<tr>
<td>COM $\rightarrow$ SI</td>
<td>0.313</td>
<td>4.301</td>
<td>0.000</td>
<td>H3 is supported</td>
</tr>
<tr>
<td>COM $\rightarrow$ INTENT</td>
<td>0.389</td>
<td>5.889</td>
<td>0.000</td>
<td>H4 is supported</td>
</tr>
<tr>
<td>PROMO $\rightarrow$ SI</td>
<td>0.295</td>
<td>3.930</td>
<td>0.000</td>
<td>H5 is supported</td>
</tr>
<tr>
<td>SI $\rightarrow$ INTENT</td>
<td>0.250</td>
<td>3.225</td>
<td>0.001</td>
<td>H6 is supported</td>
</tr>
<tr>
<td>INTENT $\rightarrow$ BEHAV</td>
<td>0.320</td>
<td>4.133</td>
<td>0.000</td>
<td>H7 is supported</td>
</tr>
<tr>
<td>FC $\rightarrow$ BEHAV</td>
<td>0.231</td>
<td>2.843</td>
<td>0.002</td>
<td>H8 is supported</td>
</tr>
<tr>
<td>AEXP $\rightarrow$ BEHAV</td>
<td>0.163</td>
<td>2.028</td>
<td>0.021</td>
<td>H9 is supported</td>
</tr>
</tbody>
</table>

Source: PLS Bootstrapping one tail
CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Discussion

This study suggests interesting findings of the relevance of promotional benefit in intention to use mobile wallet.

Firstly, the study found that promotional benefit had no direct effect on the intention to use mobile wallet. The finding is consistent with Aydin and Burnaz (2016). However, it is opposite with the detection of Deka (2020); Li and Shen (2019); K. M. R. Yadav (2016).

A possible explanation is that demographic characteristics such as income, age and education, and culture in the different collected samples can affect the effectiveness of promotion techniques. Fam et al. (2019) clearly found that location (country and culture) has a substantial effect on the perception and value of particular sales promotional techniques, for instance, New Zealander rates discounts higher and samples lower than the other studied countries. Fam et al. (2019) also listed that a lack of sales promotion success may be due to a failure to grasp the cultural environment, a sales promotion that underperforms, or a promotion that is difficult to comprehend. Additionally, according to Nitzl, Roldan, and Cepeda (2016), when a variable has no direct effect since its effect is mediated by another variable, focusing solely on direct effect and neglecting mediating effects may severely bias the results' interpretation. The indirect effects of promotional benefits on the intention to use mobile wallets have been ignored, which may result in conflicting findings among previous studies.

Secondly, the results indicated that the impact of promotional benefit on intention to use mobile wallet is mediated by compatibility and social influence. Previous studies have found several mediators between promotional benefit and intention to use. H. Hoang and Le (2020) found that habit and usefulness partially mediate the effects of promotional benefit on intention to use mobile wallet. This study also identified the statistical influence of promotional benefit on social influence. Nonetheless, social influence was not shown to positively impact intention to use, therefore, the mediating role of social influence was not established. Aydin and Burnaz (2016), when studying
the effects of factors on the intention to use mobile wallets between the users and non-users, detected a mediating role of attitude in the relationship between promotional benefit and intention to use. However, the estimation of a relatively coefficient was relatively small and the effect only statistically significant for the users. Therefore, the identification that social influence and compatibility remarkably mediates the effect of promotional benefit on intention to use is a unique and important finding because it suggests a new approach to designing effective promotions that drive social influence and compatibility with consumers.

Consistent with the finding by H. Hoang and Le (2020), promotional benefit was found to have a strong and positive impact on social influence. In general, when there is an attractive promotion, consumers usually suggest more mobile wallets to their acquaintances since they expect that their relatives need to use and benefit from such promotions as they previously experienced (H. Hoang & Le, 2020). From a business-consumer perspective, word-of-mouth recommendations, suggestions are available forms that consumers reciprocate service producers when they perceived benefit or support from the company (Casaló & Romero, 2019).

The promotional benefit also showed considerably meaningful effects on perceived compatibility in the mobile wallet context. Promotional benefit not only form utility value, like decline loss in payment transactions but also initiates enjoyment (Chandon et al., 2000). These benefits are undoubtedly compatible with the lifestyle of younger customers who are interested in new and wonderful experiences. In addition, promotions that fit the regulatory focus orientation (promotion focus and prevention focus) are predicted to increase the behaviour frequency of using mobile wallets as well as inspire customers to use both promoted services and unpromoted services (Ramanathan & Dhar, 2010). This is an important implication for providers. Providers can flexibly incorporate “gain” and “non-loss” messages in promotions to appropriately approach individuals' regulatory orientation, thus, improve the efficiency of promotions.

Compatibility is appeared to be the most dynamic predictor which influences the intention to use mobile wallets. The recent observation was also consistently in line with previous research in mobile banking and mobile payment adoption by Chen and Nath (2008); Schierz, Schilke, and Wirtz (2010); S. Singh and Srivastava (2014). Likewise,
compatibility is found to be a strong predictor of mobile wallet acceptance (Aydin & Burnaz, 2016; Chawla & Joshi, 2019, 2020). Similar to other technology adoption, compatibility is a key issue in the diffusion of mobile wallets. Recognizing that new technology can adapt to existing behavioural value makes it easier for users to accept using that technology. Especially, greater compatibility adjusts users' preferences, values, and experiences with the technology and leads to promote intention to adopt that technology (Chawla & Joshi, 2019).

Interestingly, the research found a significant effect of compatibility on social influence. The finding consistently supports the previous emergence by Fu et al. (2017) and M.-J. J. Lin et al. (2009). Individuals preferred to share contents that were consistent with their motives because they intended to satisfy both personal and social needs by sharing information (Fu et al., 2017). Members who use information sharing as a competent, superior, and compatible means of achieving personal goals demonstrate a strong desire to share their expertise (M.-J. J. Lin et al., 2009).

Social influence is identified as a positive factor for intention to use mobile wallet, which is in line with previous findings by Phutela and Altekar (2019); Soodan and Rana (2020). The significant effect of social influence in spreading new information technology is clarified in several previous studies (V. Venkatesh et al., 2003; V. Venkatesh et al., 2012). It can be observed that the opinion of family, friends, peer groups as well as virtual communities on social networks is considered to be a reliable reference and has a significant influence on consumer behaviour. Consequently, positive word of mouth sharing from these sources can create greater motivational effect that influences other decision to try out or reject a new technology (K. M. R. Yadav, 2016).

The study found use intention, facilitating condition and affective experience as critical determinants of use behaviour. Firstly, intention to use is described as a strong predictor of use behaviour by Davis (1989); V. Venkatesh et al. (2003); V. Venkatesh et al. (2012). In this paper, the finding continues to be affirmed in the context of mobile wallet. It is demonstrated that promotional benefit, compatibility, and social influence are influential factors of mobile wallet adoption, in which compatibility and social influence mediate the effect of promotional benefit on intention to use. Secondly, facilitating condition is determined to be a strong driver to use behaviour. The result is similar to
findings by Thu Nguyen et al. (2020); V. Venkatesh et al. (2012). The availability of necessary resources makes it easier for users to access and more confident in using mobile wallets. Finally, the positive effect of affective experience on use behaviour was statistically validated. As similar to the finding of Rose et al. (2012), improving behaviour frequency is a typical outcome of affective experience. The empirical study showed that consumers not only appreciate the cognitive experience but also concern about the affective value of using mobile wallet.

5.2 Contribution and implications

Theoretically, the current study contributes to literature relevance regarding factors affecting the intention to use mobile wallets in the Vietnamese context. Firstly, the study incorporates the promotional benefit that is less attractively mentioned in previous studies into the conceptual model. The results not only supported the previous finding of Aydin and Burnaz (2016) that promotional benefit has no direct effect on intention to use but also revealed that the effect of promotional benefit on intention to use is mediated by social influence and compatibility. So far, previous studies have confirmed that social influence and compatibility play important roles in explaining the intention to use mobile wallet (Chawla & Joshi, 2019; S. Singh & Srivastava, 2014). As a supplementary to the previous findings, this study successfully found that social influence and compatibility are critical mediators in the relationship between promotional benefits and intention to use.

Secondly, the study also identified specific variables that have positive effects on actual use behaviour on mobile wallet. The study provides empirical demonstration to show that in addition to intention to use and facilitating condition, affective experience is also an influential construct of use behaviour. Affective experience which was determined to affect consumer behaviour in the online shopping context (Barari et al., 2020) is found to have an important role in predicting the actual use behaviour of the mobile wallet.

Practically, research has revealed several meaningful implications for practitioners.

Firstly, the result indicates that the effect of promotional benefit on intention to use mobile wallet is mediated by social influence and compatibility, which draws meaningful implications in enhancing promotional effectiveness. Correspondingly,
promotion campaigns should be designed to promote positive word of mouth and create awareness about the compatibility with consumer lifestyles.

To begin with, recognizing that promotional benefit positively affects social influence, service providers can be beneficial to offer promotions that give gifts, vouchers, coupons when referring mobile wallets to acquaintances. In addition, because social media is an important communication channel, service providers can also conduct promotion programs, for example, offer gifts, vouchers if people engage or share fan pages on social networks, to encourage suggestions, social interaction on social networks, virtual communities, ... among service users. These kinds of activities are promised to improve the effectiveness of the promotion campaign. Besides, to improve the perception of compatibility, promotional messages can be flexibly varied between “gain” and “non-loss” to suit the regulatory orientation of the customer. In addition, mobile wallet service providers can combine diversifiable forms of promotion, typically as personal promotions and community-oriented promotions (sponsorship) to fit with different extent of user's personal-oriented and social-oriented values.

Secondly, in order to promote intention to use mobile wallet service, social influence and compatibility continue to be important aspects. On the one hand, it is critical to pay attention in order to generate positive word-of-mouth recommendations among consumers. The concentration should be not only onsite but also online. On the other hand, empirical evidence implied that the mobile wallet processes should be designed to be compatible with consumption patterns and cognitive processes to promote the decision to accept the mobile wallet. It is necessary to integrate new functions into a mobile wallet that allows customers to purchase and transact without asking for complex steps, additional equipment, and training. Mobile wallets had better be exciting and build up the consumer's lifestyle image (Chen & Nath, 2008).

Finally, to improve the behaviour frequency of using mobile wallets, service providers should focus on upgrading facilitating condition as well as improving affective experience. Regarding facilitating conditions, technical and information support should be available and easy to find to ensure that the customer can receive assistance when needed. In addition, it is also necessary to be attentive to customer affective experiences.
In order to improve customer experience, the service providers should develop features that increase interactivity and enhance the positive affective experience.

5.3 Limitation and direction for future research

Firstly, problems related to sample size and its characteristics are the main limitations of the study. The research objects are aimed for mobile wallet users in Vietnam. Nonetheless, the number of responses was 182 that is much lower than the number of people using mobile wallets. Also, the majority of respondents are living in Northern Vietnam which may not satisfy the distribution requirement. In addition, there were a few respondents who have a high income to participate in the survey. These discrepancies may affect the experiment’s results. The nature of the study and outbreaks of the COVID 19 pandemic are fundamental difficulties that challenge the collection of a large sample size. Therefore, future studies with a larger sample size of participants who live in various regions could help deliver better results. In addition, comprehensive sample demographic analysis and data collection would allow more control variables, increasing the reliability of research results.

In addition, there are limitations to the questionnaire of this study, possibly the common method variance. However, the potential is attempted to minimize by applying measurement items to variables from highly cited sources. The scale item to measure behaviour frequency developed by the author also meets the reliability and validity requirement. Therefore, the results from this study are valid in the framework and context of the surveys that were designed.

Last but not least, the promotional benefit is a familiar concept in marketing and technology adoption, but their integration into mobile wallet research models is limited. The current paper confirms that promotional benefits affect mobile wallet intentions through social influence and compatibility without interpreting how latent constructs influence each other. Furthermore, the relationships between promotional benefit and other factors such as perceived usefulness, attitude, habit are not hypothesized and re-tested in this study. Therefore, it is essential to carry out further qualitative and quantitative studies to profoundly understand how promotion affects mobile wallet adoption as well as to verify the relationship between promotional benefits and other constructs.
5.4 Conclusion

The results represented above show that the empirical study has successfully achieved the objectives and possibly answer the research questions. The paper has attempted to formulate a theoretical framework to study the intention to use mobile wallets and applied the PLS-SEM method to analyse and test the developed hypotheses. The study has obtained the following results:

First, promotional benefit is found to have no impact on intention to use mobile wallet. Nevertheless, the effect of promotional benefit on intention to use mobile wallet is mediated by social influence and compatibility. Second, out of three factors, compatibility is found to be the strongest factor that affects intentions to use mobile wallets. Compatibility also substantially impact on social influence. Third, the intention to use has a positive and strong impact on the behaviour frequency of using mobile wallets. Besides, facilitating and affective experience are identified to positively affect use behaviour.

The above findings contribute to help practitioners to improve consumer acceptance of the mobile wallet. They could adjust promotion campaigns to be compatible with consumer lifestyles as well as encourage suggestions, social interaction and positive word-of-mouth to improve the consumer incentive to adopt mobile wallet. In addition, due to the strong effect of compatibility on mobile wallet adoption, mobile wallet should be designed to be consistent with consumption patterns and cognitive processes. Practitioners need also to take care of consumer affective experience and ensure the availability of support channels to help consumers to deal with their trouble relating to mobile wallets.


50


Tu, N. V. (2019). Factors Influencing Consumers' Intention to Adopt Mobile Wallet in Ho Chi Minh City.


doi:http://dx.doi.org/10.1108/JIBR-10-2015-0112


Online survey

Introduction

Dear Sir/madam,

My name is Nguyen Thi Ha, and I am a student at Vietnam Japan University, National University, studying Business Administration. I'm currently conducting a survey to determine the intention to use a mobile wallet service.

I implore you to take a few moments (approximately 5 minutes) to complete the following survey honestly and accurately. All information you provide will be kept confidential and used only for research purposes.

I sincerely thank you for your precious support/cooperation!

Part 1: Screening question

In this study, mobile wallet is a service integrated into applications installed on smartphones or tablet. Mobile wallet is activated when a user links a bank account with a mobile wallet account and deposits money into the wallet. Users can make online transactions such as paying their energy bill, water bill, tuition fee, top-up, buying tickets, and making payments on e-commerce platforms with only a smartphone and wifi.

1. Have you ever heard/known mobile wallet service?
   □ Yes (continue)
   □ No (stop)

2. Have you ever used a mobile wallet service?
   □ I am using and I intend to continue using in the future (continue)
   □ I have never used mobile wallet (stop)
   □ I have used but currently not used anymore (stop)
Part 2: Demographic information

1. Your gender
   □ Male
   □ Female
   □ Other

2. Your age
   □ Under 18
   □ 18-22
   □ 23-29
   □ 30-39
   □ 40-49
   □ ≥ 50

3. Your monthly income
   □ Under 5 million
   □ 5-12 million
   □ 13-20 million
   □ Over 20 million

4. Living location
   □ Northern part of Vietnam
   □ Middle part of Vietnam
   □ Southern part of Vietnam
5. Your education degree

- High school
- Undergraduate
- Post graduate
- Other

6. Your occupation

- Employee
- Student
- Self Employed
- Other

7. How many mobile wallet services are you using?

- 1
- 2
- 3
- More than 3

8. What kinds of mobile wallet are you using most frequently?

- Momo
- Zalo Pay
- Moca
- Airpay
- Other
9. How long have you been using mobile wallet?

- Under 6 months
- 6 months – 1 year
- 1 year - 3 years
- 3– 5 years
- More than 5 years.

**Part 3:**
Please choose to what extent you agree with following statements:

(1). Strongly Disagree
(2). Disagree
(3). Somewhat disagree
(4). Neutral
(5). Somewhat agree
(6). Agree
(7). Strongly Agree

<table>
<thead>
<tr>
<th>Statements</th>
<th>Agreement level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Using mobile wallet is appropriate with my daily consumption patterns</td>
<td></td>
</tr>
<tr>
<td>(purchasing online goods and services, purchasing goods at the traditional</td>
<td></td>
</tr>
<tr>
<td>market, supermarket, convenience stores, bill payments, ...)</td>
<td></td>
</tr>
<tr>
<td>2 I have resource necessary to use mobile wallet (smartphone, banking</td>
<td></td>
</tr>
<tr>
<td>account, mobile app…)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Statements</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------------------------</td>
</tr>
<tr>
<td>3</td>
<td>If no promotions were offered, I would not (have) downloaded mobile wallet.</td>
</tr>
<tr>
<td>4</td>
<td>My family members who are using mobile wallet (parents, siblings, wife, husband, relatives) suggest that I should use mobile wallet.</td>
</tr>
<tr>
<td>5</td>
<td>Using mobile wallet is compatible with my lifestyle.</td>
</tr>
<tr>
<td>6</td>
<td>Groups that I interact with on social media suggest I use mobile wallets.</td>
</tr>
<tr>
<td>7</td>
<td>I intend to continue using mobile wallet in my daily life.</td>
</tr>
<tr>
<td>8</td>
<td>I have many fun experiences when using mobile wallet.</td>
</tr>
<tr>
<td>9</td>
<td>I have knowledge necessary to use mobile wallet (user manual, terms and conditions of mobile wallet users and service providers, ...).</td>
</tr>
<tr>
<td>10</td>
<td>Using mobile wallet can be accepted by merchants as well as other payment methods (Example: cash, debit or credit card).</td>
</tr>
<tr>
<td>11</td>
<td>I use mobile wallet because of the promotional offers</td>
</tr>
<tr>
<td>12</td>
<td>When I see people around me using mobile wallets, I would like to use it.</td>
</tr>
<tr>
<td>13</td>
<td>I have many fun experiences when using mobile wallet.</td>
</tr>
<tr>
<td>Statements</td>
<td>Agreement level</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>14  I plan to continue to use mobile wallet more frequently.</td>
<td></td>
</tr>
<tr>
<td>15  Support of an individual or service is available when problems are</td>
<td></td>
</tr>
<tr>
<td>encountered with mobile wallet services.</td>
<td></td>
</tr>
<tr>
<td>16  I gain benefit from the promotional offers when using mobile wallet.</td>
<td></td>
</tr>
<tr>
<td>17  I am very delightful when experiencing the mobile wallet service.</td>
<td></td>
</tr>
<tr>
<td>18  People close to me who are using mobile wallet (my peer, friends,</td>
<td></td>
</tr>
<tr>
<td>colleague, acquaintances...) recommend me to use mobile wallet.</td>
<td></td>
</tr>
<tr>
<td>19  Mobile wallet services are compatible with other systems I use (ex:</td>
<td></td>
</tr>
<tr>
<td>banking service, food delivery apps, car-order apps, ...)</td>
<td></td>
</tr>
<tr>
<td>20  Using mobile wallet is compatible with my working style.</td>
<td></td>
</tr>
<tr>
<td>21  I am very enjoyable when experiencing mobile wallet service.</td>
<td></td>
</tr>
</tbody>
</table>

Please select the frequency of using mobile wallets app in smartphone for the following activities. Scale levels are rated from 1 to 5, in which:

(1). Seldom (0-10% of total transaction)

(2). Occasionally (10-30% of total transactions)

(3). Often (30-50% total transactions)
(4). Frequently (50-70% total transactions)

(5). Always (>70% of total transactions)

<table>
<thead>
<tr>
<th></th>
<th>Statements</th>
<th>Agreement level</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>I am frequently using mobile wallet to make payments for purchasing online</td>
<td></td>
</tr>
<tr>
<td></td>
<td>goods and services (shopping on e-commerce website, ordering food, booking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>cars, ...)</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>I am frequently using mobile wallet to make bill payments (electricity,</td>
<td></td>
</tr>
<tr>
<td></td>
<td>water, internet, top-up, ...)</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>I am frequently using mobile wallet to make payments at stores (convenience</td>
<td></td>
</tr>
<tr>
<td></td>
<td>stores, restaurants, supermarkets, petrol stations, ...)</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>I am frequently using mobile wallet to transfer money.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>I am frequently using mobile wallet to buy movies ticket, airline tickets</td>
<td></td>
</tr>
<tr>
<td></td>
<td>and hotel reservations.</td>
<td></td>
</tr>
</tbody>
</table>
Giới thiệu

Xin chào anh/chị,

Tôi tên là Nguyễn Thị Hà - học viên chương trình Quản trị Kinh doanh, Đại học Việt Nhật - Đại học Quốc Gia Hà Nội. Hiện tại, tôi đang thực hiện một cuộc khảo sát tìm hiểu về ý định sử dụng dịch vụ vi dien từ trên di động.

Do vậy, tôi rất mong anh/chị dành thời gian (khoảng 5 phút) trả lời bản khảo sát dưới đây một cách trung thực và chính xác nhất. Mọi thông tin anh/chị cung cấp sẽ được bảo mật và chỉ dùng cho mục đích nghiên cứu.

Tôi xin chân thành cảm ơn sự hỗ trợ/ hợp tác quý báu của anh/chị!

Phần 1: Câu hỏi sàng lọc

Trong nghiên cứu này, vi dien từ trên di động (từ đây sẽ gọi là vi dien từ) là dịch vụ được tích hợp trong các ứng dụng cái đặt trên điện thoại thông minh hoặc máy tính bảng. Khi người dùng kết nối tài khoản ngân hàng và vi dien từ trên di động, gửi tiền vào ví, vi dien từ sẽ được kích hoạt. Chỉ cần một chiếc điện thoại thông minh có kết nối internet, người dùng có thể thực hiện các giao dịch thanh toán trực tuyến như hòa đơn tiền điện, tiền nước, học phí, nạp tiền vào xem phim, thanh toán trên các nền tảng thương mại điện tử một cách nhanh chóng, tiện lợi và an toàn.

Vui lòng trả lời những câu hỏi dưới đây:

1. Bạn đã bao giờ được nghe nói/ biết đến vi dien từ chưa?

☐ Rồi (Tiếp tục khảo sát)

☐ Chưa (Dừng khảo sát)

2. Bạn đã từng dùng với vi dien từ chưa?

☐ Tôi đang sử dụng và có kế hoạch tiếp tục sử dụng vi dien từ trong tương lai. (Tiếp tục khảo sát)

☐ Tôi chưa bao giờ dùng vi dien từ (Dừng khảo sát)
Tôi đã ngưng sử dụng ví điện tử và không có ý định tái sử dụng trong tương lai. (Dùng khảo sát)

Phần 2: Thông tin cá nhân

1. Giới tính
   ☐ Nam
   ☐ Nữ
   ☐ Khác

2. Độ tuổi
   ☐ Dưới 18 tuổi
   ☐ Từ 18-23
   ☐ Từ 23-29
   ☐ Từ 30-39
   ☐ Từ 40-49
   ☐ Từ 50 tuổi trở lên

3. Nghề nghiệp
   ☐ Học sinh/ sinh viên/ học viên
   ☐ Nhân viên văn phòng
   ☐ Tự kinh doanh
   ☐ Khác

4. Trình độ học vấn
   ☐ Phổ thông
   ☐ Đại học
5. Thu nhập hàng tháng

- Düới 5 triệu đồng
- Từ 5-12 triệu đồng
- Từ 13 -20 triệu đồng
- Trên 20 triệu đồng

6. Nơi ở hiện nay

- Miền Bắc Việt Nam
- Miền Trung Việt Nam
- Miền Nam Việt Nam

7. Bạn đang sử dụng bao nhiêu dịch vụ điện tử?

- 1 vi điện tử
- 2 vi điện tử
- 3 vi điện tử
- Nhiều hơn 3 vi điện tử

8. Bạn đang sử dụng vi điện tử nào thường xuyên nhất?

- Momo
- Zalo Pay
- MoCa
- Airpay
- Khác
9. Bạn đã sử dụng dịch vụ vị điện từ bao lâu rồi?

☐ Dưới 6 tháng

☐ 6 tháng đến 1 năm

☐ 1 năm đến 3 năm

☐ 3 năm đến 5 năm

☐ Trên 5 năm

Phần 3:

Vui lòng lựa chọn mức độ đồng ý với các mệnh đề dưới đây. Các mức độ được đánh giá theo thang điểm từ 1 đến 7.

(1). Rất không đồng ý

(2). Không đồng ý

(3). Có phần không đồng ý

(4). Trung lập

(5). Có phần đồng ý

(6). Đồng ý

(7). Rất đồng ý

<table>
<thead>
<tr>
<th>STT</th>
<th>Nhấn định</th>
<th>Cấp độ đánh giá</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sử dụng vị điện từ thích hợp với phòng cách tiêu dùng hàng ngày của tôi. (mua hàng hóa và dịch vụ trực tuyến, mua hàng tại chợ truyền thống, siêu thị, các điểm bán lẻ, extract tiền lợi, thanh toán hóa đơn…)</td>
<td>1  2  3  4  5  6  7</td>
</tr>
<tr>
<td>STT</td>
<td>Nhân định</td>
<td>Cấp độ đánh giá</td>
</tr>
<tr>
<td>-----</td>
<td>------------------------------------------------------------------------------------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>2</td>
<td>Tội có các nguồn lực cần thiết để sử dụng ví điện tử (điện thoại thông minh, tài khoản ngân hàng, app điện thoại...)</td>
<td>1 2 3 4 5 6 7</td>
</tr>
<tr>
<td>3</td>
<td>Tội sẽ không tải app và sử dụng ví điện tử nếu không nhận được khuyến mãi.</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Các thành viên trong gia đình - những người dùng sử dụng ví điện tử (bố mẹ, anh chị em, vợ, chồng, họ hàng, ...) gọi ý tôi nên sử dụng ví điện tử.</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Sử dụng ví điện tử thích hợp với phong cách sống của tôi.</td>
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<td>6</td>
<td>Các hội nhóm mà tôi thường xuyên tương tác trên mạng xã hội gọi ý tôi nên sử dụng ví điện tử.</td>
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<td>7</td>
<td>Tội dự định sẽ tiếp tục sử dụng ví điện tử trong cuộc sống hàng ngày của mình.</td>
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<td>8</td>
<td>Tội có nhiều trải nghiệm vui vẻ khi sử dụng ví điện tử.</td>
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<td>9</td>
<td>Tội có các thông tin cần thiết để sử dụng ví điện tử. (hướng dẫn sử dụng ví điện tử, các điều khoản quy định quyền và và nghĩa vụ của người sử dụng ví điện tử và nhà cung cấp dịch vụ ví điện tử, ...)</td>
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<td>10</td>
<td>Sử dụng ví điện tử được những người bán chấp nhận giống như các phương thức thanh toán khác (ví dụ: tiền mặt, thẻ ATM, thẻ tín dụng, ...).</td>
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<td>11</td>
<td>Tội sử dụng ví điện tử vì có nhiều khuyến mãi.</td>
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<td>12</td>
<td>Tội thấy những người xung quanh tôi sử dụng ví điện tử nên muốn sử dụng dịch vụ này.</td>
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<td>STT</td>
<td>Nhấn định</td>
<td>Cấp độ đánh giá</td>
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<td>13</td>
<td>Tôi có nhiều trải nghiệm thú vị khi sử dụng ví điện tử.</td>
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<td>14</td>
<td>Tôi sẽ tiếp tục sử dụng ví điện tử thường xuyên hơn trong tương lai.</td>
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<td>15</td>
<td>Các cá nhân và dịch vụ hỗ trợ luôn sẵn sàng giúp đỡ khi tôi gặp vấn đề với ví điện tử.</td>
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<td>16</td>
<td>Tôi được hưởng lợi từ các khuyến mãi khi sử dụng ví điện tử.</td>
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<td>17</td>
<td>Tôi thấy rất hài lòng (thích thú) khi trải nghiệm dịch vụ ví điện tử.</td>
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<td>18</td>
<td>Những người thân thiết với tôi - những người đang sử dụng ví điện tử (người cùng lựa tuổi, bạn bè, đồng nghiệp, người quen, …) khuyến tôi sử dụng ví điện tử.</td>
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<td>19</td>
<td>Dịch vụ ví điện tử tương thích với các hệ thống khác mà tôi đang sử dụng (ví dụ: các dịch vụ của ngân hàng, app đặt xe, app đặt đồ ăn, …)</td>
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<td>20</td>
<td>Sử dụng ví điện tử phù hợp với phong cách làm việc của tôi.</td>
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<td>21</td>
<td>Tôi cảm thấy rất thoải mái khi trải nghiệm dịch vụ ví điện tử.</td>
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</table>

Vui lòng lựa chọn tần suất sử dụng ứng dụng ví điện tử trên điện thoại thông minh trong các hoạt động sau.

Các mức độ được đánh giá theo thang điểm từ 1 đến 5, trong đó:

(1). Hiểm khi (0-10% trên tổng số giao dịch)
(2). Thịnh thường (10-30% trên tổng số giao dịch)

(3). Bình thường (30-50% trên tổng số giao dịch)

(4). Thương xuyên (50-70% trên tổng số giao dịch)

(5). Rất thương xuyên (Trên 70% trên tổng số giao dịch).

<table>
<thead>
<tr>
<th>STT</th>
<th>Nhận định</th>
<th>Cấp độ đánh giá</th>
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<tbody>
<tr>
<td>1</td>
<td>Tối thường xuyên sử dụng ví điện tử để thanh toán khi mua hàng hóa và dịch vụ trực tuyến (mua sắm trên các trang thương mại điện tử, đặt đồ ăn, đặt xe, ...)</td>
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<td>2</td>
<td>Tối thường xuyên sử dụng ví điện tử để thanh toán hóa đơn. (diễn, nước, internet, nạp tiền, ...)</td>
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<td>3</td>
<td>Tối thường xuyên sử dụng ví điện tử để thanh toán tại các cửa hàng (cửa hàng tiền ảo, nhà hàng, siêu thị, thẩm mỹ đầu...)</td>
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<tr>
<td>4</td>
<td>Tối thường xuyên sử dụng ví điện tử để chuyển tiền.</td>
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<td>5</td>
<td>Tối thường xuyên sử dụng ví điện tử để mua vé xem phim, vé máy bay và đặt phòng khách sạn.</td>
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</table>