VAASAN AMMATTIKORKEAKOULU
caUNIVERSITY OF APPLIED SCIENCES

Thuy Nguyen

# FACTORS AFFECTING VIETNAMESE PEOPLE'S INTENTION TO USE E-WALLET

Case: MOMO Vietnam

International Business
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VAASAN AMMATTIKORKEAKOULU
UNIVERSITY OF APPLIED SCIENCES
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## ABSTRACT

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| Author | Thuy Nguyen |
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E-wallets flourish in the Vietnamese e-payment market, which is highly digitized and has a sizable customer base. To gain market share, banks and new competitors are fierce competitors for e-wallet providers. The study aimed to examine the factors influencing Vietnamese customers' intentions to use the MOMO e-wallet.

The sample size consists of 138 MOMO e-wallet users. The study was carried out using the quantitative research method. The conceptual research framework is the theoretical model based on the Technology Acceptance Model and the Unified Theory of Acceptance and Use of Technology on mobile wallet technology. In addition, the model consists of two external elements, which are mobility and convenience. The hypotheses are formed to evaluate the impact of the factors. Five elements, including perceived usefulness (PU), perceived ease of use (PEU), social influence (SI), mobility (MOB), and convenience (CON), impact a consumer's intention to utilize MOMO electronic payment, as shown by the study's results. In order to better fulfill customers' demands and accelerate the growth of the electronic payment sector in Vietnam, practical implications and recommendations for the MOMO e-wallet have been examined.

From the result, researcher gives recommendations for intermediary payment service providers and regulators to further promote the trend of digital payment in Vietnam in the context of industry 4.0.

**Keywords** MOMO, E-wallet, behavioral intention

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Sincerely,

Thuy Nguyen

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**ABBREVIATIONS**

| | |
|---|---|
| TAM | Technology Acceptance Model |
| UTAUT | Unified Theory of Acceptance and Use of Technology |
| PU | Perceived Usefulness |
| PEU | Perceived Ease of Use |
| TRA | Theory of Reasoned Action |
| TPB | Theory of Planned Behavior |
| DOI | Diffusion of Innovation |
| MM | Motivational Model |
| MPCU | Model of PC Utilization |
| SCT | Social Cognitive Theory |
| PE | Performance Expectancy |
| EE | Effort Expectancy |
| SI | Social Influence |
| FC | Facilitating Conditions |
| EPOS | Electronic Point of Sale |
| MOB | Mobility |
| CON | Convenience |
| EFA | Exploratory Factor Analysis |

# 1 INTRODUCTION

## 1.1 Research background

Industrial Revolution 4.0 has altered the economic landscape by utilizing modern technologies to facilitate transactions. This revolution significantly impacts consumer behavior as customers transfer from a manual exchange model to an online one. Since then, many electronic transaction facilities, for example e-commerce, have evolved, offering both online shopping and digital-based financial services (Fintech), progressively gaining traction in many nations across the globe (Chandra & Bagdi, 2021; Gokilavani et al., 2018; Kumar & Abdin, 2021). The exponential expansion of electronic payment needs highlights the Internet's contributions as a significant commerce route and tremendously exciting potential power, which has yet to be harnessed entirely. Previously, consumers were unfamiliar with the Internet and used it to collect information. On the other hand, consumers are rapidly accepting this channel for buying and for transactions. Increasing consumer demand for mobile payment has necessitated the development of a new payment method that makes transactions more practical and easier (Ondrus & Pigneur, 2006).

The WorldBank (2020) survey found that electronic transactions have become more popular as payment method in many countries worldwide. Over 90 percent of all daily financial transactions are person-to-person exchanges. In ASEAN, non-cash payment methods are also becoming more prevalent. A survey conducted by Bain & Company in collaboration with Facebook surveyed around 16,500 digital users in six ASEAN countries (Vietnam, the Philippines, Thailand, Singapore, and Malaysia). According to the research (Facebook & Bain&Company, 2020), cash is still widely used in Southeast Asia, although the percentage of individuals who prefer to pay with money has decreased from 40 percent in 2019 to 34 % in 2020.

Vietnam is a promising economy with moderate growth and fast digital development. Following the global trend of cashless transactions, Vietnam aggressively promotes cashless transactions. More than half of the population in

Vietnam possesses a mobile device (Morgan, 2019) which makes mobile payment a viable alternative to the use of physical currency. In recent years, mobile payments have developed remarkably. E-Wallets are increasingly becoming a vital tool for customers in Vietnam, where non-cash payment options, such as bank cards, Internet banking, and mobile payment, are gaining popularity. There are 23 varieties of e-wallets offered by 26 medium businesses nationwide. The State Bank of Vietnam regulates the financial technology industry; different electronic wallets cater to several types of users; nonetheless, they all have the unique feature of not charging users any transaction fees. Moreover, the variety of e-wallets is growing. According to the State Bank of Vietnam, as of December 31, 2018, 4.24 million verified mobile wallets were linked to bank accounts (VNBA, 2019). Mobile wallet transactions in 2017 were worth more than VND53 trillion (US$2.2 billion), a 64% increase over 2016 (Standard. Chartered, 2019). However, compared to other modes of payment, the volume of e-wallet transactions in Vietnam needs to be higher.

The tremendous expansion of mobile wallets in recent years may be linked to consumers' widespread acceptance of these products. Using a mobile wallet provides numerous benefits to consumers, including high security, protection of the rights of both sellers and purchasers, and the ability to make payments quickly and easily. In addition, mobile wallet providers often conduct various enticing campaigns to drive payment volume by delivering gifts, rebates, coupons, or free transactions. This is done as part of the competition to win market share (T. Anh, 2021).

AirPay, developed by Vietnam E-Sports Development Joint Stock Company, and Viet Wallet, created by Lien Viet Post Bank, are just two examples of the e-wallet apps that Vietnamese companies want to spend millions of dollars on to compete in this market. MOMO e-wallet has gained popularity and has over 20 million users in Vietnam, making it stand out from other payment methods (Vietnam E-commerce Association, 2020).

There are presently few studies studying the elements influencing the intention to use e-wallets in Vietnam. The research on e-wallets in Vietnam is mostly fragmented. Despite the findings, even though variables differ from analysis to study, some characteristics stand out in more investigations. Controversy surrounds their impact. According to the authors' current understanding, the number of researches in Vietnam examining the variables influencing the desire to use e-wallets is still limited and has not revealed many ground-breaking findings. This deficiency necessitates further empirical investigations to augment the results and test for the influence of new elements on this aim.

## 1.2 Objectives and research questions

Many practitioners and researchers are interested in studying users' intention to use electronic wallets by determining the factors that influence their behavior. Due to its advantages, financial institutions, payment service providers, trusted third parties, and system software and supporting service providers can better understand these essential variables (Dahlberg et al., 2003; Kim et al., 2010). In addition, various demographics of customers may arrive at divergent conclusions about the benefits of M-payment and the following employment of advanced methods of monetary transaction. Realizing the behavior of various user-group levels is essential, yet there needs to be more motivated to address a gap in research at this level.

This study was conducted to analyze the variables influencing consumers' intent to use MOMO's electronic payment service in Vietnam, investigate the demand for using MOMO's e-wallet, and determine the elements and their effects on each customer's intention to use. As such, it provides the foundation for companies providing e-wallet services in general and Online Mobile Services Joint Stock Company (the firm behind the MOMO e-wallet app) to understand the e-wallet market and provide appropriate solutions to aid in the long-term growth of Vietnam's electronic payment sector. To achieve these goals, the author will research to provide answers to the following questions:

- What factors affect customer behavioral intentions toward MOMO e-wallet in Vietnam?
- How do these factors influence the intention to use MOMO e-wallet in Vietnam?

### 1.3 MOMO in Vietnam

With support from high-profile investors such as Warburg Pincus, Standard Chartered, and Goldman Sachs, Vietnam's digital wallet Mobile Money (MOMO), has overgrown since its introduction in 2013. M-Service (MOMO, 2020) claims that MOMO e-wallet is a secure, convenient, and user-friendly mobile financial app compatible with iOS and Android. MOMO e-wallet, a mobile payment system, helps the cashless economy grow. It allows users to pay for a wide variety of goods and services with only a few taps of their finger, including prepaid cell top-ups, energy bills, internet, consumer loans, movie and plane tickets. The payment mechanism for online commerce that is used in Vietnam is shown in the following figure.

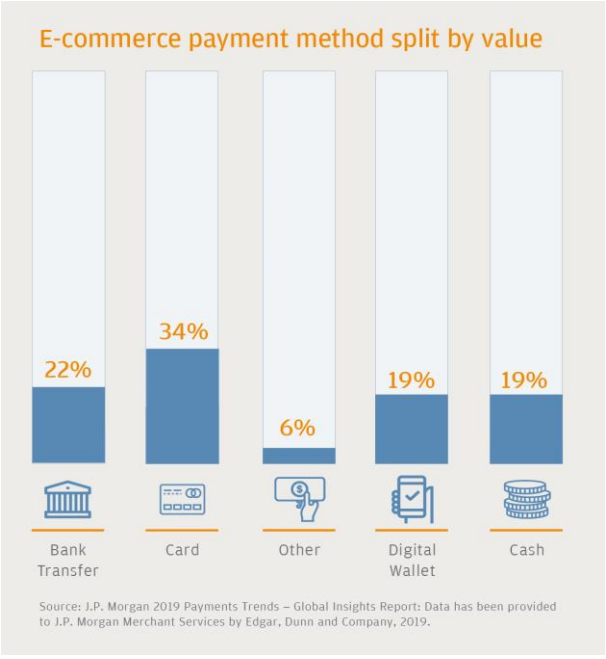


**Figure 1.** E-Commerce Payment Trends: Vietnam (Morgan, 2019)

MOMO is the undisputed leader in the Vietnamese mobile wallet market, having amassed over 13 million members by 2020. It has a stellar reputation for promptness and dependability as a payment method. MOMO has earned the confidence of a sizable portion of the mobile user base because of its dedication to strengthening its security measures. MOMO is honored to have achieved the highest PCI DSS (Payment Card Industry Data Security Standard) certification for service providers before any other IT firm in Vietnam.

MOMO has risen to prominence as a significant mobile payment service provider in the wake of the immense success of Asian IT giants, notably Tencent's WeChat, Indonesia's Go-Jek, and Grab from Singapore. Standard Chartered, JCB, MasterCard, and Visa are some of the prominent international payment institutions with whom the firm has partnered. There are over 10,000 businesses in varied industries, including e-commerce, transportation, entertainment, utilities, and consumer buying, working with MOMO. Some accomplishments that the MOMO team has successfully attained throughout time include the following:

- Highest rank software application in Apple Store Vietnam (2 times) (2019)
- Top FinTech100 according to KMPG 2018
- Top 3 financial applications for Android 2014
- Best Mobile Product of The Year 2012, 2013, 2014

Banks readily link to MOMO due to its simplicity and robust ecosystem. By the end of October 2019, MOMO will be a direct affiliate partner of 16 banks and will have 16 million customers in Vietnam. MOMO is now the electronic wallet with the highest and most famous market share in Vietnam, based on subscriber statistics and declared market share by e-wallet enterprises. In 2018, MOMO's transaction volume more than quadrupled. Additionally, MOMO has surpassed 200 million transactions per year with a total payment value of $1.2 billion yearly (Thuy Dieu, 2019).

Mobile users have given MOMO positive reviews for its safety features and user interface/user experience. With over 80% of the population not having a bank account, cash handling dominating the financial sector, and those who want to use e-wallets somehow finding it inexpensive to use and choosing Apple Wallet or Samsung Pay, MOMO still shows to be the astonishing expert in the long term as the most used electronic wallet in Vietnam. Differentiating it from other banking programs is the constant effort to improve the user experience (UX design). The company's goal is to completely transform the way people in Vietnam do business by widely adopting cashless payment methods. While this goal may seem lofty initially, there is a strong indication that MOMO will achieve it soon (Vietnam, 2019). MOMO is the only unit that offers an application for its agents and transaction points. This application enables agents and transaction points to manage business operations better.

### 1.4 Research structure

In the first chapter of a thesis paper, the fundamentals of the study are presented. These fundamentals include the research background in which the author will present the reason for choosing this topic. The research objectives and research questions are proposed to serve the study. Regarding the case company investigated in this study, the author presents an overview of MOMO in Vietnam, covering MOMO's entry into the Vietnamese market. From this point, this chapter will clarify how MOMO achieves Vietnamese users' intentions in reality. The author conducted the structure and research scope of the article to inform readers about available chapters in this article and the timeline to complete the study.

The next chapter introduces the literature review. Firstly, the author reveals the definition of e-wallets to inform readers about digital wallet apps, e-wallet categories, and digital wallet enterprises in Vietnam. Besides, the author also presents the challenges digital wallet providers face in this industry. This chapter also discusses the emergence of mobile wallets during the COVID-19 outbreak in this nation. In the following part of the second chapter, the author explains the

prior research's theoretical relevance and builds the hypotheses and conceptual model for future testing.

After establishing the theoretical foundations, the author describes the entire research approach in chapter 3 to achieve the targeted goals. In particular, the whole empirical investigation is presented in detail, from selecting the appropriate methodology through the planning and executing data collection to its analysis. A pilot test will be covered in this chapter to build reliability. Additionally, the purpose of this part is to evaluate the research procedure, including the validity and reliability of the results.

Chapter 4 outlines the study's findings and critical results, which investigates the variables determining Vietnamese people's intention to use e-wallets and how these factors affect their behaviors. The implications are discussed in this section.

The last chapter presents findings and conclusions in response to the study's questions. In addition, limitations and suggestions for further study are presented in this concluding section.

## 1.5 Research scope

Place scope: The research was done in the Northern, Central, and Southern areas of Vietnam.

Time scope: The research was done between September 5$^{th}$ and November 3$^{rd,}$ 2022.

# 2 LITERATURE REVIEW

## 2.1 Introduction to E-Wallet

### 2.1.1 Definition of E-Wallet

E-Wallets, or digital wallets, are mobile applications that allow users to make cashless in-store and online purchases using their smartphone or wearable device, such as a wristwatch, instead of carrying physical credit or debit cards in addition to storing identity papers or e-vouchers, tickets, flight cards, and hotel keys. According to Aji & Adawiyah (2021), an E-wallet is a form of an electronic card that may be used for making transactions online using a computer or a smartphone. This definition of an E-wallet comes from the authors of the study. It functions similarly to a credit or debit card. For transactions, an e-wallet must be associated with a valid bank account (Kumar et al., 2019). Typically, e-wallets exist as applications on cell phones, but they may also exist as software on the primary display window of a personal computer. In mobile wallets, consumers may save their personal and financial information, shopping history, and payment history and utilize their payment information for different transactions such as bill payments, money transfers, shopping payments, and booking of tickets. Many mobile wallets now employ two-factor authentication, verifying the user's identity in two diverse ways. E-Wallets replace conventional cards and enable value-added services to be added. Depending on its owner, the mobile app is the most popular form of an e-wallet owing to its flexibility and mobility. Compared to utilizing a conventional wallet system, electronic wallets are not only more practical but also safer. Users may avoid carrying cash-filled wallets, which are targets for thieves. Users of electronic wallets must download applications developed by banks or reputable third parties to access a particular service or make transactions that satisfy their requirements.

The ecosystem for e-wallet services consists of three primary components: Service provider network, User, and Connecting technology platform in which the client (consumer) is always seen as the central focus. Wallet service providers will

collaborate with the bank to manage the customer's funds. As a result of this partnership, the bank will spend less time managing payment transactions from the customer's card, as the e-wallet service provider will handle these transactions.

### 2.1.2 E-Wallet applications in Vietnam

The Ministry of Information and Communications reports that as of the end of November 2014, there were 80 million mobile users in Vietnam. A typical Vietnamese citizen owns one mobile phone. Mobile phone usage is widespread across all demographics, from the youngest to the oldest, and is not limited to any region or population density. Since 2010, 50 banks have been active in retail banking in Vietnam. As a result, the mobile payment service has tremendous potential in Vietnam.

According to IMARC (International Market Analysis Research and Consulting), Vietnam's e-wallet market expanded significantly between 2015 and 2020, and this trend is projected to continue over the following five years. There were 32 non-banking entities in Vietnam at year's end that had received approval from the State Bank to provide e-wallet services. Most of them facilitate monetary transactions digitally, including e-wallet services, online payment gateway assistance, payment collecting and processing, and money transfer. More than 12 million Vietnamese people use MOMO, making it the country's most popular e-wallet. MOMO also has more than 10,000 partners and more than 100,000 places of sale. It has expanded its network of distribution outlets and forged partnerships with financial institutions to attract additional clients. Both international and local businesses in Vietnam are scrambling to get a piece of the growing e-wallet industry. MOMO, VNPayQR, NextPay, Payoo, and Pay365 are just a few financial technology solutions released recently. Bank Plus, a joint venture between Viettel, a telecom powerhouse, and MBBank; Timo, from VPBank; and MEED, from Maritime Bank, are some examples of the products provided by domestic banks. VNPT Pay, ViettelPay, VTC Pay, and FPT Pay are all new services from the

telecommunications companies Vinaphone, Viettel, VTC, and FPT. Even messaging service provider Zalo has released its payment system, ZaloPay. Zalo, a late entrant to the market, persuaded shop partners to accept its ZaloPay E-wallet by pointing to the 100 million people already using the Zalo social network. Zalo plans to have 1,000 retail locations by the end of the year, from large malls to little corner boutiques. (Vietnamnet, 2021).

MOMO, Moca, ZaloPay, AirPay, Viettel Pay, and Payoo are the most popular e-wallets in Vietnam. MOMO, Moca, and ZaloPay are advantageous at the cash register. Moca offers to Grab service reservations, AirPay is the electronic wallet with the most users (Shopee), and Payoo is a payment platform for services such as water, electricity, and internet (Vietnamnet, 2021).

### 2.1.3 Development of e-wallet during COVID-19 pandemic

COVID-19 affects the entire world because of the virus's rapid spread, particularly the lockdown scenario; all manufacturing facilities and many bank branches had to temporarily close their operation (Chawla, 2020). It is also pertinent to our subject of how people avoid using cash, which might be another push for the growth in using more electronic wallets or mobile payment systems. This is relevant since the author's topic concerns how people avoid using cash. In the United Kingdom, many shops that offer products and services are attempting to move away from cash transactions. For purchases of less than 40 British pounds, many shops now allow contactless payments through credit or debit cards and mobile payments (Chawla, 2020). In Australia, primary utility retailers encourage consumers to avoid touching EPOS devices using contactless technology instead of physically contacting the machines. Because of its position as a developing nation, Africa has the world's most enormous unbanked population. Initiatives are being taken to transition many financial transactions away from cash and toward mobile money.

The spread Covid-19 epidemic has been devastating, but it has also unintentionally opened new markets for several advanced technical sectors, such as mobile

payment services. During Vietnam's lockdown time, mobile payment opportunities increase when people are confined to their homes. The Vietnamese government has ordered the State Bank of Vietnam to expedite research and increase the usage of mobile payment methods to decrease the number of cash transactions in the country, considering the recent COVID-19 outbreak.

According to Vietnamplus, consumers have shifted their spending habits from traditional to digital channels because COVID-19 imposed contact and travel limitations. Due to the increased number of transactions, e-wallets have increased the scale of their marketing initiatives. According to recent data from the State Bank of Vietnam, e-wallet transactions totaled over 77.7 trillion VND (3.38 billion USD) in the first few months of 2021. Many banks have begun offering this service because of the popularity of e-wallets and the ease with which they can be used to make payments. The cashless payment business is predicted to grow in three to five years. Mobile money and e-wallets will increase the market share of non-cash payments in Vietnam.

### 2.1.4 Challenges

Although e-wallets possess many characteristics to satisfy the demands of current consumers, such as saving time and money, processing payments quickly and easily, and offering several rewards, the development process is fraught with many obstacles.

In addition to a widespread preference for cash payments and a concern about fraud and danger in the payment process, some Vietnamese customers continue to choose cash transactions. Several new electronic wallets have been created in recent years, but none have emerged as the prominent industry leader. These are also the most significant impediments to customers and market growth.

Second, the issue of fraud risk associated with e-wallet payments. This is a significant barrier to the future development of e-wallets. Due to the hazards associated with mobile payment methods, such as loss of funds, theft of personal

information, and fraud, many individuals are hesitant to use them. One factor that dissuades customers from using E-wallets is the possibility of fraud. The worry of being hacked, undergoing a virus attack, or experiencing a data breach is another reason customers feel uncomfortable utilizing this contemporary payment method.

Thirdly, some Vietnamese customers still need to catch up with global technology improvements. They are unfamiliar with and skeptical of new payment methods in general and e-wallets in particular. Although it was created in 2008, the notion of an e-wallet has only been widely recognized and accepted for the last three years. They believe that e-wallets are not a convenient and secure payment method due to their lack of knowledge, which poses various problems such as, "What if a user's phone is hacked?" Is there money in the wallet if the user loses the device? What if the user loses access or gets shut out?

Lastly, there currently needs to be a complete and recognized legal structure for e-wallet payments. In other words, there are no fines or rules governing the legality of e-wallets, their hazards, or the protection of users' assets in the event of a disagreement. In order to attract more customers to use e-wallets, online consumer protection regulations must be strengthened and enforced rigorously.

## 2.2 Technology Acceptance Model (TAM)

Understanding the complexity of human behavior enables researchers in the technology industry to anticipate user behavior toward positive outcomes. Technology Acceptance Model (TAM), established by Davis (1989), has highlighted the effect of factors: perceived ease of use (PEU) and perceived usefulness (PU) of technology, influencing attitudes towards the usage of technology (Davis, 1989). The original foundation of TAM is the psychology theory of reasoned action, which explains the behavior. In addition, TAM used the two predictors of perceived usefulness and perceived ease of use to make decisions (King & He, 2006). Chhonker et al. (2017) and Yousafzai et al. (2007) cite TAM's simplicity and use as reasons for its widespread adoption in technology and informatics-related fields.

The individual's perceived usefulness and ease of use might rise or decrease depending on the external elements that impact the individual. They believe that the intention to use it will bring them more benefits than they think, and the fact that the use of e-wallets is also relatively easy and not too complicated will create a positive attitude for them. When the feeling of usefulness increases, they feel that the intention to use it will bring them more benefits than they think about using digital wallets. A more optimistic outlook will increase the likelihood of intending to utilize wallets.

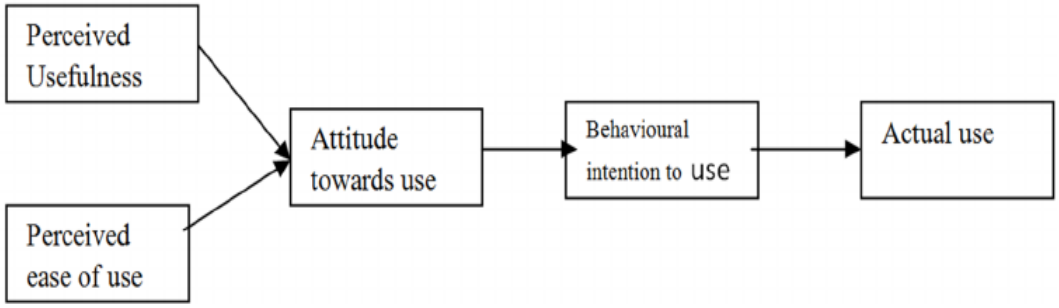


**Figure 2.** Technology Acceptance Model (TAM) (Davis, 1989)

Considering the author's objective, the study on the adoption of digital wallets, the author has summarized the usage of TAM in these research publications. The writer sees how these research studies attempted to utilize other relevant constructs, how they combine original TAM components with other relevant constructs, and what the study's outcome is.

Wong & Mo (2019) researched customer intention to utilize mobile payment in Hong Kong based on TAM. The findings showed that perceived risk, trust, security, and other TAM constructs influenced consumer intention. The findings presented in the study report authored by Shankar, A. & Datta, B. (2018) used the TAM constructs such as PU, PEU, trust, and self-efficacy to see the intention of Indian people to use e-wallets (Shankar & Datta, 2018). The results indicated that all components had a favorable effect on the desire to utilize mobile payment, except for subjective norm and personal innovativeness, which had no significant effect.

Following in the footsteps of Oanh & Uyên (2017), the authors of this study analyzed the factors that influence Vietnamese consumers' decisions to use mobile payment services. The results showed that, among these factors, customers' perceptions of trust and pleasure were the most important. While Oanh & Uyên (2017)'s research does not employ the traditional TAM components, it addresses the gaps in the literature and identifies areas where additional research into moderators and the relationship between intentions and actions are required.

The TAM is a specific model for use in the study of the usage of a system; however, the model can only be applied to a certain kind of technology at a particular point in time. As a result, the correlation between the components in the model is altered. Discrepancies have been found in investigations involving a variety of disciplines and topics. Furthermore, the model does not take into account the environment's restrictions and affects. Two cognitive constructs, perceived usefulness and perceived ease of use, were claimed by (Mathieson, Peacock, and Chin (2001) to be insufficient to give a holistic picture to explain an individual's adoption of the technology. TAM typically ignores the social setting of a new technology's adoption (Shin, 2009).

### 2.3 The Unified Theory of Acceptance and Use of Technology (UTAUT)

Venkatesh developed the Unified Theory of Acceptance and Use of Technology (UTAUT) model to improve the TAM model and investigate customers' intentions to use information systems and their ongoing behavior (Venkatesh et al., 2003). The UTAUT is based on 8 previous theoretical models: the Theory of Reasoned Action (TRA), the Theory of Planned Behavior (TPB), the Technology Acceptance Model (TAM), the Diffusion of Innovation (DOI), Motivational Model (MM), Model of PC Utilization (MPCU), the integration of TPB and TAM, and the Social Cognitive Theory (SCT). Figure 3 shows the UTAUT model, extensively used to test hypotheses with many technological advances because of its ability to explain users' behavioral intentions to adopt new technologies. UTAUT is comprised of

four components' Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC)—that each play a key role as direct determinants of consumer adoption and use behavior.

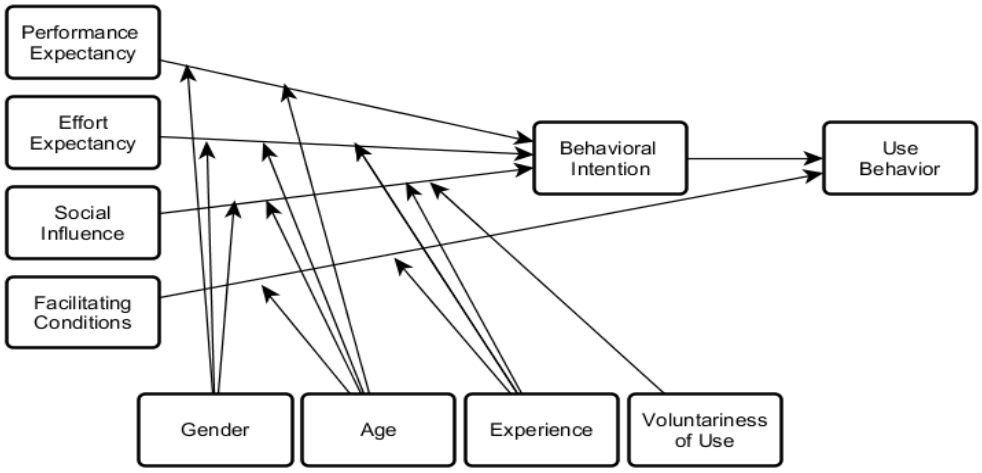


**Figure 3.** The Unified Theory of Acceptance and Use of Technology (UTAUT) (Venkatesh et al., 2003)

Several authors have utilized UTAUT and its variants to explain the appeal of modern information technologies like mobile banking (Bhatiasevi, 2016) and mobile payment systems (Escobar-Rodríguez & Carvajal-Trujillo, 2014; Slade et al., 2015). Notably, the original UTAUT model was developed to anticipate technology acceptance in the setting of an organization. However, critical characteristics linked to the adoption processes of customers were disregarded when the model was developed. Therefore, (Venkatesh, Thong, and Xu (2012) improved the parsimony and robustness of the original UTAUT by extending it as UTAUT2 and introducing seven constructs. These constructs included habit, effort expectancy, hedonic motivation, facilitating condition, performance expectancy, price value, and social influence. Despite being valuable models for expressing plans to incorporate new technology, UTAUT and UTAUT2 have specific problems that need to be addressed. Their most significant deficiency is that they have a fundamental misunderstanding of cultural norms' role in determining whether new information systems are accepted (K. M. R. Yadav, 2016).

Applying the UTAUT theory, Williams et al. (2011) rediscovered several online payment options by putting them through their paces (Slade et al., 2015). As technology adoption is also a central theme in this investigation, drawing on UTAUT as a theoretical framework makes both theoretical and practical sense.

## 2.4 Review of relevant literature and hypothesis development

### 2.4.1 Behavioral intention

According to Ajzen (1991), the intention is a factor used to evaluate the ability to perform a behavior in the future. The intention is a motivating factor; it motivates an individual to be willing to perform the behavior and is influenced by it directly by attitudes, subjective norms, and perceived behavioral control. Behavioral intention is assumed to be an intermediate antecedent of behavior, and research on intention to use is a good predictor of usage behavior (Ajzen, 1991). According to Scheer (2004), intention is a mental state, often with causal force. One's determination, anxiety, and excitement as 'forces' motivate us. There are other characteristics of intention that the mental state of the intention does not have in common. The intention does not have the temporal characteristics that the mental state has or shares the curious context dependence that the intention does. Because mental states work by causality, a person cannot commit to a course of action as we usually do when promising or signing an agreement or contract.

Therefore, the Technology Acceptance Model (TAM) and The Unified Theory of Acceptance and Use of Technology (UTAUT) are two theories that are often used in research that attempt to assess people's intentions regarding the adoption of mobile wallets. Many researchers have elaborated on these theories by adding aspects such as perceived trust, security, cost, and value; alternatively, they have incorporated these aspects into conceptual models that are appropriate to the mobile wallet development situation and the demographic characteristics of users in a particular society (Shaw, 2014; Shin, 2009; Slade et al., 2015).

In general, the findings of this research have significantly contributed to identifying the fundamental characteristics that impact both the desire to use mobile wallets and the actual usage behaviors of those who use them. According to many research findings, behavioral intentions are accountable for a significant amount of the observed behavioral variation (Ajzen, 1991). In addition, the importance of intention as a predictor of action (such as use) is essential for its use as a dependent variable in the context of technological research (Venkatesh et al., 2003). Overall, our choice to utilize behavioral intention to use mobile payment as the dependent variable is related to the theories discussed earlier in this paragraph. The author's study themes are pertinent to TAM and UTAUT; hence, several independent factors are employed to evaluate the provided hypotheses and make assumptions about the research issue; the following section explains those independent variables.

### 2.4.2 Perceived usefulness (PE)

Perceived usefulness is "*the degree to which a person's belief in using a particular system enhances their job performance*" (Davis, 1989; Venkatesh et al., 2003). Previous studies all agree that the more customers perceive the benefits and efficiency of using mobile payments, the more they intend to use mobile payment services.

(Aslam et al., 2017; Chen, 2008; de Sena Abrahão et al., 2016; Hằng et al., 2018). Studies on the behavior of using electronic payment services provided by banks also give equivalent results when the more user's perception of the service's usefulness is optimistic, the more user consumption behavior they have (Dam Thi Phuong Thao, 2015; Le Chau Phu & Dao Duy Huan, 2019). In the present e-wallet industry, where there is fierce rivalry among e-wallet businesses, the more the perceived usefulness by consumers, the more it will attract customers to use since customers choose the goods and services they want.

Thus, familiarity with the benefits that MOMO provides substantially impacts the probability that users will sign up for and utilize the service. More specifically, the

usefulness of the services on MOMO e-wallet is represented in the fact that MOMO e-wallet may recharge their accounts, transfer money, pay bills, and so on simply and expediently. Research conducted in India and Cameroon by Fonchamnyo (2013) using an extended technology acceptance model TAM reveals that perceived utility is one of the critical criteria that has a favorable influence on the adoption of mobile banking apps. The findings of the previous investigations have led the author to the following hypothesis, which refers to as H1:

***H1: Perceived usefulness positively affects behavioral intention to use MOMO e-wallet in Vietnam.***

### 2.4.3 Perceived ease of use (PEU)

According to Davis (1989), "*perceived ease of use is the degree to which a person believes using a particular system is effortless*." ("Technology Acceptance Model by Davis (1989) – 1 library"). A study by Venkatesh et al. (2002) showed that the correlation between perceived ease of use and behavioral intention to use is positive and significant. The ease of use and user-friendliness of web service technology also positively affect perceived usefulness and behavioral intentions (Al-Maroof & Al-Emran, 2018). E-Wallets are increasingly optimizing the registration process and the most convenient way for users to attract users to use the company's services.

Their opinion of its simplicity will influence customers' propensity to utilize MOMO. Using the TAM model, Al-Maroof & Al-Emran (2018) found that students were more likely to use Google classroom technology if they perceived it to be easy. Similarly, Haider et al. (2019) interviewed e-Banking users to identify the factors that influenced their bank online choice, they found that perceived usefulness, ease of use, reliability in technology, and information quality were all important. Theoretically, customers will consider the MOMO e-wallet program user-friendly if they find it simple to pick up, memorize, and use.

For this reason, ease of use is often cited as crucial in determining whether customers would adopt and use a given modern technology. In the context of MOMO's goal of catering to users with varying levels of wealth and education, it is essential to design the app so that it is simple to use and comprehend, no matter the user's background. From this point of view, the author offers the following hypothesis H2 as stated below:

***H2: Perceived ease of use positively affects behavioral intention to use MOMO e-wallet in Vietnam.***

### 2.4.4 Social influence

According to Philip Kotler (2009), customers often consider the advice of their friends, family, co-workers, and other members of their social networks (consumer groups, professional organizations, and other relationships linked with their life) when evaluating their alternatives and making a purchase decision. Social influence is "*the degree to which an individual thinks they should use the new system - in this case, an electronic wallet*" (Venkatesh et al., 2003). Social influence, including influence from family members, has been identified as necessary in behavioral studies (Bolton et al., 2013). One's social circle significantly influences the willingness to try innovative technologies (Sarika & Vasantha, 2019). Bagozzi & Dholakia (2002) added that the environment and online community contribute to the favourable attitude of consumers toward the product. Chaouali et al. (2016) describe the effect of social factors on how consumers perceive using an innovative product via a specialized service. The research hypothesizes that social influence positively impacts views regarding e-wallets and the desire to use them. Social impact motivates consumers to share views and insights and understand their service experience. In previous studies, social influence has shown similar results as it affects users' intentions (Ajzen, 1991; Celuch et al., 2004; Lee et al., 2003; Riemenschneider et al., 2003; Venkatesh & Davis, 2000).

Social influences imposed by significant and prominent persons in a person's surrounding environment have the potential to modify that person's intentions. The individual will attempt to fit themselves as much as possible to the intention to use digital wallets, and vice versa, with the condition that the essential persons in their lives have a favourable attitude toward digital wallets (Teo et al., 2020). Hence, it can be claimed that as the effect of viewpoint towards the usage of digital wallets rises, the chance of one using a digital wallet would also increase (Rahman et al., 2020). Most of the theoretical research, as stated in the study that referred to Cheung & Lee (2010), emphasized that online social technology has been affected and gained customers' attention because of the independent variable of social influence. For instance, Dholakia, Bagozzi, and Pearo (2004) established and experimentally evaluated a virtual community using the social impact variable while doing their study. Hence, the author produced the following hypothesis H3 based on the above statements:

***H3: Social influence positively affects behavioral intention to use MOMO e-wallet in Vietnam.***

### 2.4.5 Mobility

*Mobility* is defined by Kalinic and Marinkovic (2015) as the ability to access service and complete financial transactions at any time, in any location. A mobile commerce service is being created for various mobile devices, and the transfer of information appears to be accomplished via a wireless internet connection, such as Wi-Fi or data. This gives users the benefit of time and location independence, making it possible for them to transmit and receive time-sensitive payment information, the value of which is contingent upon the information's timely application (Wang & Li, 2012). This highlights that consumers will be driven to utilize the mobile wallet if they can begin and complete transactions from anywhere if they have a network connection and their portable devices.

According to another study area, mobile services are an excellent fit for the mobile lifestyle. They provide a method of paying for goods and services in any

circumstance that may arise in one's life. The capacity to move about quickly is one of the most valuable aspects of mobile technology. According to Amberg et al. (2004), one significant benefit of mobile payment services is that they allow customers to utilize the services whenever and whenever they choose, which is an advantage consumer do not have with conventional payment methods. The new mobile payment method is convenient to use regardless of the time or location, making it an excellent complement to the mobile and active lifestyles prevalent today. Customers are given the ability to access the services through a wireless network and a variety of mobile devices, including smartphones (Au & Kauffman, 2008). Customers can buy a product without the need to travel to the stores, which is challenging to do in Vietnam compared to other developed countries; all they need is to be in an area covered by Internet service and a cell phone. In other developed countries, this is challenging to do (Sho, 2004). *Mobile payment* is a service that allows users to access information to finish the payment procedure accurately and effectively at any location, regardless of the counting time (Anckar & D'incau, 2002). This service is used in the electronic commerce industry, which regularly conducts transactions over the wireless Internet. Notably, that the typical person in Vietnam possesses a mobile phone, and that mobile phone use is daily in urban and rural areas. In addition, the use of mobile phones is popular among students in metropolitan areas. As a result, mobility is one of the factors determining whether consumers in Vietnam utilize mobile payment services to pay for the items or services they purchase. As a result, the findings of this research suggest that mobility may affect Vietnamese individuals' behavioral intention to use digital wallets, as hypothesized in the hypothesis H4 below:

***H4: Mobility positively affects behavioral intention to use MOMO e-wallet in Vietnam.***

### 2.4.6 Convenience

According to Sharma & Gutiérrez (2010), *convenience* may be defined as the ease and comfort of usage to achieve real advantages via the use of something driven

by the portability and immediate accessibility. The convenience of mobile phone services may be characterized by quickness, accessibility, availability, and flexibility of time and location. This is in comparison to the conventional payment services that are offered. Customers can use their mobile phones to complete financial transactions, which removes the need for cumbersome payment equipment such as computers and laptops. This makes e-wallet service much more convenient for customers than it is in terms of location and time. In addition, mobile payment systems may facilitate modest transactions, eliminating an additional annoyance for users who do business involving relatively small cash amounts (Luarn & Lin, 2005). In addition to these benefits, electronic payment services offer customers lower transaction costs, another area in which they might benefit (Sho, 2004). Because of the factors discussed above, digital wallet service is an excellent complement to a new habitat since it provides a practical means of conducting financial transactions beneficial to human existence.

According to the findings presented by Sarika & Vasantha (2019), it has been shown that there are considerable disparities in the ease of use of e-wallets and their rate of acceptance. Convenience is an essential aspect, and it genuinely influences the consumer's purchase choice, verified by the finding of (Check et al., 2014)'s research. This finding is the most critical factor when consumers adopt an electronic wallet. The ease with which payments may be made online has contributed to the widespread adoption of online shopping among customers. Howcroft et al. (2002) found that younger customers focus more on convenience and time savings than older consumers do when accepting online banking. According to the study's findings, when consumers make a payment online, they do not put as much strain on their financial resources due to excessive expenditures (Karjaluoto et al., 2002). Consumers who, for example, shell out cash to make purchases online are more likely to keep their spending under control and avoid going over their budget. Therefore, using an electronic wallet to make a payment online is highly handy and helps clients get goods or services much more quickly.

One of the advantages of using mobile computing is convenience; it is one of the aspects that determine the success of mobile payment systems (Xu & Gutiérrez, 2006). It makes it easier for customers to utilize the service and boosts the efficiency with which payments are processed. Users will benefit from the new tool's ease of space, time, and access speed (Clarke III, 2008). In addition, mobile payment users can use their mobile devices to combine contemporary technology with more conventional means of making payments, thanks to the availability of certain services. Customers can ease the strain of time constraints by taking advantage of the availability of the approach in all circumstances (Mallat et al., 2006). Consumers in Vietnam make the majority of their payments through the completion of small transactions. Mobile payment services assist consumers in lowering the costs associated with conducting these transactions, and they also assist consumers in removing the inconvenience of dealing with coins and currency. Thus, the final hypothesis is developed as below:

***H5: Convenience positively affects behavioral intention to use MOMO e-wallet in Vietnam.***

## 2.5 Conceptual research framework

Using the rapidly increasing use of electronic wallets in Vietnam as a case study, this study attempts to empirically determine the precise impacts of variables and determinants on the core construct of TAM, validating an extended version of the UTAUT in a new context, focusing on from manufacturing to the online payment method service domain. The results of this study will allow academics to examine the pros and cons of technology adoption from a broader viewpoint.

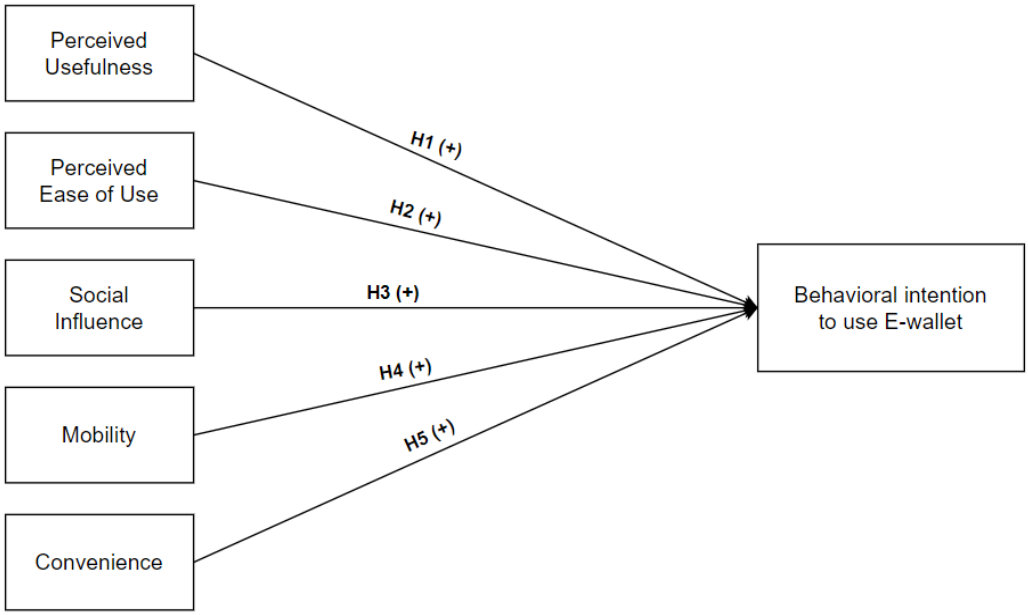


**Figure 4.** Conceptual research framework and hypotheses of this study (created by the author's thesis)

According to the conceptual research framework shown in Figure 4, which the author developed for this thesis, there are five factors: perceived usefulness, perceived ease of use, social influence, mobility, and convenience.

These independent factors were determined after reviewing the research gap and examining sections of relevant theories and previous studies by other researchers. Technology Acceptance Model (TAM) variables that will be collected in the author's survey include perceived usefulness and perceived ease of use; social influence is used as an independent variable in the Unified Theory of Acceptance and Use of Technology (UTAUT); and moderators from the UTAUT include gender, age, education level, and experience with the technology. The conceptual framework also presents two more independent factors: mobility and convenience. The hypothesis tested in this paper are listed as follows:

- **H1:** Perceived usefulness positively affects behavioral intention to use MOMO e-wallet in Vietnam.
- **H2:** Perceived ease of use positively affects behavioral intention to use MOMO e-wallet in Vietnam.

- **H3:** Social influence positively affects behavioral intention to use MOMO e-wallet in Vietnam.
- **H4:** Mobility positively affects behavioral intention to use MOMO e-wallet in Vietnam.
- **H5:** Convenience positively affects behavioral intention to use MOMO e-wallet in Vietnam.

# 3 RESEARCH METHODOLOGY

The study approach that the author used is presented in the first part of the fifth chapter. After that, a complete description of the procedure for gathering data for theoretical and empirical frameworks is shown. Following that is the explanation of data collection.

## 3.1 Research approach

Within the scope of this study, the quantitative approach will be used to identify the answers to the research questions posed and the elements that contribute the most to consumer intention toward electronic wallets. Mertler, C. 2016 mentioned in his book about the quantitative research approach that the purpose of the quantitative method is to acquire a more profound knowledge of the situation or event being researched. Quantitative research involves using numerical values, applying mathematical or statistical analysis to those values, and interpreting those values using graphical representations such as charts, tables, or diagrams (White & Rayner, 2014). According to Doan (2014), the approach centered on the facts and rationales for various social occurrences. Because of the wide variety of phenomena amenable to quantitative analysis, this technique is highly adaptable. There are four categories of research problems for which the quantitative approach is the most appropriate.

- First, when the researcher expects a quantifiable response.
- Second, a quantitative application is required to study the numerical shift precisely.
- The third is when the researcher wishes to show or explain a concept or phenomenon.
- The final one will be suited for hypothesis testing.

## 3.2 Research design

In order to complete the quantitative research investigations, the researchers need to identify links between the variables and understand how past events

relate to the present day's circumstances. The author will be able to discover the elements affecting the adoption and learn about the present condition of mobile wallet acceptance by using a quantitative technique. This methodology was selected because it is suitable for a higher number of respondents to the survey (Sekaran & Bougie, 2016), requires less time to be spent on it, and has the potential to save more resources (Eyisi, 2016). Collecting surveys may support the research approach and better understand the descriptive research design used (C. Williams, 2007). More specific information (who, when, where, what, and how) is known as a result of the information obtained using the descriptive research approach, allowing researchers to concurrently understand the sentiments and attitudes of respondents (Asiamah et al., 2017). According to McCombes (2019), the purpose of doing research using a correlational design (a sort of descriptive research) is to determine the nature of the link between two variables. As a result, correlation research was chosen to investigate the connection between the independent factors (perceived usefulness, perceived ease of use, social influence, mobility, and convenience) and the dependent variable (intention to use digital wallets).

### 3.2.1 Measurement scale

The term "measurement scale" refers to several systems that classify and characterize numerical values. Some different statistical analyses may not be appropriate depending on the unique properties of a given scale of measurement. It is vital to determine the measuring scales for all established research hypotheses before carrying out the questionnaire. The research hypotheses are as follows: Perceived Usefulness (PU), Perceived Ease of Use (PE), Social Influence (SI), Mobility (MOB), and Convenience (CON). Based on the pertinent references about mobile payment, the Likert Scales of 5 will be used for every variable. The replies and ratings of participants to each survey topic are measured on a scale that ranges from 1 = "strongly disagree" to 5 = "strongly agree.” Inheriting from previous studies, the author uses the measurement scale shown in Tables 1,2,3,4

and 5; The scale includes 18 items, which are observed variables of the independent variable.

- Measurement scale for Perceived Usefulness of e-wallet on behavioral intention

**Table 1.** Measurement scale of Perceived Usefulness

| Factors | Observed variables | Content |
|---|---|---|
| **Perceived Usefulness** | PU1 | Using MOMO helps me to save time |
| | PU2 | I can make payment and transfer money with MOMO faster than before (when I have not used MOMO) |
| | PU3 | Using MOMO helps me make transactions easier than before |
| | PU4 | I am informed about any changes in my account |

- Measurement scale for Perceived Ease of Use of e-wallet on behavioral intention

**Table 2.** Measurement scale of Perceived Ease of Use

| Factors | Observed variables | Content |
|---|---|---|
| **Perceived Ease of Use** | PEU1 | MOMO E-wallet is easy to use |
| | PEU2 | Interactions to use MOMO do not take time/effort |
| | PEU3 | Interactions with MOMO are truly clear and easy to understand |
| | PEU4 | I can ask MOMO to execute an order of my choice easily |

- Measurement scale for Social Influence of e-wallet on behavioral intention

**Table 3.** Measurement scale of Social Influence

| Factors | Observed variables | Content |
|---|---|---|
| **Social Influence** | SI1 | Family members influence my intention to use MOMO |
| | SI2 | Friends and colleagues influence my intention to use MOMO |
| | SI3 | Advertising affects my intention to use MOMO |
| | SI4 | I use MOMO wallet because everyone around me uses it |

- Measurement scale for Mobility of e-wallet on behavioral intention

**Table 4.** Measurement scale of Mobility

| Factors | Observed variables | Content |
|---|---|---|
| **Mobility** | MOB1 | I can use MOMO anytime, anywhere |
| | MOB2 | I can use MOMO even when traveling / business / overseas |
| | MOB3 | I can use MOMO easily, as long as I always carry my phone with me |

- Measurement scale for Convenience of e-wallet on behavioral intention

**Table 5.** Measurement scale of Convenience

| Factors | Observed variables | Content |
|---|---|---|
| **Convenience** | CON1 | I can use MOMO to make transactions at all convenience stores |
| | CON2 | I can use MOMO to pay for living expenses |
| | CON3 | I can use MOMO to shop on E-commerce channels and make payments |

### 3.2.2 Questionnaire design

This study will gather its data using a survey as the method. The survey was conducted via an online questionnaire because of the standardized and organized method in which a questionnaire captures replies (White & Rayner, 2014). Because of its high degree of customization, well-organized recording of data, and real-time interpretation of data, the questionnaire was designed using the online survey tool of Google Drive, known as Google Form. Because the study was carried out in Vietnam, the written initially in English questionnaire was later translated into Vietnamese.

To start the survey, the author built a brief explanation provided at the beginning of the questionnaire. This introduction seeks to explain the research's goal, the questions' nature, and the ethical considerations involved. The questionnaire consists of 3 components.

- In the first section, respondents will be asked screening questions to assess whether they use digital wallets, especially MOMO.

- In the second section, we collect demographic data such as age, gender, education level, monthly income, employment, location, and experience with mobile wallets.
- The third section of the survey comprises multiple-choice questions that aim to elicit responses on several construct elements. The adopted research model and the author's hypotheses served as the fundamental foundation for forming the sequence of statements.

### 3.2.3 Pilot test

The term "*pilot test*" refers to the testing of processes, data-gathering instruments, and the recruiting process, in addition to other research methodologies, in advance of a more extensive study (Hassan, Schanttner & Mazza, 2006) (Health, 2006). Research conducted as part of a pilot program serves various necessary functions and may provide further studies with material that is both helpful and valuable. The samples vary in size from 10 to 40, and each participant is evaluated based on their ability to produce precise estimations to accomplish a diverse array of possible objectives (Hertzog, 2008).

Before publishing the survey, 10 individuals were asked to participate in a pilot test. The purpose of this test was to get feedback on the survey's correctness, spelling, and grammar, as well as the clarity of the questions. This pilot test was conducted using a selection of respondents to ensure that the translated questionnaire was utterly comprehensible, and qualitative interviews were conducted with a larger group. Participants in the pilot test included coworkers, family members, and friends from social media. They are from different age groups, gender, and backgrounds and were either current users of electronic wallets or those who had never used one before.

## 3.3 Sample size

After completing the preliminary research, formal research is carried out. A prominent issue in conducting a formal study is the sample size selection.

Exploratory Factor Analysis (EFA) will be used to determine the study's most influential research model and questionnaire. Scale value (unidirectionality, convergent validity, and discriminant validity) and variable reduction are frequent applications of EFA. Factor analysis is used here to reduce a large number of observables to a smaller number of factors that capture the essence of the studied characteristics.

Eighteen independent variables created for this study are free to use in other contexts. The number of variables is crucial in determining the optimal sample size. Sapnas et al. (2002) showed that the minimal sample would depend on the desired ratio of 5 observations per variable and that the optimal sample size had to be beyond 100. The minimal sample size in the EFA approach is five times the number of observed variables, as stated by Hair et al. (1998) and Hoang Trong and Chu Nguyen Mong Ngoc (2008). The author may use this principle to develop the formula for determining sample size, which is as follows: $N \geq 5p$ (N is the sample size, and p is the number of observed variables in the model). Hence, it is necessary to compute the optimal sample size for this study. The author assumed a total sample size of N as the following calculation:

As stated by Sapnas et al. (2002),

$N > 100$

$N = 5p$ (p is the number of observed variables)

⇨ $N = 5*18 = 90$

From the result above, the sample size N equals 90. Thus, the minimum collected sample for this research should be **90**.

### 3.4 Data collection

The participants in this research are Vietnamese citizens with prior knowledge and experience using MOMO e-wallet. Meanwhile, the participants in this research were chosen based on the criteria of:

1) being Vietnamese persons who make use of digital wallets and

2) presently making use of MOMO e-wallet.

The use of a questionnaire form was used in the collection of data. Google Forms, as mentioned in the previous part, is used to create the online survey with closed-ended statements, and Facebook, Skype, and Zalo (a chatting application in Vietnam) are used to disseminate the survey to possible participants who reside in various locations in Vietnam. The author used the snowball method for the survey to get the questions out to the participants. This method is carried out by choosing the first respondents based on the author's acquaintances on social networks and then asking those respondents to provide this form to the subsequent participants in the study. To be more specific, the survey was sent to the author's colleagues and university friends who are MOMO e-wallet users. Then, the author created a Facebook and Instagram post including the survey's link and asked for support from Facebook and Instagram users. The survey was also distributed to North and Central Vietnam via the author's friends living in Hanoi (the capital of Vietnam – located in Northern) and the author's co-workers working in the country's central areas.

In order to encourage people to participate in the survey, a small contest was launched on Facebook and Instagram. The participants were asked to comment on a screenshot of the confirmation page after they submitted their answers, tag 3 friends of theirs, and comment on a random number. If they did all this, they would be entered into a drawing to win a discount coupon for 100.000 VND (€4.0) at King BBQ (a well-known BBQ restaurant in Vietnam), the number of winners is 3. Besides, a phone card worth 10,000 VND, or 0.4 euros, was given to each of the responders whom the former co-workers discovered. This contest was launched to encourage the group members to participate in the survey. The author’s colleagues, friends, and family members, who did not participate in the mini game on social media (Facebook and Instagram), would receive a small cookie package from the author as a gift.

The period during which answers were accepted was from 23rd of October 2022 to 28th of October 2022. After the deadline had passed, the survey was terminated, the discount coupons and phone cards were sent out to the winners, and the data that had been gathered was imported into Excel for data analysis.

After six days of collecting data, the study received 155 responses; however, there were 17 answers that were usable and determined ineligible on the questionnaire. This is because 17 of the responses were excluded for several reasons; for instance, respondents may not have heard of or used mobile wallets in the past, but they are currently not using digital wallets or do not utilize MOMO e-wallet. As a result, 138 replies met the criteria and were included in the study for analysis in chapter 4.

### 3.5 Reliability and validity

The term "reliability" refers to the fact that the study findings stay consistent when repeated by various people in the same settings. In this study, 138 eligible respondents participated in the survey, resulting in a small sample size. As a result, the research's dependability is restricted.

The amount to which a study appropriately assesses the phenomena it seeks to examine is called validity. The theoretical framework is based on the critical academic literature extensively utilized in the community of academics interested in adopting technological advancements by customers. Furthermore, the assumptions that served as the foundation for the questionnaire were derived from a prior academic study in Vietnam. Furthermore, the questionnaire has been pilot-tested to ensure its correctness and use. Ensuring the respondents comprehended the statements, the questionnaire was distributed to 10 people for feedback, and additional explanations and examples were added to certain statements to help respondents understand the key message of the statements. Another reason for the research's validity is that contradictory and nonsensical comments were discarded.

# 4 DATA ANALYSIS

The information obtained by doing empirical research is purpose of this topic. In the beginning part of this chapter, the outcomes are reported and analyzed. The session covered the reporting of the findings of the questions one after the other and consisted of categorizing the data and reporting it according to the hypothesis (hypotheses testing). A discussion of the results, which presents the answers to the study questions, will serve as the concluding part of this chapter. Charts will be used to show the demographic and other relevant data covered in this part. The author chooses this style since graphs and charts are understandable and easy for percentage observation.

## 4.1 Results of the research

Following the segmentation (Vietnam) provided by the author, the aim was to acquire the bare minimum of gathered samples. As was noted in the prior section, the minimum for the sample size is 90. Since only a few non-user respondents participated in the survey, the only respondents who will be considered for the target group are those currently using MOMO e-wallet.

As mentioned in the **3.2.2 Questionnaire design**, the survey is separated into **3 sections**: the first part is to check if the participant is a user of the MOMO e-wallet, the second part is the basic information about MOMO users, the last part is to test the hypotheses proposed in the conceptual framework.

After the survey's collection, the author gathered a total of 155 replies, including 138 responses from MOMO users and 17 from non-users. It is vital to explain all pertinent data and the number of responses to every question, such as whether they are familiar with digital wallets or use the MOMO application. The survey contained the filter question to verify that the respondents meet the criteria (described in section **3.4 Data collection**). The necessity for sampling to filter the intended segmentation was stated in Section 1, including three questions: These results were described in detail below: As a preliminary step, the author

determined whether the participant has heard about digital wallets or has an active MOMO application.

**Section 1 - Question 1: Have you ever heard about e-wallets?**

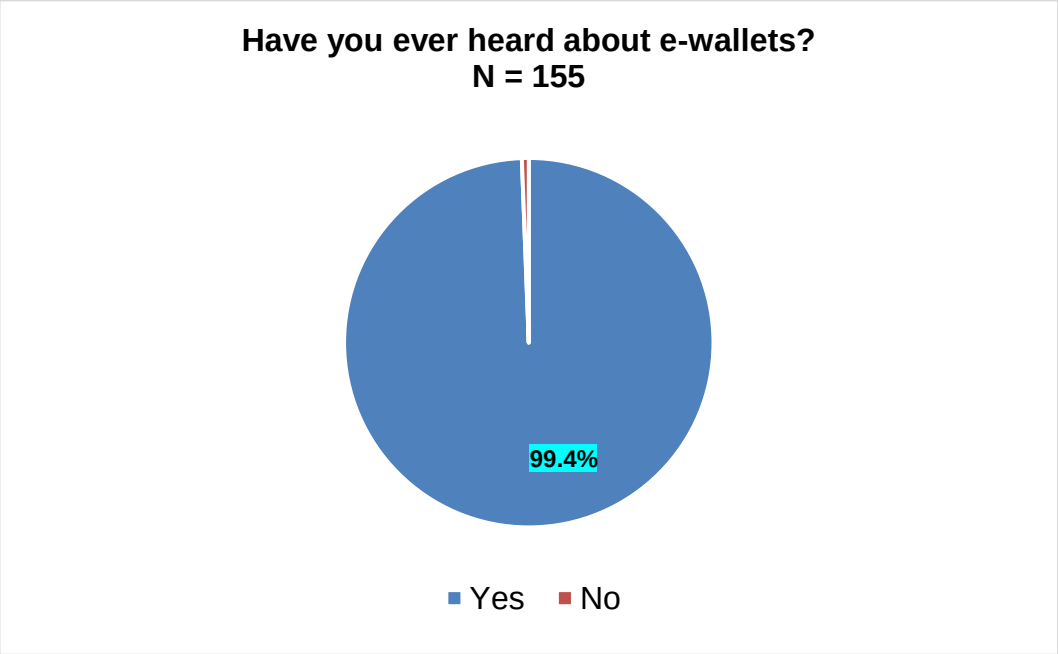


**Figure 5.** The percentage of e-wallets awareness of the participants

In this section's first three questions, respondents are asked how Vietnamese people perceive electronic wallets. Current digital wallet application awareness includes wallet apps made by overseas phone manufacturers that are also accessible in regions outside of Vietnam. The first question is crucial since it sets the foundation for the rest of the survey by identifying whether the participants are aware of e-wallets. With a response rate of 99.4% (154 participants), almost all survey takers were familiar with electronic wallets. Only a single respondent (0.6%) was unaware of the concept. As a result of this, the respondent would end the survey.

**Section 1 – Question 2: Are you using an e–wallet?**

The purpose of question 2 is to categorize respondents into two groups: users and non-users. Users are defined as respondents who have used the wallet service at

least once, while non-users are defined as respondents who have never used the wallet application. Chart 2 shows the outcomes.

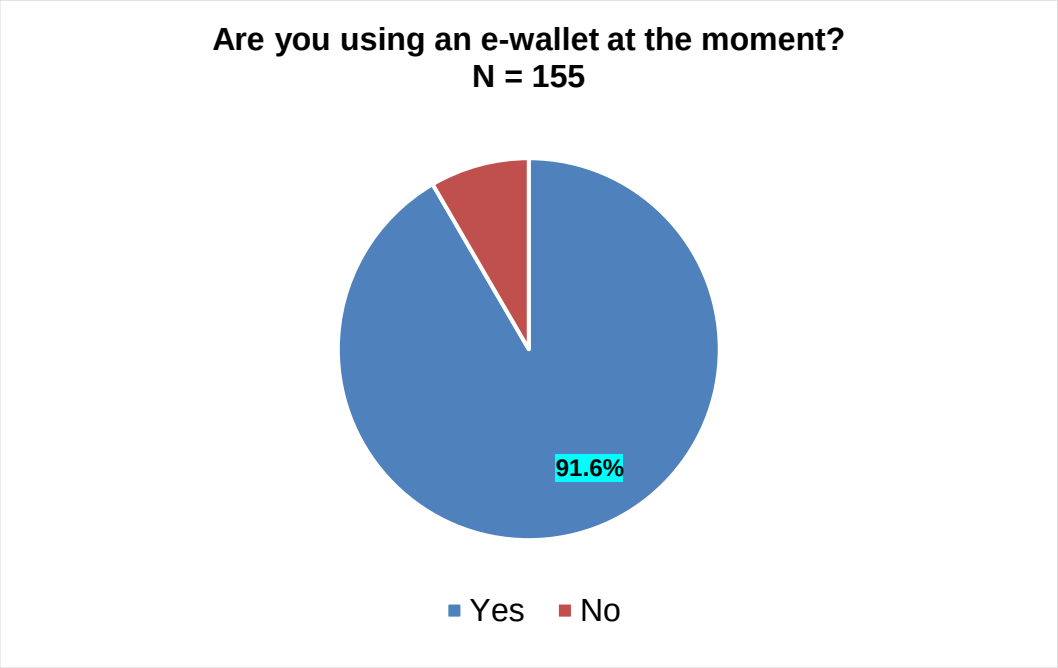


**Figure 6.** The percentage of current e-wallet users

The author effectively distributed the survey to a total of 155 individuals in Vietnam. As can be seen in Chart 2, presently, there are 142 (accounting for 91.6% of participants in Section 1) users of the mobile payment service, compared to just 13 people who do not utilize the service. However, the author will only analyze current users, excluding non-user data. Respondents who indicate that they do not use electronic wallets can exit the questionnaire at this point.

**Section 1 – Question 3: Are you using MOMO e-wallet?**

Chart 3 shows that 89% of the people surveyed used MOMO wallet, with just 11% of the sample claiming to be non-users of MOMO. The author poses this question to identify the MOMO wallet-using respondents for the following section of the study. According to the findings, 138 participants used MOMO e-wallet of 155 respondents who participated in the survey's first section.

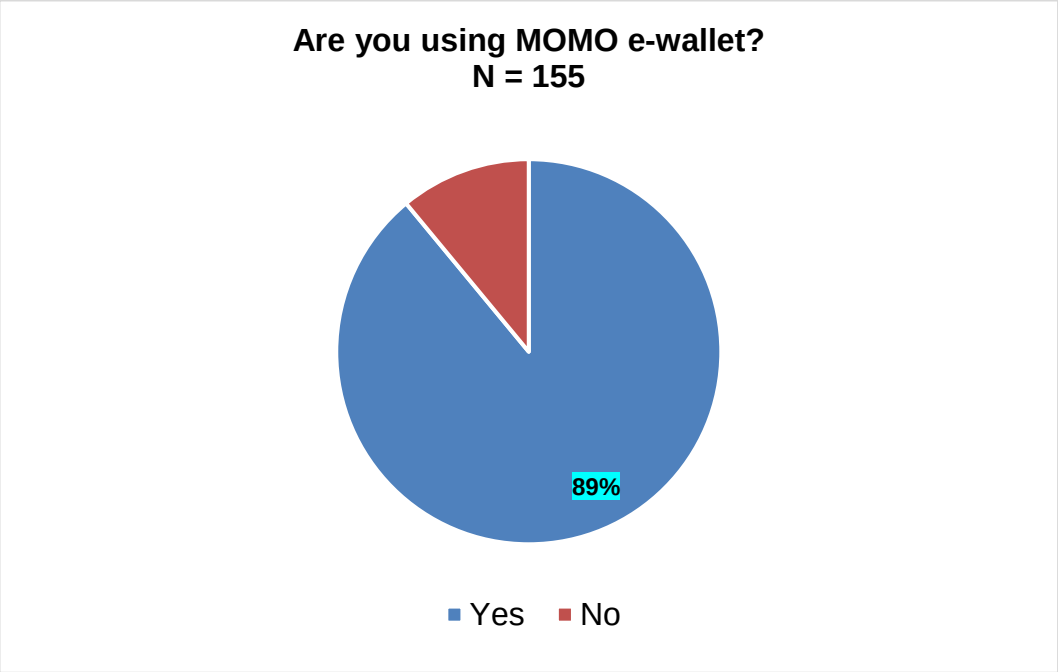


**Figure 7.** The percentage of current MOMO users

As a result, 17 respondents do not use MOMO, the survey concluded here, and the remaining 138 users go on to Section 2 (general information) and Section 3 (hypothesis test with statements based on independent variables of 5 factors affecting intention to use) of the questionnaire.

### 4.1.1 Demographic data

In order to get responses from the MOMO user backgrounds, the general information area was developed. The respondents' demographic information was first gathered. This is Section 2 of the survey.

This section describes the respondents' backgrounds, including their gender, age, occupation, monthly income, current location, use history, and the purpose for using MOMO. The 138 respondents' demographic information, gathered from the survey's first three questions, is shown in the summarization table below (Table 6).

**Table 6.** Summarization table of demographic data of MOMO users

| Demographic | Value | Frequency | Percentage |
|---|---|---|---|
| **Gender** | Male | 75 | 54.4% |
| | Female | 62 | 44.9% |
| | Others | 1 | 0.7% |
| **Age** | Under 18 | 8 | 5.8% |
| | 18 – 22 | 36 | 26.1% |
| | 23 – 29 | 68 | 49.3% |
| | 30 – 39 | 18 | 13% |
| | Over 39 | 8 | 5.8% |
| **Occupation** | Student | 36 | 26.1% |
| | Full-time employee | 65 | 47.1% |
| | Freelancer | 18 | 13% |
| | Self-employee | 11 | 8% |
| | Other | 8 | 5.8% |
| **Monthly income** | Under 10 million | 56 | 40.6% |
| | 10 – 15 million | 43 | 31.2% |
| | 16 – 20 million | 24 | 17.4% |
| | Over 20 million | 15 | 10.8% |
| **Current living area** | Northern | 24 | 17.4% |

| | | | |
|---|---|---|---|
| | Middle | 30 | 21.7% |
| | Southern | 84 | 60.9% |
| **Usage time** | Under 6 months | 12 | 8.7% |
| | 6 months – 1 year | 18 | 13% |
| | 1 – 3 years | 58 | 42% |
| | 3 – 5 years | 35 | 25.4% |
| | Over 5 years | 15 | 10.9% |
| **Purpose of using MOMO (can choose more than one option)** | Transfer money | 130 | 94.2% |
| | Pay water/electricity bills | 66 | 47.8% |
| | Pay for services (flight and movie tickets, shopping, spa…) | 74 | 53.6% |
| | Other | 29 | 21% |

In order to provide more specific demographic data, the author proceeded to elaborate on each question to illustrate the detailed background of the 138 survey respondents.

**Section 2 – Question 1: Gender**

According to Figure 8, the rate difference between male and female participants is not incredibly significant. 62 females and 75 men are included in the total sample size, with males accounting for 54.4% and females for 44.9%, respectively. In response to this question, only one respondent picked another.

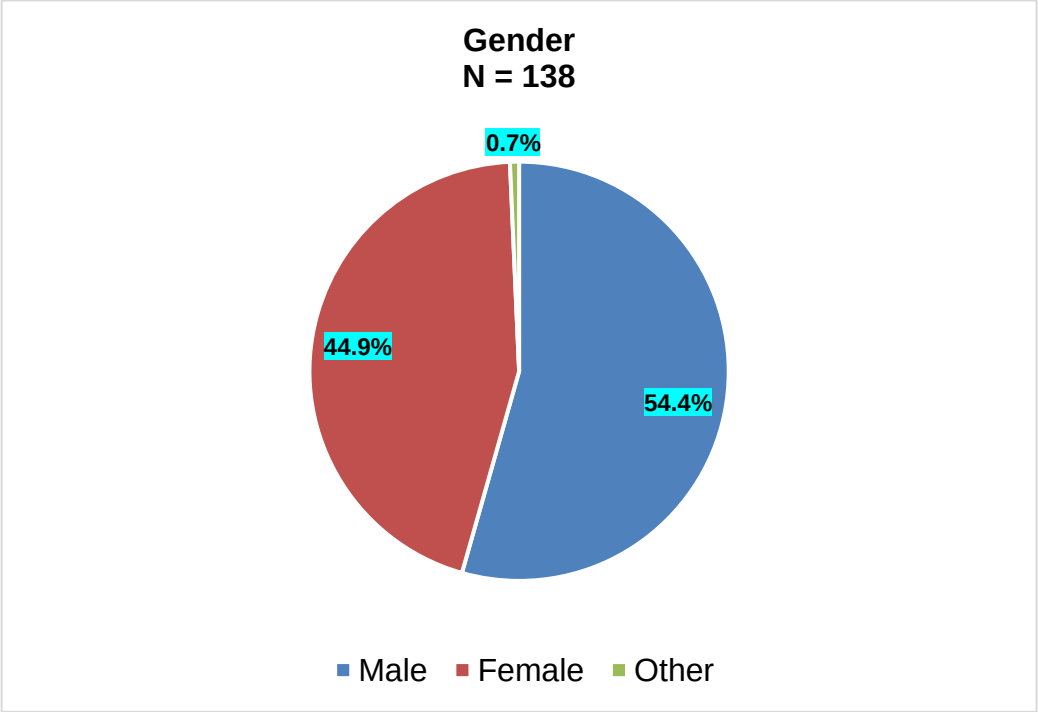


**Figure 8.** Gender ratio of MOMO users

**Section 2 – Question 2: Age**

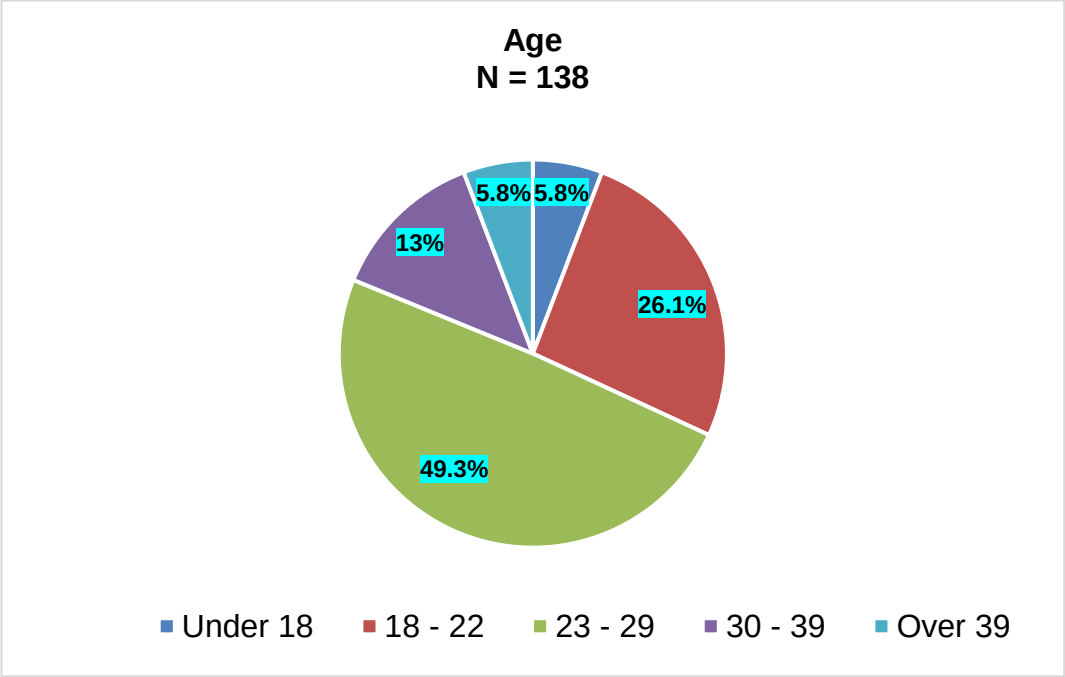


**Figure 9.** Age groups ratio of MOMO users

As can be seen in Figure 9, eight individuals are under the age of 18. Thirty-six respondents are between the ages of 18 and 22, sixty-eight people are in the group

of 23 to 29, and eighteen people are from the 30 to 39 group. The result showed that the number of people beyond the age of 39 is eight. The fact that respondents ranging in age from 18 to 29 make up 75.4% of the total demonstrates that the younger generation is taking up most of the space in answer to this inquiry. However, the answer to this question is insignificant in the consumer adoption process of MOMO e-wallet.

**Section 2 – Question 3: Occupation**

For the study, information on the participants' professional careers is gathered as data (Figure 10).

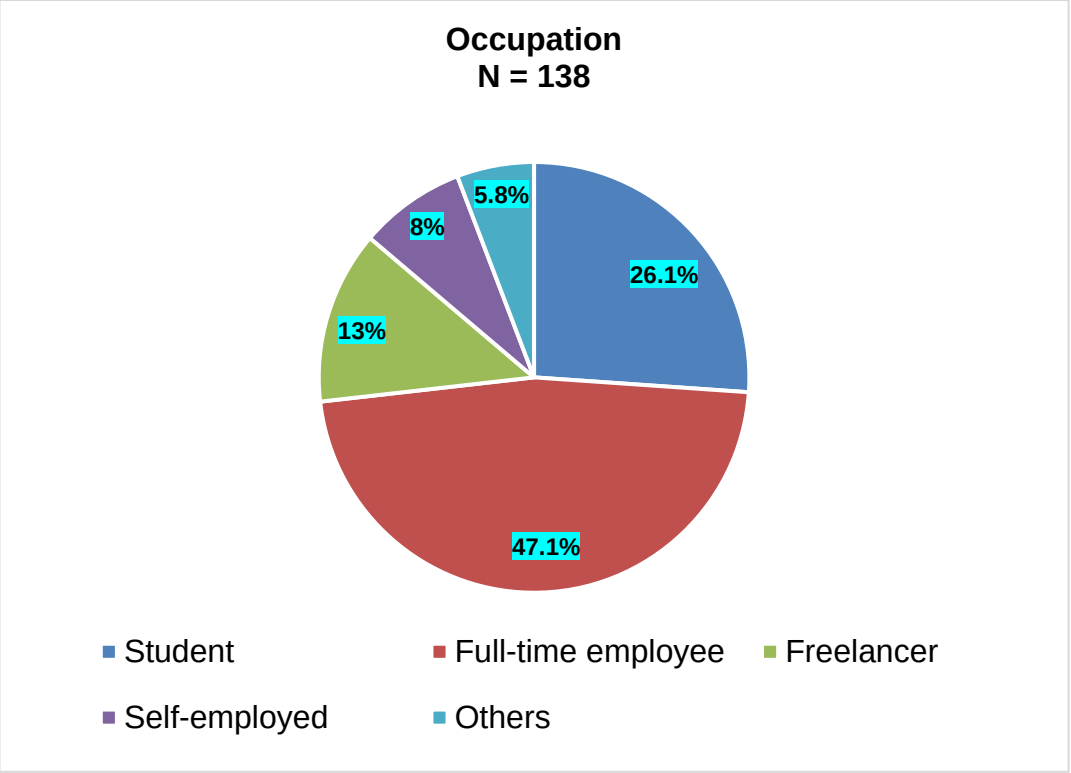


**Figure 10.** Occupation ratio of MOMO users

In detail: 11 respondents (compared to 8%) are business owners, 36 respondents (related to 26.1%) are students pursuing a variety of degrees, 65 answers (compared to 47.1%) are employed by firms, and the remaining 8 respondents (relative to 5.8%) have diverse types of occupations. There are 18 MOMO users, accounting for 13% of freelancers. The survey results in this question show that

today's e-wallets have become popular with Vietnamese people, especially full-time employees.

**Section 2 – Question 4: Monthly income**

The group earning less than €400 per month (less than 10 million) has the highest share of monthly earnings. This ratio stands at 40.6%, although other factors, such as participants who make above $16 million per month, account for little under 18% of the monthly income share. There are 43 people who earn between 10 and 15 million, which exceeds the average monthly income per capita in Vietnam, as measured by the General Statistics Office of Vietnam, which is 6.5 million VND (€250) (Thang, 2017), and the minimum cost of living in HCMC, which is 6.4 million VND (€246) (Tuoi Tre, 2017). This indicates that the majority of respondents in Vietnam can sustain a level of life. The following is data on the monthly income ratio of respondents, as illustrated in Figure 11.

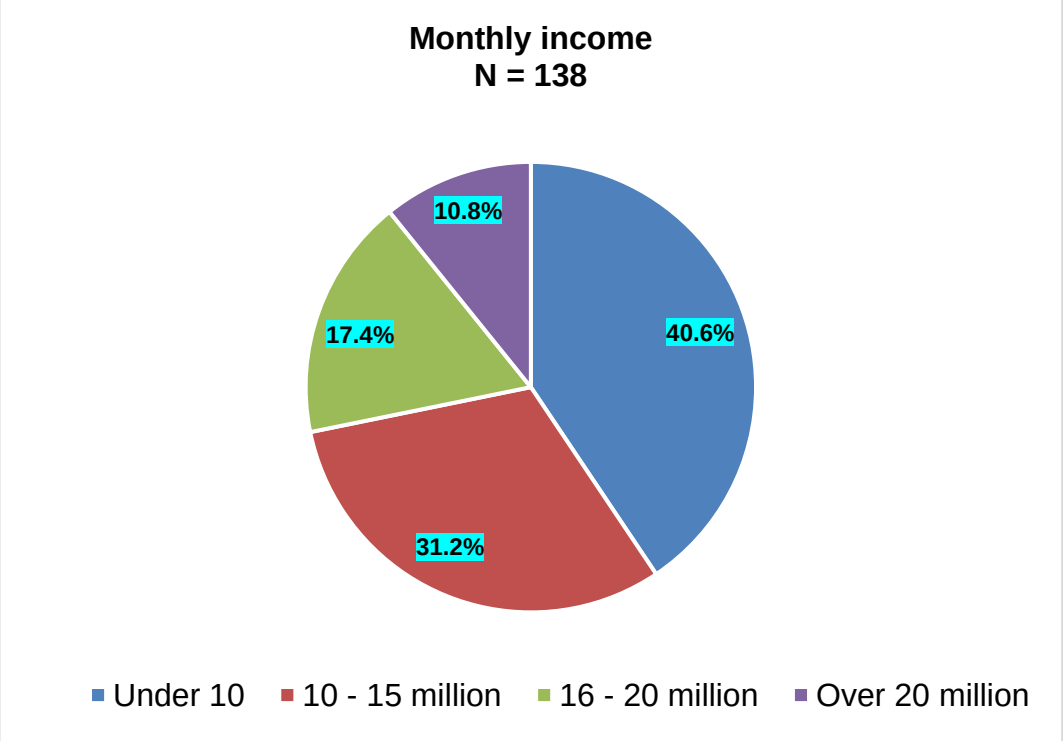


**Figure 11.** Monthly income ratio of MOMO users

**Section 2 – Question 5: Current living area**

The survey would be circulated countrywide from the North to the South. The ratio of respondents in Vietnam's region is shown in the above chart. However, many respondents to the study were from the South (the most prominent economic area of Vietnam). This is because most of the author's acquaintances reside in Southern Vietnam, while a few reside in the North. Consequently, the graph revealed that 60.9% and 21.7% of respondents were from the South and Middle, respectively. The remaining respondents (17.4%) would be classified as Northern.

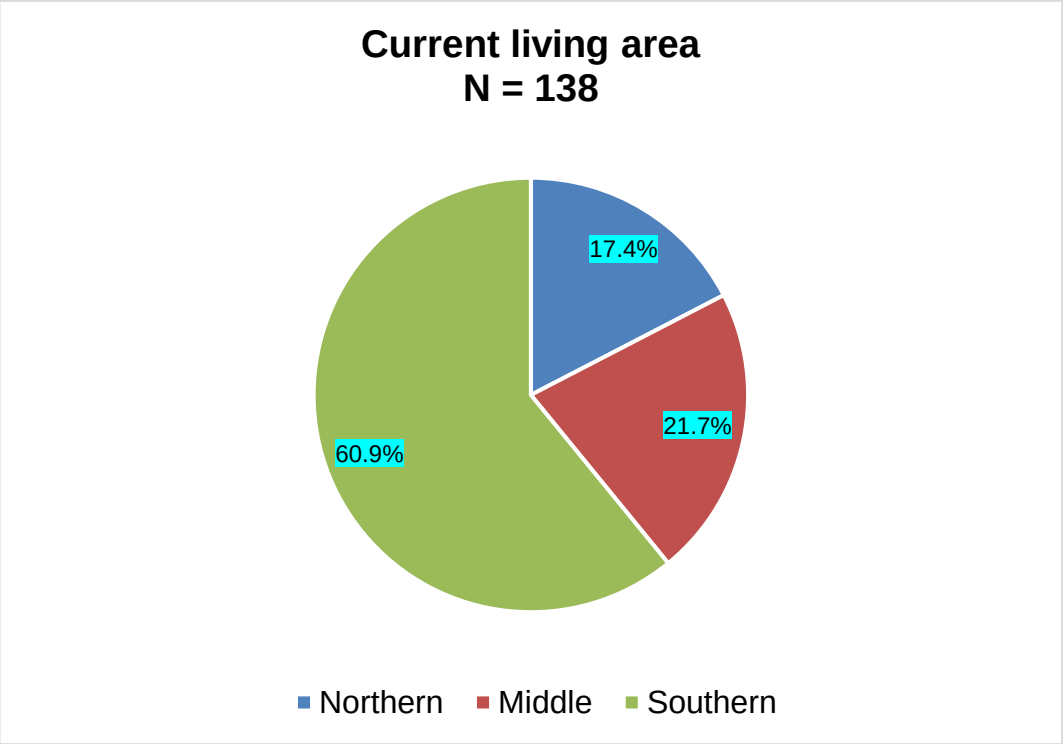


**Figure 12.** Allocations ratio of MOMO users

**Section 2 – Question 6: Usage time**

Next, 138 respondents were asked how long they had been using MOMO E-wallet, and this information was gathered. Many respondents, % or 58 individuals, said that they had used the application for between one and three years, followed by 25.4%, or 35 individuals, for between three and five years. With 13% or 18 responders, the six months-to-one-year age group is the third largest. Over five years and under six months had 15 and 12 responders, respectively, for a frequency of 10.9% and 8.7%. As can be seen from the data collection, MOMO wallet has been used by Vietnamese individuals for a significant time, as shown by

the fact that the majority of those who participated in the questionnaire had had at least one year of experience using the application.

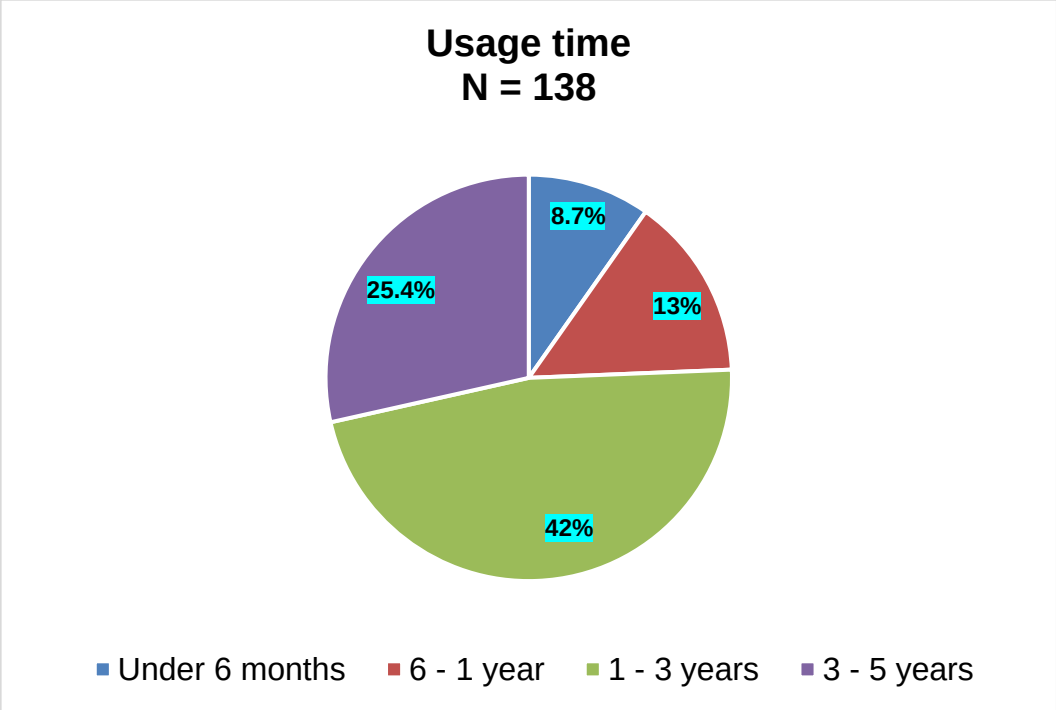


**Figure 13.** Usage time ratio of MOMO users

**Section 2 – Question 7: Purpose of using MOMO**

The seventh question was posed to the group of MOMO wallet users, and it inquired about the activities in which they participated. In this question, participants can choose more than one listed option. The services of MOMO wallet have been used with comparable frequency, indicating that users have explored the capabilities of the mobile wallet. While 37 respondents reported using just one of the listed MOMO services (transfer money), 101 respondents (73.1% of the total sample) reported using more than one listed MOMO service. The service done by most respondents is a money transfer inside the mobile wallet app (130 respondents), followed by paying for travel tickets, movie tickets, shopping costs, and spa services (74 respondents). A total of 66 participants, or 47.8%, were selected to pay monthly bills. Other services were recorded in the "Others" section of the survey (21%). The chart below is the detailed data of this question.

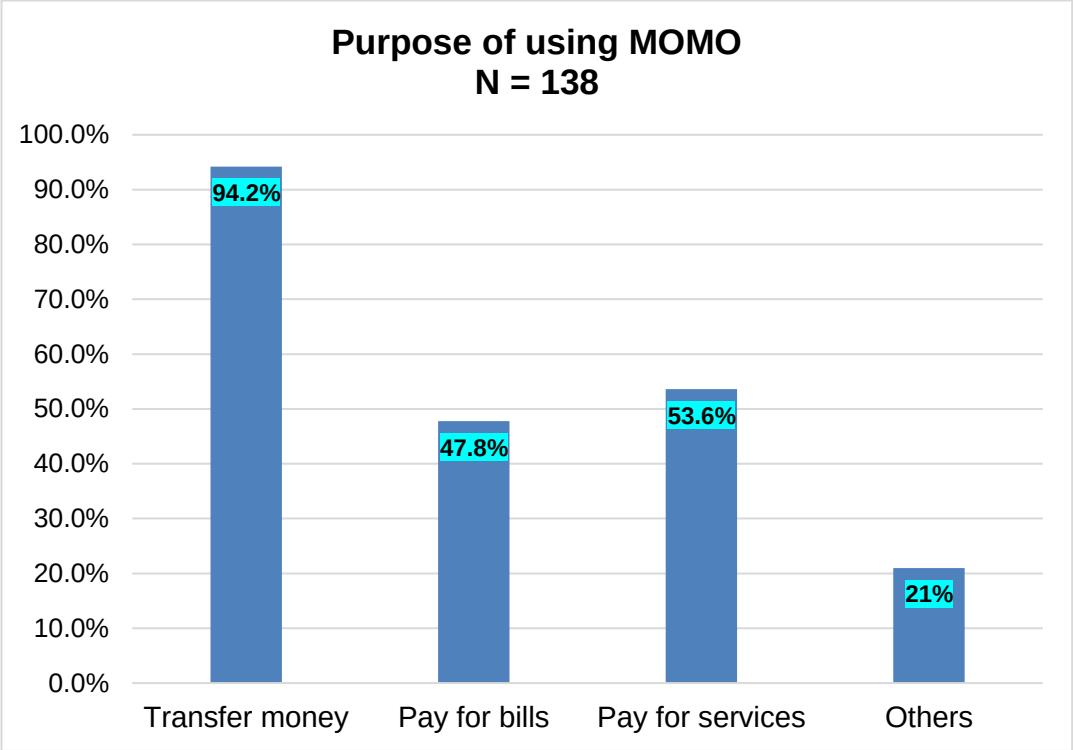


**Figure 14.** The percentage of purpose of using MOMO

### 4.1.2 Hypotheses testing

Two further study questions were addressed in the part of hypotheses testing, which addressed identifying influential factors and how they may impact usage intention. This is Section 3 of the survey where the author conducts the statements related to the factor to ask for the degree of agreement from participants. In the same sequence that they were presented in section **3.2.1**, the factors were examined.

- **Hypothesis 1: Perceived Usefulness**

**Table 7.** Percentage of overall opinion toward Perceived Usefulness

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| Using MOMO helps me to save time | 1.4% | 1.4% | 8.7% | 23.9% | 64.5% |

| | | | | | |
|---|---|---|---|---|---|
| I can make payment and transfer money with MOMO faster than before (when I have not used MOMO) | 2.2% | 2.9% | 8.7% | 26.8% | 59.4% |
| Using MOMO helps me make transactions easier than before | 4.3% | 1.4% | 7.2% | 23.9% | 63% |
| I am informed about any changes in my account | 2.2% | 2.9% | 22.5% | 25.4% | 47.1% |

Using this variable, the author wants to investigate how the customer's perception of the usefulness of the MOMO wallet affects their behavioral intention. As was discussed in section **2.4.2**, if a person believes that utilizing a mobile wallet has led to an improvement in either their professional or personal performance, then that belief will have a favorable effect on the person's intention to behave in a certain way as the result of that perception. In order to quantify this characteristic, four statements were formulated to investigate its usefulness in saving time, being practical, being a good match for the work or activity at hand and being contemporary.

The findings indicate that perceived usefulness has a favorable influence on the users' intentions towards their future conduct. The usefulness of the MOMO e-wallet is acknowledged by a significant portion of the user base. Moreover, 70% percent of the users gave the four assertions a favorable response, indicating that they agreed with them to a significant degree. The first statement, "Using MOMO helps me to save time," was met with a broadly positive reaction from 89 people. In particular, 64.5% of users selected "completely agree" as their response to the statement, while 23.9% selected "agree" as their response. After that, the usefulness of the MOMO service was validated by the comments of 37 users who said they "agreed" and 82 users who said they "completely agreed." These figures reflect 26.8% and 59.4% of the users, respectively.

Next, 63% of users were in complete agreement that the MOMO wallet positively impacted their day-to-day activities regarding the completion of transactions, and another 23.9% of users agreed that they had observed greater applicability of the wallet service in assisting them in the completion of payments. Finally, 72.5% of respondents agreed with the fourth statement, emphasizing the rapidity with which they get updated information on their accounts.

- **Hypothesis 2: Perceived Ease of Use**

**Table 8.** Percentage of overall opinion toward Perceived Ease of Use

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| MOMO is easy to use | 2.2% | 0.7% | 10.1% | 26.8% | 60.1% |
| Interactions to use MOMO do not take time/effort | 2.2% | 1.4% | 15.2% | 27.5% | 53.6% |
| Interactions with MOMO are truly clear and easy to understand | 0.7% | 5.1% | 15.9% | 27.5% | 50.7% |
| I can ask MOMO to execute an order of my choice easily | 2.2% | 5.1% | 19.6% | 25.4% | 47.8% |

The perception that technology is challenging to use and complicated is a barrier to the widespread adoption of that specific invention. The second consideration is if, on the other hand, ease of use has a favorable effect on the behavioral intention of individuals. It was recommended that the factors be evaluated based on the following four aspects: how easy it is to use, how simple the method is, how clear and comprehensible the services are, and how well they execute requests.

The perceived ease of use has a substantial impact on the overall intention of the respondents. When it comes to consumers, most customers express satisfaction

with the convenience and simplicity of use offered by the wallet service. 26.8% of respondents agreed, and 60.1% strongly agreed that it is feasible for them to become proficient in using mobile wallets quickly. The statement "MOMO is easy to use" indicates that the users, after becoming familiar with the wallet service and utilizing it, can:

- browse the necessary features
- set up and approve NFC/QR code payment at the POS
- optimize card rewards and take advantage of discount chances
- traverse discount options

According to the subsequent statement, 112 users concurred that they could learn to use the wallet app with low effort and that it takes little time to use the app. This indicates that the majority of users are confident about MOMO.

The third and fourth statements also got a significant level of favorable feedback (38 to 27.5% for "agree" and 70 to 50.7% for "completely agree"). These remarks explored the ease of use on a more granular level, focusing on the simplicity of the processes when asking for requests and interactions.

Regarding the users who disagree, the replies demonstrated that this demographic does not consider ease-of-use quality when reaching an adoption choice. 2.2% of respondents responded with the phrase "completely disagree" in response to the first two assertions, which have broad connotations. In the two subsequent statements, which are more detailed, the replies remained at the level of 2.2% of the users who disagreed with the assertion that the simplicity of interactions of the transactional processes would not motivate their desire to use the MOMO service. However, the overall result demonstrates that the favorable trends for this component are continuing.

- **Hypothesis 3: Social Influence**

**Table 9.** Percentage of overall opinion toward Social Influence

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| Family members influence my intention to use MOMO | 17.4% | 10.9% | 28.3% | 13.8% | 29.7% |
| Friends and colleagues influence my intention to use MOMO | 4.3% | 7.2% | 16.7% | 29% | 42.8% |
| Advertising affects my intention to use MOMO | 21% | 9.4% | 27.5% | 17.4% | 24.6% |
| I use MOMO because everyone around me uses it | 4.3% | 7.2% | 15.9% | 23.2% | 49.3% |

According to the social influence hypothesis, an individual's viewpoint may be influenced by the opinions of their family, friends, colleagues, and other forms of mass media. To investigate the impact that this factor has on behavioral intention, four statements were formulated, each of which investigates the influence of a different group: the influence of family and close friends; the influence of friends and colleagues; the influence of the media; and the influence of the community.

The desire to utilize a mobile wallet is positively affected, on the whole, by social influence. A range of reactions can be found in the remarks about the users. The remark that "I use MOMO because everyone around me uses it," was seen as influential by 49.3% of the app users. The influence of recommendations from friends and coworkers came in at number two, receiving approval from 42.8% of the users. This suggests that one of the motivations for adopting mobile wallets is the community's preexisting level of comfort and familiarity with using them and demonstrates that individuals have the propensity to seek knowledge and

guidance on technology breakthroughs from others who are of the same age as them, have the same interests, and live the same kind of lifestyle as them. However, there was a more significant number of users who disputed the impact of their family (10.9% "disagree"; 17.4% "completely disagree"). Although the influence of family members on the intention was debatable, a more considerable number of users denied the effect of their family. On the one hand, 27.5% of the consumers rated the advertising as having a neutral impact.

- **Hypothesis 4: Mobility**

**Table 10.** Percentage of overall pinion toward Mobility

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| I can use MOMO anytime, anywhere | 1.4% | 4.3% | 16.7% | 23.2% | 54.3% |
| I can use MOMO even when travelling / business / overseas | 6.5% | 8% | 23.2% | 21% | 41.3% |
| I can use MOMO easily, as long as I always carry my phone with me | 2.2% | 3.6% | 8.7% | 27.5% | 58% |

The usage of a mobile wallet needs a wireless connection in order for it to function correctly. For this reason, if clients cannot access or use the mobile wallet, it loses a benefit that other forms of payment, like cash and payment cards, provide, which is mobility. As a result, the fourth modified hypothesis stated that the capability of accessing the service and carrying out the transaction when the customer is on the go affects the customer's intention to use the service. The respondents' thoughts on mobility were investigated using three explicitly developed statements.

The respondents' intentions are positively impacted, on average, by respondents' levels of mobility. When it comes to the users, a significant number of users have

shown their acceptance, although to varying degrees, of the portability of the MOMO electronic wallet. The first statement received 23.2% of responses that were "agree" and 54.3% of "completely agree," verifying that they can use the program whenever and wherever they need it. In response to the second question, 41.3% of respondents said they could access and utilize the wallet app when traveling, such as when they were away on business or traveling internationally. The above assertion suggests that using a mobile wallet as a payment option is reasonable for current smartphone users since these individuals constantly have their phones with them. More than eighty percent of the users agreed with the statement (27.5% said they "agree," and 58% said they "completely agree").

The first two assertions both garnered a comparable percentage of favorable replies from MOMO users who selected the disagree option (4.3% and 8%, respectively). Only 3.6% of respondents disagreed with the third statement, which questioned whether it was appropriate for mobile wallets to take advantage of the fact that smartphone users never part with their devices. Despite this, the total number of users who gave a favorable response is still more than the number of disagreed users who gave a negative response.

- **Hypothesis 5: Convenience**

**Table 11.** Percentage of overall opinion toward Convenience

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| I can use MOMO to make transactions at all convenience stores | 2.9% | 5.1% | 10.1% | 23.9% | 58% |
| I can use MOMO to pay for living expenses | 2.9% | 1.4% | 15.9% | 23.2% | 56.5% |

| | | | | | |
|---|---|---|---|---|---|
| I can use MOMO to shop on E-commerce channels and make transactions | 2.9% | 3.6% | 10.2% | 23.4% | 59.5% |

The following statements were formulated to support the modified hypothesis, which states that convenience will favor the customers' usage intention, subsequently resulting in a choice. Customers need to switch between different payment methods on fewer occasions when MOMO offers a greater level of convenience to them. In order to validate this hypothesis, three questions were posed to the individuals who participated in the research.

In overall, the presence of convenience has a positive impact on behavioral intention. This community of users admitted that the MOMO e-wallet, which they use, collaborated with many convenience stores (23.9% of them agreed, and 58% agreed). The expansion of the available services is helped by every relationship formed. Working with corner businesses, for example, may increase the number of accepted payment types, giving consumers more freedom in settling their bills. Since they engage with consumers when they check out, retailers are in a unique position to influence the payment routines of their clients. The second statement found that 56.5% of respondents "agreed" that living expenditures, such as water, power, or internet, may be paid through MOMO. The fact that a significant proportion of users agree with the second statement on the practicality of MOMO wallet demonstrates that electronic wallets are linked to points of purchase to facilitate the payment of people's day-to-day living costs. Life without the need to go to the area where payments are made. The third statement, which read, "I can utilize MOMO to purchase on E-commerce platforms and conduct transactions," received 23.4% of responses of "agree" and 59.5% of responses of "absolutely agree." When it comes to making purchases online, all survey participants agree that they have access to various payment options, which explains why this figure is so high. Customers will have more opportunities to use the program as the

number of establishments, such as restaurants, convenience stores, and other businesses that accept mobile wallet payments increases.

- **Behavioral intention**

**Table 12.** Percentage of overall opinion toward behavioral intention to use MOMO in the future

| | Strongly disagree | Disagree | Neutral | Agree | Strongly agree |
|---|---|---|---|---|---|
| I always use MOMO E-wallet (if possible) to pay or make transactions | 2.9% | 5.1% | 18.1% | 25.4% | 48.6% |
| In the future, I intend to pay and conduct financial transactions using MOMO E-wallet | 3.6% | 5.8% | 18.1% | 21% | 51.4% |
| I will switch to another E-wallet if it has better functions than my current wallet | 8% | 4.3% | 21.7% | 16.7% | 49.3% |

Concerning consumers of MOMO, a large majority of this group is under the impression that they would utilize the wallet service offered by MOMO anytime they make payments (25.4% "agree" and 48.6% "completely agree"). A comparable number of users indicate that they want to continue using MOMO wallet more often in the near future (21% "agree"; 54.1% "completely agree"). Compared to the third statement, it has been observed that a very high number of MOMO users (49.3%) claimed that they may move to another application if its functionalities are better than the digital wallet they are now using.

### 4.1.3 Ending question of the questionnaire

To end the survey, the author asks one last question about the most crucial reason why Vietnamese people choose to use MOMO e-wallet. Questions include convenience, promotions, safety and security, and user interface choices. Survey participants were only allowed to choose a single answer that they thought was the determining factor in their usage behavior. This question is proposed because the author wishes to help readers and future researchers have more factors to study the user's intention to use e-wallet. The results of this question are shown in Chart 11 below.

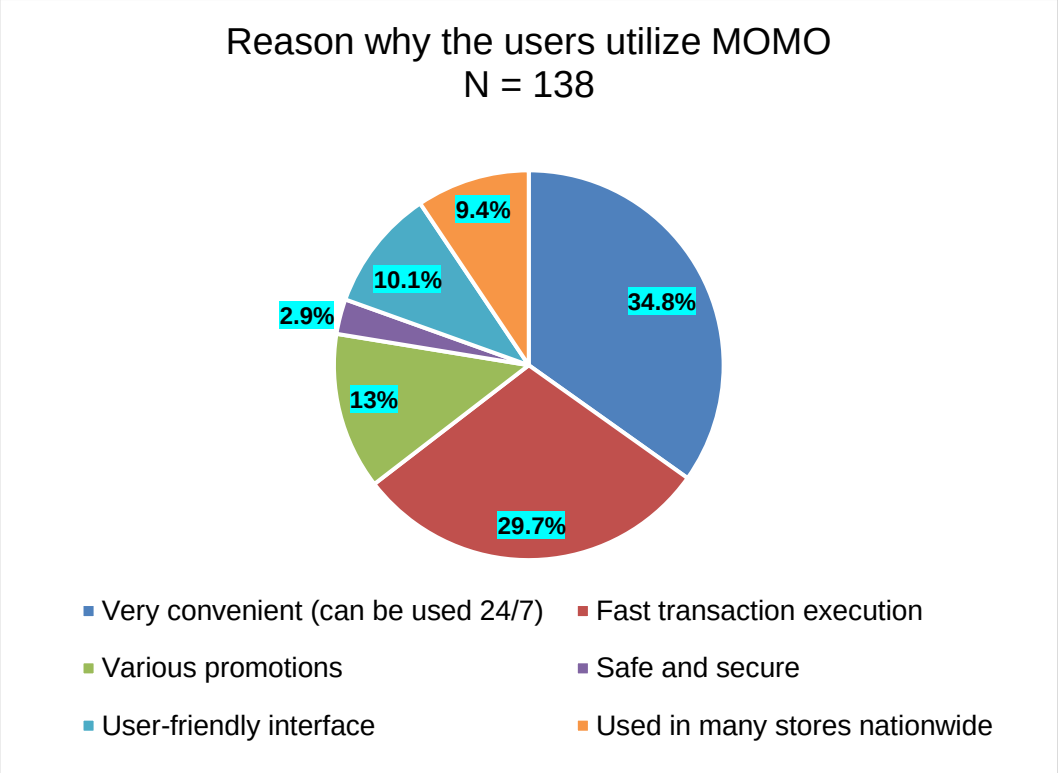


**Figure 15.** The percentage of the most important reasons of using MOMO

Overall, convenience was the most chosen factor, with 34.8%. They were followed by fast transaction execution, with 41 respondents (29.7%). In addition, users also choose factors such as promotions, safety, and security. Although accounting for only a small percentage, these are two potential factors that can be used to conduct future surveys. Many previous studies have used these two independent

factors; however, the author wants to exploit the five factors mentioned before in this study.

### 4.1.4 Results of hypotheses testing

It is clear from the author's tables in the previous analysis, which can be seen in the previous tests, that each combination dataset delivers the same result. This provides the author with a brief conclusion: the five criteria influencing the behavioral intention to use MOMO e-wallet in Vietnam are perceived usefulness, perceived ease of use, social influence, mobility, and convenience. The table below is a summary of the results of the test.

| | **Conclusion** |
|---|---|
| PU Þ Behavioral intention | H1 is supported |
| PEU Þ Behavioral intention | H2 is supported |
| SI Þ Behavioral intention | H3 is supported |
| MOB Þ Behavioral intention | H4 is supported |
| CON Þ Behavioral intention | H5 is supported |

**Table 13.** Results of hypotheses testing

The study's author accepted the first hypothesis, stating that perceived usefulness is a significant factor influencing behavioral intention. Additionally, the authors of the study accepted the second hypothesis, which stated that perceived ease of use is a factor that has influenced behavioral intention regarding the use of MOMO e-wallet in Vietnam. Additionally, there are three additional hypotheses that the author concluded that the data supported, and we came to this conclusion since the results supported the hypotheses. The three theories were designated with the numbers 3, 4, and 5. As a result, the findings of this research indicate that Social Influence, Mobility, and Convenience all play a role in adopting MOMO in Vietnam.

To provide a quick summary, the author agrees with hypotheses 1, 2, 3, 4, and 5. This shows that people have a strong opinion and see mobile payment as a helpful tool when they have a strong opinion. As a result, it affects the intention to utilize an electronic wallet service.

## 4.2 Discussion and recommendations

- **Perceived usefulness**

When it comes to **perceived usefulness** the findings coincide with the notion of perceived usefulness, which occurs when a person considers the mobile wallet to be advantageous. The findings align with those found in other studies (Pham & Bui, 2012; Nguyen & Pham, 2016) and (Aydin & Burnaz, 2016; Tandon et al., 2017). e-wallet acceptance will be impacted by the utility of mobile devices, including personalization, accessibility, localization, timeliness, and network reliability. According to the users, the tasks completed in the wallet app were completed quickly and agile, which made people's lives simpler. According to the findings, consumers have an ongoing demand for innovative services that, first, make a positive contribution to the quality of their lives by enhancing their access to speed and efficiency and, second, are congruent with the modern way of life, which is characterized by a hectic pace and a heavy reliance on mobile technology. People are becoming more conscious that they should focus on working more efficiently rather than just putting in more hours. Because mobile devices are so handy, consumers are more likely to be receptive to new features and functionalities if those features would benefit them. When consumers have a better impression of a product's usefulness, their purchasing behavior naturally follows suit. The finding, which is corroborated by the findings of research by Mun et al. (2017), indicates that the e-wallet service would raise the users' efficiency and effectiveness in their day-to-day lives, hence improving their lives. The Technology Acceptance Model is one of the ideas that provide evidence for the link between the perceived utility of electronic wallets and their adoption (TAM). Although the user found the item challenging to use, they will continue to use it because of its

utility and the fact that it can improve their productivity. Therefore, the perception of an item's utility is the most critical component in utilizing an electronic wallet.

By the **recommendation**, in addition to continuously supplying time- and effort-saving and multifunctional features, MOMO providers must also concentrate their marketing and promotional efforts on influencing users' perceptions of the utility of mobile wallets. According to Shatskihh through Aydin & Burnaz (2016), customers are only encouraged to utilize a digital wallet based on its utility if they know its advantages. People must recognize the significance of the electronic payment system and the benefits it offers them over alternative payment methods in their professional and private lives. Advertised content may emphasize, for instance, that mobile wallet transactions can be completed in a matter of seconds, that many large retailers and franchises are mobile wallet partners and therefore accept it, and that mobile wallet is the preferred payment method for influencers with an active and urban lifestyle.

- **Perceived ease of use**

Regarding **perceived ease of use**, the findings were consistent with the ideas described in section 2.4.3; respondents acknowledged the significance of the mobile wallet's simplicity of learning, usage, and interaction. The outcome is consistent with earlier studies (Nguyen & Pham, 2014; Aydin & Burnaz (2016); Tandon et al., 2017). According to research conducted by Davis et al. (1992), Gefen & Straub (2000), and Venkatesh & Davis (2000), perceived ease of use is an essential factor in the acceptance of electronic wallets. Users are provided with an interaction that is transparent and easily comprehendible while using the new system, which contributes to the system's perceived ease of use. It decides how easily the new system can be adopted and how the customer will accept it. They are interested in items whose installation can be completed quickly, whose graphical elements and layout are apparent, and whose processes are straightforward, so they may become skilled with little effort. Therefore, many users are ready to adapt to the new system, which means that the percentage of users who use e-wallets will rise. Users are more likely to use an electronic wallet

to make payments and to use it to acquire products or services when the newly implemented system is simple and user-friendly. For instance, consumers typically switch to using an e-wallet since it makes buying products at the store more accessible, more straightforward, and more expedient. This demonstrates that high perceived ease of use will impact the users' willingness to utilize it. Consumers are sensitive to the product's simplicity of use because of their hectic lifestyles. Customers might get irritated with the technology if it is difficult to use. Compared with the other independent variables, the strength of the correlation between user perceptions of ease of use and future behavior regarding E-wallet usage is the strongest. In other words, perceived ease of use is crucial in consumers' adoption of e-wallet services. This method may make consumers' lives easier and reduce the danger associated with frequent bank withdrawals.

For the **recommendation**, MOMO must improve customer happiness by making the mobile wallet's interface with the consumer easy and satisfying. They should utilize typefaces with good readability and icons with high comprehension to aid users in navigating the system. Secondly, MOMO should ensure that consumers can quickly locate the services and instructions, display the most-used services on the most visible positions, and allow customers to select and customize their most-used service, similar to configuring the iPhone's Home Screen Toolbar. Finally, the MOMO app automatically directs consumers to the correct external links rather than sending them to the homepage or requiring them to exit the wallet application and visit the website.

- **Social influence**

Respondents are affected in terms of **social influence** by people's views, groups of reference, and mass communication. In contrast to the findings of the studies conducted by Nguyen and Pham (2014) and Aydin and Burnaz (2016), which discovered that social influence had little bearing on behavioral intention and concluded that consumers make decisions based on their perceptions, our investigation came to the opposite conclusion. In recent years, electronic wallets have emerged as a standard payment method for Vietnamese people. Consumers

may get rid of their concerns and apprehensions about mobile wallets by consulting with a wider variety of sources of information rather than deciding on their own. The discovery provides unwavering support for the earlier findings published by Fu et al. (2017) and M.-J. J. Lin et al. (2009). Because people wanted to fulfill their personal and social needs by exchanging information, they preferred discussing topics congruent with both goals (Fu et al., 2017). Members display a great willingness to offer their skills by using information sharing as a thoughtful, superior, and compatible way of reaching personal objectives (M.-J. J. Lin et al., 2009). It has been shown that social influence is a favorable factor for the intention to use a mobile wallet, which is consistent with the results of prior research done by Phutela & Altekar (2019), Soodan & Rana (2020). Several earlier research (Venkatesh et al., 2003, 2012) shed light on the substantial role social impact plays in disseminating innovative information technology. It has been noted that the opinion of one's family, friends, peer groups, and even virtual communities found on social networking sites is seen as a credible reference and has a substantial impact on the behavior of consumers. Consequently, good word-of-mouth sharing from various sources might produce a higher motivating impact that affects other people's choices about trying out a new technology (K. M. R. Yadav, 2016).

Regarding the recommendation, MOMO users are more influenced by close/essential others. Most of the respondents' primary sources of information on E-wallets come from online and social media platforms. It is advised that all marketing efforts be directed toward internet mediums. MOMO providers of these services should be aware of the potential of these channels to generate online recommendations from satisfied customers. People who see advertisements are likelier to talk about them with their loved ones and coworkers. Customers will feel more motivated to learn about the mobile wallet if they notice that their social audience is spreading information about it.

- **Mobility**

When a person discovers that utilizing a mobile wallet will improve his capacity to manage duties or activities when away from home or work and on the go, he

develops a positive desire to use the product based on its **mobility**, these findings are consistent with the idea discussed in section 2.4.4. The findings conflict with studies by Kalinic & Marinkovic (2015) and Nguyen & Pham (2014) on mobile commerce. According to Kalinic & Marinkovic, the poor effect of mobility was that consumers did not adopt m-commerce. Mobile commerce and payment, however, are becoming commonplace among Vietnamese consumers. Customers know the value of a mobile payment service's mobility in meeting their urgent or unforeseen demands. Strong and Old, a UK-based research firm, discovered that the ease of accessing the Internet at any time and location would be the primary driver of consumer adoption of mobile Internet apps.

For **recommendation**, by increasing the number of partners in their network, the service provider may increase mobility and make the mobile wallet accessible everywhere at any time. In addition, by providing discounts on 3G and 4G data plan subscriptions associated with telecommunications providers, clients are encouraged to remain connected and utilize electronic wallets wherever and whenever necessary. The service provider should think about enabling the option to pay even without an online connection to help prevent situations where internet access may be inconsistent. With Klozest, an Indian company, consumers may make payments without an internet connection and afterward reconcile their transactions with their wallets when they connect to Wi-Fi. Similarly, users of the MOMO e-wallet may pay by phoning a toll-free number, entering their predetermined passcode, the amount they desire to pay, and the recipient's phone number (Sathe, 2016).

- **Convenience**

Concerning the factor of **convenience**, the findings correspond to the discussion that occurred in section 2.4.6. Namely, the more uses a person discovers in a mobile wallet, the more probable he will want to use it. The users of MOMO wallet have reported that they know that the digital wallet has many partners and is accepted at many locations, such as shopping malls, convenience stores, and food courts. The application has fulfilled all of its requirements regarding making

payments regardless of the circumstances. According to the findings of Nguyen and Pham's (2014) research, the degree of affluence of consumers in developed economies is one of the primary factors that drives the need for diversity. Digital wallets are creating their comparative advantage by integrating several payment options such as utility payment, phone balance payment, and credit repayment. This means that a mobile wallet is not only another creative way to pay and store funds, but it is also an integrated payment solution for customers.

Concerning the **recommendation**, the number of partners and the number of payment service locations might contribute to an increase in convenience. In order to add new services or partners, MOMO providers need to pay attention to the trends of the spending habits of the target segment, the shopping or entertainment locations of frequent visits, the emerging merchants among the customers, and the special occasions celebrated by Vietnamese people in general or by Vietnamese millennials.

## 4.3 Implications

Before drawing a conclusion from the research, several important points will be raised about its significance for financial institutions and software development firms, which will help them recognize possible problems customers could run into while using an e-wallet. The research will help financial institutions and software development companies recognize and appreciate the areas that need improvement to improve electronic wallets in Vietnam effectively. The constraints, as well as the theoretical and practical implications, are discussed in this chapter. The research is concluded after considering suggestions and improvements for further study.

### 4.3.1 Theoretical implication

Results from research may either prove or disprove a hypothesis, depending on the theoretical implications of those findings. By empirical validation of an integrated research model, this work makes a substantial contribution to the existing body of research on the Technology Acceptance Model (TAM) and the

Unified Theory of Acceptance and Use of Technology (UTAUT). In the process of this research, a theoretical model was established to direct the path taken by the independent variables. The construction of the conceptual model was accomplished by the incorporation of the two listed models above. When the investigation outcomes match the theory being investigated, the hypothesis can be confirmed. This study could help future researchers conduct relevant studies on the elements that impact the desire to use an electronic wallet. In the study carried out by the author, many independent variables, including PU, PEU, SI, MOB, and CON, exhibited positive significance leading toward the adoption of E-wallets. It is essential to go on with more research on relevant factors, focusing on target respondents in various locations and periods. In recent years, electronic wallets have been a hot topic of conversation across Vietnam. E-Wallet research in the future would help create improvements and encourage more customers to use electronic wallets. Hence this topic must be researched.

### 4.3.2 Practical implication

This research has many implications in real life. First, this research increases Vietnamese people's knowledge of e-wallet use. Second, by exposing the challenges experienced by their consumers while dealing with their e-wallet services, financial institutions and companies that employ e-wallet services are alerted by this research. Based on the findings of our investigation, this research could benefit various parties in some way. The first group would include entrepreneurs interested in creating e-wallet services in the future and facility suppliers of electronic services. The study's findings might serve as a reference for business owners to better understand e-wallet difficulties. Future researchers interested in adopting e-wallets may benefit from this study since it acts as a good resource for research on mobile payments. The factors used in this research might be used as a guide for a subsequent investigation. To keep existing customers and draw in new ones who may start using their e-wallet services without worrying about late penalties or inadequate security, financial institutions should be aware of the problems their consumers encounter. Finally, the party that benefits from

this research is the government. Governments can know the key factors influencing consumer adoption of electronic wallets. A policy may be put in place by the government to encourage customers to use digital wallets. The government may learn new strategies from this research to encourage users to keep using their electronic wallets rather than quit using them after utilizing donated funds.

# 5 CONCLUSION

This research aimed to determine Vietnamese consumers' behavioral intentions concerning using the MOMO e-wallet. We looked at characteristics that impact E-wallet usage, including perceived usefulness, perceived ease of use, social influence, mobility, and convenience. A total of 155 replies were obtained after the survey was determined, of which 138 were chosen for study.

Two study questions indicated in section 1.2 have been satisfactorily addressed by the literature evaluation and data collection: (1) what aspects of consumer behavior influence their intent to use MOMO e-wallet in Vietnam, and (2) how do these aspects impact them those intentions?

The Technology Acceptance Model (TAM) and the Unified Theory of Acceptance and Use of Technology have been used in the thesis to measure the consumers' behavioral intentions about wallet application. The study has modified five hypotheses from the author's conceptual framework, which includes two original TAM factors, one UTAUT factor, and two extended factors. Gender, age, occupation, and income have no effect on users' intentions to use the MOMO e-wallet, according to demographic data.

Consequently, it is agreed that e-wallets are a helpful service that adheres to the general trend of social growth and addresses consumers' expectations for simple and rapid transactions while using an e-commerce platform. The MOMO e-wallet application is a tremendously successful investment channel that helps diversify the goods and services that a mobile financial application may provide, stay up with trends, and meet consumer expectations as a leading financial technology firm. To meet the needs of as many customers as possible, MOMO must streamline the registration process and diversify the features of E-wallets, increase the number of partners and payment acceptance locations to grow market share and customer base, and lower interbank transfer costs. Besides, service providers can foster communication and work with press agencies to implement campaigns

to increase awareness, boost consumer confidence, and concentrate on creating and extending application models on mobile platforms.

## 5.1 Limitations

The target audience is not a representative sample of the whole nation, which is the sample's restriction. Most of them are concentrated exclusively in the South; Ho Chi Minh City respondents were given paper questionnaires, while friends and coworkers of the author who reside in the South of Vietnam were given internet surveys. As a result, the sample representative of the whole population is slightly constrained by this sampling technique. This research primarily focuses on well-known and recognizable companies to assess the general degree to which viral marketing variables influence Vietnamese brand awareness. Therefore, future research should focus on particular industries and businesses, as well as determining whether there are differences in the application of viral marketing for large, medium, and small-sized enterprises, as well as conducting more extensive tests about demographic differentiation to variables.

The author also employed a quantitative approach in which a questionnaire survey was conducted online. This is because gathering questionnaires is more time- and space-efficient. Closed-ended questions make up the questionnaire survey's format. There are several options for the responders' response. Only the options "strongly agree" and "strongly disagree" are available for them to pick. Respondents cannot provide comments and recommendations since there is no qualitative methodology. As a result, the research's findings will be somewhat limited.

Considering the research's limitations, this report may be a starting point for future studies on other cutting-edge payment systems in Vietnam. There are numerous opportunities for further research after looking at the TAM, the UTAUT construct, and two external variables to integrate and use the more powerful complexity framework to assess the adoption of new ideas.

## 5.2 Suggestion for future research

The limited sample size and period time of data collection raises concerns about the generalizability of the results to the community of MOMO users in Vietnam. In order to prevent time restrictions from influencing responses, the researcher might send out surveys at the appropriate times. The researcher should give participants a few days to complete the surveys. They will be able to respond when accessible, and they may take their time reading the question. The researcher can also order the questions from more generic to more personal. This makes it easier for the responder to answer the questions without feeling pressure.

Researchers should utilize a combination of qualitative and quantitative techniques to address the issue of restricted results in quantitative research. In the interview approach, there will be direct communication between researchers and respondents. This enables responders to provide recommendations and opinions about the e-wallet. In addition to the questionnaire's alternate options, it contains additional information from responders. This is a more reliable way to learn what consumers think about E-wallets.

The author advises future researchers to investigate merchandiser viewpoints to address the shortage of merchandiser views. This is because the acceptance of e-wallets also depends on the merchandiser. More studies must be done to determine why a few retailers have adopted e-wallets as a form of payment for their customers. It will give more information as well as more accurate findings about the use of e-wallets across various groups of people's points of view.

Aside from that, the survey should be improved by including more significant factors and variables in further study. As a result, it is recommended that more comprehensive or in-depth research be carried out to reach a broad audience and conduct interviews with members of focus groups to acquire more critical findings on e-wallets. In the future, academics may focus on a different subfield of e-wallet studies, such as a comparative study between the nations of ASEAN or the path that e-wallets will take in the digitalization of the fintech ecosystem. In conclusion,

for e-wallet service providers in Vietnam to remain competitive in the fintech market, they must enhance the quality of the services they provide and innovate comprehensively to meet the requirements of their customers.

The study provides an overview of the evaluation of critical elements that influence customer behavioral intention while using the MOMO e-wallet in Vietnam. As was said, new service innovations face opportunities and problems as mobile technology advances. The adoption of this invention by consumers and further market consolidation is crucial for it to succeed in the Vietnamese electronic payment sector. Therefore, it is essential to remember that innovations need changes in customer behavior. By understanding the consumer's purpose, innovations may be adopted more effectively.

Overall, the study anticipates that the market will continue to develop in the future, which is good news for e-wallet customers with a more excellent range of selections. Future studies may utilize this study as a starting point for their research.

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## APPENDICE

**APPENDIX 1. Factors and observed variables of the research**

| Factors | Observed variables |
|---|---|
| **Perceived Usefulness** | Using MOMO helps me to save time. |
| | I can make payment and transfer money with MOMO faster than before (when I have not used MOMO). |
| | Using MOMO helps me make transactions easier than before. |
| | I am informed about any changes in my account. |
| **Perceived Ease of Use** | MOMO is easy to use. |
| | Interations to use MOMO do not take time/effort. |
| | Interactions with MOMO are truly clear and easy to understand. |
| | I can ask MOMO to execute an order of my choice easily. |
| **Social Influence** | Family members influence my intention to use MOMO. |
| | Friends and colleagues influence my intention to use MOMO. |
| | Advertising affects my intention to use MOMO. |
| | I use MOMO because everyone around me uses it. |
| **Mobility** | I can use MOMO anytime, anywhere. |
| | I can use MOMO even when travelling/business/overseas. |
| | I can use MOMO easily, as long as I always carry my phone with me. |

| | |
|---|---|
| **Convenience** | I can use MOMO to make transactions at all convenience stores. |
| | I can use MOMO to pay for living expenses. |
| | I can use MOMO to shop on e-commerce channels and make transactions. |

**APPENDIX 2. Vietnamese questionnaire**

**Giới thiệu**

Xin chào các bạn, mình tên là Minh Thùy. Hiện tại mình đang là sinh viên năm cuối ngành Kinh Doanh Quốc Tế tại trường Đại học Khoa học Ứng dụng Vaasa, Phần Lan. Mình đang trong quá trình viết luận văn tốt nghiệp về chủ đề "Những nhân tố ảnh hưởng đến ý định sử dụng ví điện tử của người Việt Nam", với công ty nghiên cứu là MOMO Vietnam. Mình mong các bạn có thể dành ra một ít thời gian để tham gia bài khảo sát này. Tất cả những thông tin mà bạn cung cấp đề được giữ bí mật và chỉ dùng để phục vụ cho bài nghiên cứu. Xin cảm ơn các bạn!

**Phần 1: Câu hỏi sàng lọc**

1. Bạn đã từng nghe/biết về Ví Điện Tử chưa?
   - □ Có
   - □ Không

2. Bạn có đã/đang sử dụng Ví Điện Tử không?
   - □ Có (tiếp tục khảo sát Phần 2)
   - □ Không (Dừng khảo sát)

3. Bạn có đang sử dụng Ví Điện Tử MOMO không?
   - □ Có (tiếp tục khảo sát Phần 2)

- ☐ Không (Dừng khảo sát)

**Phần 2: Thông tin cơ bản**

1. Giới tính
   - ☐ Nam
   - ☐ Nữ
   - ☐ Khác

2. Độ tuổi
   - ☐ Dưới 18
   - ☐ 18 – 22
   - ☐ 23 – 29
   - ☐ 30 – 39
   - ☐ Trên 39

3. Nghề nghiệp
   - ☐ Học sinh/Sinh viên
   - ☐ Làm việc full-time
   - ☐ Làm việc tự do
   - ☐ Tự kinh doanh
   - ☐ Khác

4. Thu nhập trung bình mỗi tháng của bạn
   - ☐ Dưới 10 triệu
   - ☐ 10 – 15 triệu
   - ☐ 15 – 20 triệu
   - ☐ Trên 20 triệu

5. Khu vực hiện tại của bạn ở Việt Nam
   - ☐ Miền Bắc

- Miền Trung
- Miền Nam

6. Bạn đã sử dụng Ví Điện Tử MOMO được bao lâu?
   - Từ 6 tháng đến 1 năm
   - Từ 1 – 3 năm
   - Từ 3 – 5 năm
   - Trên 5 năm

7. Bạn thường sử dụng MOMO để (có thể lựa chọn nhiều hơn 1 đáp án)
   - Chuyển tiền
   - Thanh toán hóa đơn điện/nước
   - Thanh toán dịch vụ (vé máy bay, vé tàu, mua sắm, spa…)
   - Khác

**Phần 3: Các nhân tố ảnh hưởng**

1. Vui lòng chọn mức độ đồng ý của bạn với những mệnh đề bên dưới:

(1) Rất không đồng ý

(2) Không đồng ý

(3) Trung lập

(4) Đồng ý

(5) Rất đồng ý

| **Nhận thức sự hữu ích** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Sử dụng ví điện tử MOMO giúp tôi tiết kiệm thời gian | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Tôi có thể thanh toán và chuyển tiền nhanh hơn khi dùng MOMO so với trước đây (khi tôi chưa sử dụng ví điện tử) | | | | | |
| Ví điện tử MOMO giúp tôi thực hiện giao dịch dễ dàng hơn so với trước đây | | | | | |
| Tôi nhận được thông tin tốt hơn (dễ và nhanh hơn) khi có sự thay đổi trong tài khoản của tôi | | | | | |

| **Nhận thức tính dễ sử dụng** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Ví điện tử MOMO dễ dàng sử dụng | | | | | |
| Các tương tác để sử dụng ví điện tử MOMO không tốn thời gian/ công sức | | | | | |
| Các tương tác với ví điện tử MOMO được hướng dẫn rất rõ ràng và dễ hiểu | | | | | |
| Tôi có thể yêu cầu ví điện tử MOMO thực hiện một lệnh nào đó theo ý muốn của mình một cách dễ dàng | | | | | |

| **Ảnh hưởng xã hội** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Các thành viên trong gia đình ảnh hưởng đến ý định sử dụng ví điện tử MOMO của tôi | | | | | |
| Bạn bè và đồng nghiệp ảnh hưởng đến ý định sử dụng ví điện tử MOMO của tôi | | | | | |
| Quảng cáo ảnh hưởng đến ý định sử dụng ví điện tử MOMO của tôi | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Tôi sử dụng ví điện tử MOMO bởi vì mọi người xung quanh tôi đều sử dụng | | | | | |

| **Tính lưu động** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Tôi có thể sử dụng ví điện tử MOMO mọi lúc, mọi nơi | | | | | |
| Tôi có thể sử dụng ví MOMO kể cả khi đi du lịch/công tác/ở nước ngoài | | | | | |
| Tôi có thể sử dụng ví điện tử dễ dàng, miễn là tôi luôn mang theo điện thoại | | | | | |

| **Sự tiện lợi** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Tôi có thể sử dung MOMO để thực hiện giao dịch ở tất cả các cửa hàng tiện lợi | | | | | |
| Tôi có thể sử dụng MOMO để thanh toán các chi phí sinh hoạt | | | | | |
| Tôi có thể sử dụng MOMO mua sắm với các sàn liên kết với ví và thanh toán | | | | | |

| **Ý định sử dụng** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Tôi luôn sử dụng ví điện tử MOMO (nếu có thể) để thanh toán hoặc thực hiện các giao dịch | | | | | |

| | | | | | |
|---|---|---|---|---|---|
| Trong tương lai, tôi có ý định sẽ thanh toán và thực hiện các giao dịch tài chính bằng ví điện tử MOMO | | | | | |
| Tôi sẽ chuyển sang sử dụng ví điện tử khác nếu nó có các chức năng tốt hơn ví hiện tại | | | | | |

2. Vui lòng chọn lý do **QUAN TRỌNG NHẤT**

Bạn sử dụng thường xuyên một ví điện tử MOMO vì?

- □ Rất tiện lợi (có thể sử dụng 24/7)
- □ Thực hiện giao dịch nhanh chóng
- □ Có chương trình khuyến mãi đa dạng, thường xuyên
- □ An toàn và bảo mật
- □ Giao diện thân thiện, dễ sử dụng
- □ Có thể sử dụng ở nhiều cửa hàng trên toàn quốc

**APPENDIX 3. English questionnaire**

**Introduction**

Hello, my name is Thuy Nguyen, and I am now in my last year of studying International Business at the VAMK University of Applied Sciences. I am in the process of carrying out a survey in order to discover the elements that influence the intention of Vietnamese people to use electronic wallet, with MOMO Vietnam serving as the case study. I would really appreciate it if you could take a few minutes (about 5 minutes) out of your day to answer the following survey questions as truthfully and correctly as possible. All of the information that you provide will be kept in strictly confidential and will only be used for research.

I want to extend my most heartfelt gratitude to you for your invaluable support and collaboration!

**Section 1: Screening question**

1. Have you ever heard about E-wallets?
   - ☐ Yes
   - ☐ No

2. Are you using E-wallets at the moment?
   - ☐ Yes (continue to Section 2)
   - ☐ No (stop)

3. Are you using MOMO E-wallet?
   - ☐ Yes (continue to Section 2)
   - ☐ No (stop)

**Section 2: General information**

1. Gender
   - ☐ Male
   - ☐ Female
   - ☐ Others

2. Age
   - ☐ Under 18
   - ☐ 18 – 22
   - ☐ 23 – 29
   - ☐ 30 – 39
   - ☐ Over 39

3. Occupation

- ☐ Student
- ☐ Full-time employee
- ☐ Freelancer
- ☐ Self-employed
- ☐ Others

4. Average monthly income
   - ☐ Under 10 million
   - ☐ 10 – 15 million
   - ☐ 15 – 20 million
   - ☐ Over 20 million

5. Your current living area
   - ☐ Northern
   - ☐ Middle
   - ☐ Southern

6. How long did you use MOMO E-wallet?
   - ☐ 6 months to 1 year
   - ☐ 1 – 3 years
   - ☐ 3 – 5 years
   - ☐ Over 5 years

7. You usually use MOMO to (can choose more than 1 option)
   - ☐ Transfer money
   - ☐ Pay water/electricity bills
   - ☐ Pay for services (flight ticket, shopping, spa…)
   - ☐ Others

**Section 3: Influence factors**

1. Please choose the degree of agreement for the following statements:

(1) Strongly disagree

(2) Disagree

(3) Neutral

(4) Agree

(5) Strongly agree

| **Perceived Usefullness** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Using MOMO helps me to save time | | | | | |
| I can make payment and transfer money with MOMO faster than before (when I have not used MOMO) | | | | | |
| Using MOMO helps me make transactions easier than before | | | | | |
| I am informed about any changes in my account | | | | | |

| **Perceived Ease of Use** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| MOMO E-wallet is easy to use | | | | | |
| Interactions to use MOMO do not take time/effort | | | | | |
| The interactions with MOMO are very clear and easy to understand | | | | | |
| I can ask MOMO to execute an order of my choice easily | | | | | |

| **Social Influence** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| Family members influence my intention to use MOMO | | | | | |
| Friends and colleagues influence my intention to use MOMO | | | | | |
| Advertisings affect my intention to use MOMO | | | | | |
| I use MOMO wallet because everyone around me uses it | | | | | |

| **Mobility** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| I can use MOMO E-wallet anytime, anywhere | | | | | |
| I can use MOMO wallet even when traveling / business / overseas | | | | | |
| I can use E-wallets easily, as long as I carry my phone with me at all times | | | | | |

| **Convenience** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|
| I can use MOMO to make transactions at all convenience stores | | | | | |
| I can use MOMO to pay for living expenses | | | | | |
| I can use MOMO to shop on E-commerce channels and make payment | | | | | |

| **Behavioral intention** | **1** | **2** | **3** | **4** | **5** |
|---|---|---|---|---|---|

| | | | | | |
|---|---|---|---|---|---|
| I always use MOMO E-wallet (if possible) to pay or make transactions | | | | | |
| In the future, I intend to pay and conduct financial transactions using MOMO E-wallet | | | | | |
| I will switch to another E-wallet if it has better functions than my current wallet | | | | | |

2. Please choose the **MOST IMPORTANT REASON**

You regularly use MOMO E-wallet because?

- ☐ Very convenient (can be used 24/7)
- ☐ Fast transaction execution
- ☐ There are various promotions
- ☐ Safe and secure
- ☐ User-friendly interface, easy to use
- ☐ Can be used in many stores nationwide