FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z IN PENANG, MALAYSIA

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Gen Z	Generation Z
TAM	Technology acceptance model
SPSS	Statistical Package for the Social Sciences

ABSTRAK

Tajuk kajian ini merupakan "Faktor-Faktor yang Mempengaruhi Penggunaan Sistem Pembayaran "e-wallet" dalam Kalangan Gen Z di Pulau Pinang, Malaysia". Tujuan kajian ini dijalankan adalah untuk mengenal pasti faktor- faktor yang mempengaruhi persepsi mudah digunakan, persepsi kegunaan, persepsi keselamatan dan persepsi kepercayaan mempengaruhi penggunaan sistem pembayaran "e-wallet" dalam kalangan Gen Z di Pulau Pinang, Malaysia. Saiz sampel kajian ini mewakili 384 orang responden. Kaedah kuantitatif digunakan untuk mengumpul data daripada para responden. Pekali korelasi Pearson telah digunakan dalam penyelidikan ini untuk menganalisis korelasi dan pekali serta mengenal pasti faktor-faktor yang mempengaruhi penggunaan sistem pembayaran "e-wallet" dalam kalangan Gen Z. "The Statistical Package for Sciences (SPSS)", versi 26 digunakan untuk kaedah menganalisis data. Melalui dapatan kajian ini, persepsi kemudahan penggunaan, persepsi kegunaan, persepsi keselamatan dan persepsi kepercayaan mempunyai hubungan signifikan yang positif dengan penggunaan sistem pembayaran "e-Wallet" dalam kalangan Gen Z di Pulau Pinang, Malaysia. Tambahan pula, kajian ini menunjukkan faktor kepercayaan mempengaruhi penggunaan sistem pembayaran 'e-Wallet' berbanding faktor- faktor lain dalam kalangan Gen Z di Pulau Pinang, Malaysia. Oleh itu, keempat-empat hipotesis kajian ini diterima. Hasil kajian ini menghuraikan batasan kajian serta cadangan bagi menunjukkan gambaran yang lebih baik kepada para pengkaji yang akan datang mengenai kajian yang melibatkan "Faktor-Faktor yang Mempengaruhi Penggunaan Sistem Pembayaran 'e- wallet' dalam Kalangan Gen Z di Pulau Pinang, Malaysia."

KATA KUNCI: persepsi mudah digunakan, persepsi kegunaan, persepsi keselamatan dan persepsi kepercayaan, penggunaan sistem pembayaran "e-wallet" dalam kalangan Gen Z

ABSTRACT

The topic of this research is factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia. The purpose of this research is to determine how the Perceived ease of use, perceived usefulness, perceived security and perceived trust factors influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. The sample size of this study is 384 respondents. A quantitative method used to gather the respondent's data. A Pearson correlation coefficient have used in this research to analyse the correlation and coefficients among the factors that influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia. The Statistical Package for Sciences (SPSS) version 26 was used for data analysis. From the findings of this research, it shows that Perceived ease of use, perceived usefulness, perceived security and perceived trust have a positive significant relationship with influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia. Furthermore, it demonstrates that among Gen Z in Penang, Malaysia, perceived trust influences the intention to use e-wallet payment system more than other factors. Therefore, all four hypothesis of this research is accepted. From the outcome of this research, limitations of this study and recommendations are included in this study to give a better idea for future researchers related to studies involving the factor influences more on the intention to use e-wallet payment system among gen z in Penang, Malaysia.

KEYWORDS: Perceived ease of use, Perceived usefulness, Perceived security and Perceived trust, intention to use e-wallet payment system among gen z

CHAPTER 1 INTRODUCTION

In the first chapter, an explanation is given regarding an introduction to this study, encompassing the eight key elements that introduce the background, problem statement, research objectives, and questions. In this study, the researcher has been investigating the factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia. Then, it is followed by a different variable that represents the significance of this study, the definition of the terms used in the conceptual model of the intention of the E-wallet payment system, and the limitations of this study. Finally, it is followed by a different position representing this study's implications. The chapter is summed up in the closing section.

1.1 BACKGROUND OF THE STUDY

Technological innovation is transforming financial services and products. The desire for faster and easier payment methods has been fuelled by the advent of innovative services like e-commerce made possible by the constantly expanding and changing technologies (Hammond, 2018). Payments have been and continue to be the most affected by technological innovation (Hancock, 2020). Traditional payments are ones in which the majority of transactions take place with the aid of cash. In addition, there are letters of credit, demand draughts, and checks (Paytm for Business, 2022a, 2022b). Unfortunately, the traditional modes of payment, which were growing slowly, could not meet the demand for new payment systems. As a result, new digital payment methods are emerging (Hammond, 2018). Transactions conducted via digital procedures are referred to as electronic payment systems. Credit/debit cards, net banking, and mobile wallets are all examples of e-payment mechanisms (Paytm for Business, 2022a, 2022b).Due to the form of online shopping and e-commerce websites, the need for electronic payment methods has increased dramatically. Therefore, the complicated consumer intention affects the e-wallet system for online payments.

While cash remains, the primary means of payment, its use has declined due to advancements in payment virtualization, digital technology, and system infrastructure. The expansion of e-commerce and apps has become ingrained in our daily life. With mobile and Internet banking channels, paying is quickly becoming obsolete (Dato' Azmi Mohd Ali & Syaizta Kamal, 2018). E-wallet is one of the most well-known forms of payment available today among e-settlements. A payment card that is authorised for you to conduct exchanges electronically is known as an electronic wallet, sometimes known as a "digital wallet" or "E-wallet" (Abdull Rahman et al., 2022). E-wallet is a by-product of this technological advancement and a major driving force in the increasing volume of digital transactions (Dato' Azmi Mohd Ali & Syaizta Kamal, 2018). The e-wallet, often owns as a digital wallet, can help to make purchases more frictionless. Near-field communications technology combines software and data that enables users to make quick and easy purchases (GoCardless, 2022).

When Coca-Cola built several vending machines in Helsinki that enabled customers to buy a can via push notifications in 1997, those were the first E-wallet transactions. Although very different from contemporary e-wallet transactions, this is nonetheless regarded as the beginning. Soon, movie and airline bookings, hotel reservations, and food delivery were all made using mobile devices. Over 95 million people had acquired a mobile device by 2003 (Sachdev, 2019). Google was the very first significant business to create a digital wallet during 2011. However, Apple's Passbook not intended for digital payments, was introduced in 2012. It can hold tickets, vouchers, and boarding passes. Apple Pay was introduced two years later. It started in the United States and quickly spread to China and the United Kingdom. Samsung Pay and Android debuted in 2015. Since that day, this payment mechanism has become more widely used thanks in part to digital wallets like Grab Pay, Lazada Wallet, PayPal, Touch 'n Go, and more (Francesca Sacco, 2020).

The Financial Sector Blueprint (FSBP) 2011-2020, which is the main driver behind Malaysia's e-payment ambition to create a digital economy by 2020, was introduced by Bank Negara Malaysia (BNM) in response to the global pattern of financial technological advancements in e-payments towards the cashless society (Abdullah et al., 2020b) .The transition of Malaysia to contactless transactions, which also eliminates the usage of paper-based resources like checks and bank draughts, can theoretically save the nation 1% of its GDP, or roughly RM13 billion (TAN, 2020). The use of e-wallets has grown significantly in recent years, particularly in Malaysia. According to estimates, about 15.7 million Malaysians, or 48% of the nation's 32.6 million, were e-wallet users (TAN, 2020). About 42 e-wallets in Malaysia had received legal permits from BNM (Bank Negara Malaysia). The six most well-known and widely used e-wallets include Touch's Go e-wallet, WeChat Pay, Grab Pay, Boost, and Big Pay (Cha et al., 2021). On July 21, 2016, in conjunction with the Maybank Treats Fair 2016 in Kuala Lumpur, the Maybank Group President announced Maybank Pay as the initial e-Wallet payment method via smartphone or e - wallets. By offering a new gateway through which cardholders can "carry their card within their mobile devices," Maybank Pay has revolutionized Malaysian e-payment. It is where customers begin when making digital transactions using their smartphones (Maybank Treats Fair, 2016).

Moreover, based on the Malay Mail (2020),The Finance Ministry has set aside RM450 million to launch the e-Tunai Rakyat program, which aims to increase the country's use of E-wallets. In an initiative subsidized by the government, Touch 'n Go e-wallet and others promoted the usage of electronic wallets. This is because of their enormous user base, wide-ranging merchant networks, and technological know-how. Moreover, these e-wallets play a dominant role in transforming the nation toward a cashless future (Adrian oh, 2018). Many e-wallet providers offer enticing benefits like coupons and rewards to persuade clients of all ages to use the e-wallet. Despite the idea that adolescence is a time of transition from childhood to

maturity, it is nevertheless a very fragile and susceptible time psychologically (Pfeifer & Berkman, 2018).

According to Department of Statistics Malaysia, Malaysia has a high number of young individuals among its 32.6 million population with a median age of approximately 28 years (Santander, 2019). In comparison to the Baby Boomers (13%) and Generation X (18%), Generation Y (26%) and Generation Z (25%) represent the largest generational cohorts in Malaysia (Tjiptono et al., 2020). Generation Z is born between 1997 and 2012and it illustrates that Malay ethnicity is the bulk of Generation Z, followed by Chinese and Indian. Given that they were raised in an age of technology and the internet, Generation Z is regarded as among the most technologically adept generations(Abd Razak et al., 2021). Generation Z would graduate from college, enter the workforce, and make up the largest client segment for e-wallets and other electronic payment methods by the year 2020 (Victoria Petrock, 2021). As a result, Generation Z can be targeted as a critical customer segment for e-wallets (May et al., 2021). Although using a wallet is easy, consumers, particularly young buyers, are always concerned. Regardless of the risk, this youthful generation is eager to investigate and experience this new payment option and its simplicity and security (Karim et al., 2020). Traction is increasing daily, particularly among Gen Z and millennials, who account for roughly 45 percent of the total population (Rohiman Haroon, 2020).

Despite the fact that Generation Z will likely be the largest group of e-payments consumers in the future, little research has been done on the factors that influence how they use e-wallets. Studies on the use of e-wallets by Generation Z for online purchasing are scarce in Penang. This research will investigate how Generation Z's perceptions of e-wallets' usefulness, trust, security, and ease of use affect their intentions to utilise them in Penang, Malaysia. The Penang state government hopes to fully implement and facilitate e-wallet transactions throughout the entire state by March 2020, making Penang potentially the first

cashless state in Malaysia (Digital News Asia, 2020). At the introduction of the Touch 'n Go E-wallet program in Penang, Chief Minister Chow Kon Yeow said, "I wholeheartedly support this effort towards turning cashless, and I would like to encourage all Penangites to embrace this cashless lifestyle." He continued by expressing interest in learning how long it would take Penang to achieve the ideal level of transitioning to a cashless community. This declaration of the state's intention comes as Touch 'n Go recently started offering its e-wallet services to proprietors of small businesses at several wet markets and hawker centres in Penang (Yin, 2020). Furthermore, the Penang state government has implemented a large-scale cashless system to pay for city council parking lots on the island and in Seberang Perai through the Penang Smart Parking smartphone app, which can be paid for and reloaded using an e-wallet (Isa et al., 2021). According to a market survey by OPPOTUS (2020), e-wallet usage increased fast from 38% to 63% in the first quarter of 2020 due to the e-Tunai Rakyat Campaign but decreased to 49% in the second quarter of 2020. As we can see, this study will investigate the factors that influencing Generation Z's trust, Perceived ease of use, perceived security, and perceived usefulness in their behavioural intention to use e-wallets in Penang, Malaysia. The study employs TAM theories to examine the factors that drive e-wallet adoption. Businesses pursuing digital markets can benefit from the insights.

1.2 PROBLEM STATEMENT

According to Cheng et al. (2018) , the new payment mechanism, E-wallet, will aid in the expansion of e-commerce by replacing the role of a traditional wallet. However, According to Tan and Li (2018), despite the growing relevance of E-wallets, Malaysia has still considered a regional laggard due to its low adoption compared to China, India, and Singapore. Furthermore, Malaysians were rarely engaged in E-wallets because of numerous problems, such as a lack of internet expertise, which led to a lack of confidence in adopting e-wallets (Saxena et al., 2019). Some people continue to utilize traditional payment methods such as

cash, debit card, credit card, and cheques because they are sceptical of the benefits of E-wallets (Osman & Yi, 2021).

Furthermore, customers declined to use E-wallets because they did not believe the system settings were valuable and capable of meeting their expectations and requirements (Osman & Yi, 2021). Consumers refused to use E-wallets because they viewed it as a waste of time to install and set up an E-wallet during the initial verification stage, even though E-wallet firms claim to be easier to use. Furthermore, consumers may believe E-wallets are ineffective due to insufficient merchant acceptance. According to Osman and Yi (2021), 27% of consumers do not use E-wallets due to limited merchant adoption at this early stage of the system's development.

On the Contrary, people refused to use E-wallets because they regarded them as challenging. Even though most Malaysians own smartphones, they may be unfamiliar with E-wallets, particularly among the elderly, who take more time to learn about new technology (Fintech News Malaysia, 2019). As a result, features such as completing a transaction payment or topping up value via an E-wallet may be complex and confusing for a new user.

According to the Osman and Yi (2021), people are hesitant to use E-wallets because they are unaware of their security features. Due to their perception of a high risk of security and privacy issues, including the tracking or hacking of personal information, the use of unencrypted transactions rather than those involving credit and debit cards, and the likelihood of unauthorized purchases, consumers declined to use e-wallets. Some of the consumers' concerns may result from misinformation and incorrect information regarding E-wallets, which has hampered their willingness to embrace them (Yun, 2022).

Moreover, customers' belief in their online sellers comes next after carefully assessing their qualities. Trust is the fundamental idea that unites honesty, reliability, goodness, and dependability (Alkhalifah, 2021). The degree to which people view the use of mobile payment

technologies as trustworthy is referred to as trust. Mobile payments are still heavily influenced by users' lack of confidence in their degree of trust, security, and confidentiality because they are a relatively new technology (Sleiman et al., 2021). The lack of face-to-face interaction between buyers and sellers during online transactions is often the cause of the lack of confidence in e-commerce. Therefore, customers worry that the seller might mislead or utilize their personal information improperly (Sleiman et al., 2021). Therefore, a lack of trust may make consumers hesitant to buy goods or services from online sources.

According to Zhou et al. (2022) research, the Technology Acceptance Model (TAM) is an updated suit to people's demands. Sahi et al. (2021) exhibited for the first time how the model forecasts customer adoption and usage of digital payments. As a result, in TAM by Zhou et al. (2022), acceptance to determine Perceived ease of use and perceived usefulness is used to determine individuals' intention to embrace new information technology. Purohit (2022) used the TAM model to assess earlier research on mobile payments, which revealed that perceived usefulness and ease of use were the two factors which had the greatest impact, accompanied by security and trust.

Because there has been little research on factors influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia a comprehensive system with additional assets related to diary data set and time must be developed. Thus, researchers employed the aspects of the four significant difficulties **(Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust)** that have previously been evaluated and cited (Mustafa et al., 2022). These four variables were investigated by experts to gain a better understanding of the intention to use e-wallet payment system among Penangite’s gen Z. This study is essential for Penang Gen-Z citizens since the intention of E-Wallet Payment System in the local country has yet to be fully achieved, so the following generations, such as Gen Z, will significantly increase the use of online payment system in the coming years.

1.3 RESEARCH QUESTIONS

The research questions will help determine the relationship between those variables. To answer the research objectives, there are research questions developed such as:

1. What is the relationship between perceived ease of use and intention to use e-wallet payment system among gen Z In Penang, Malaysia?

2. What is the relationship between the perceived usefulness and intention to use e-wallet payment system among gen Z In Penang, Malaysia?

3. What is the relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia?

4. What is the relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia?

1.4 RESEARCH OBJECTIVES

Research objectives will focus on the outcome of this study and help achieve the research goal. The research objectives of this study are:

1. To examine the relationship between perceived ease of use and intention to use e-wallet payment system among gen Z In Penang, Malaysia.

2. To examine the relationship between perceived usefulness and intention to use e-wallet payment system among gen Z In Penang, Malaysia.

3. To examine the relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia.

4. To examine the relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia.

1.5 SCOPE OF STUDY

Specific scopes can be discovered in this study. First, consider the study's population. This research aimed to identify the factors that generation Z millennials between the ages of 15 and 24 consider essential when deciding whether to utilize an electronic wallet as a payment method. This study was limited to individuals of Generation Z in Penang who were of various races. Secondly, the geographical area is also the scope of the study. Penang state is the scope of the survey to be taken. The results from the research can be used to generalize similar case studies. In addition, the data will be gathered in a survey using a questionnaire at a particular time in the city of Penang in Malaysia.

1.6 SIGNIFICANCE OF THE STUDY

This e-Wallet brings about a significant change in the community's daily life, particularly for the younger generation, such as Gen Z, who are already exposed to increasingly sophisticated technology such as this application. This study was conducted to identify common occurrences among e-Wallet users, particularly Generation Z users. The previous generation may be less comfortable with technological matters and more comfortable with manual payment financial systems. As a result, they believe more in what is happening in front of them and what they have always used.

E-wallet consumers, customers, supermarkets, marketers, banks, and legislators will all gain from the research. This will happen whenever an examination reveals the consequences that various user groups, depending on their gender, age, and level of income, experience when using various e-wallet platforms, and whether there are any differences between them given that this technology is still relatively new among consumers.

RESEARCHERS

The significance of this study is that it can identify the characteristics that cause users to prefer e-Wallet applications over others, allowing developers to improve their existing applications. These features can be used to promote e-Wallets and decrease the need for physical money transfers. The researcher will investigate whether this prevalence is caused by their reading's Perceived ease of use, perceived trust, perceived security, and perceived usefulness. Each related matter will prompt them to prove that the e-Wallet is a better application and appropriate for their daily lives.

GOVERNMENT

It should have been noted that since there are so many laws governing mobile banking and e-wallets, this research will assist politicians and legislators in putting effective e-payment policy ideas that cater to the needs of consumers and sellers of goods into place, as well as in adding sound rules to safeguard system users. Users are expected to use the study's findings to fill in their brains with some of the consequences the e-wallet system will have before starting to use it, and all decisions will be made based on the system's knowledge.

The results can help mobile wallet service providers prioritise their efforts, determine how the system affects users, and subsequently modify or sway users' opinions about it. Although important and helpful to Gen Z consumers, this discovery will also add to the body of knowledge on digital and mobile payment systems.

E-WALLET MERCHANTS

Merchant Wallets offers more than just payments; they also provide various value-added services. This could also benefit e-wallet providers by expanding their customer base. This study is thus essential for entrepreneurs interested in developing e-wallet service in Penang. This system manages liquid cash exchanges between a business and a customer,

enhancing the accuracy and speed of financial exchanges on both sides. The amount is transferred into the merchant's wallet and is readily transferable to the merchant's savings account when the merchant detects the QR code from the customer's smartphone. The user must insert a debit or credit card into the wallet and could also store the card information for later use.

1.7 DEFINITION OF TERMS

1.7.1 E-Wallet

E-wallet is a mobile wallet or digital wallet, an application that only allows users to use online through a computer or smartphone to make payments. This e-wallet has the same function as a credit or debit card (Kagan, 2022a). When making any payment, users can use an e-wallet by scanning a QR code, tapping, and paying on the phone with NFC features or online transfer. Malaysia has many e-wallets, such as Touch n Go, Grab Pay, Boost, etc (The Economic Times, 2022).

1.7.2 Generation Z

Numerous scholars refer to the current generation of adolescents as Generation Z. According to Demir and Sönmez (2021), Generation Z consists of individuals born after 1995. On the other hand, Dimock (2019) argued that Generation Z was born between 1997 and 2012. Moreover, Generation Z is also known as the "digital natives" and the "digital society,"(Heather A. Turner, 2019). These names are generated from the birth year of the generation.

1.7.3 Perceived ease of use

The term "Perceived ease of use" refers to the extent people believe the technology they utilize is simple to operate. Another definition of Perceived ease of use is the comfort one experiences when employing a specific technological solution (Keni, 2020).

1.7.4 Perceived usefulness

Perceived usefulness can be explained by how people use or implement a specific technology to help themselves and improve job performance. Perceived usefulness defined as the confidence that a new piece of technology will aid in attaining one's objectives (Keni, 2020).

1.7.5 Perceived security

The term "perceived security" refers to the confidence with which a mobile payment user completes financial and identification-related transactions using their mobile device. Perceived security is described by Razif et al. (2020) as the customer's perceptions and subjective evaluations of a system's security and how well they are protected from potential hazards. Also, according to Lyra (2021), users are more likely to back out of e-payment transactions if they have a deficient level of trust in the system's safety.

1.7.6 Perceived trust

The term "perceived trust" refers to the internal state of mind that prompts one to trust another based on the other's laudable actions. Therefore, perceived trust is vital in adopting new technologies, and it supports business owners in cultivating healthy ties with their customers (Ali & Bhasin, 2019). Furthermore, according to Singh and Sinha (2020), trust has been a critical factor in buyer-seller transactions, giving purchasers long-standing high expectations of the success of their commercial relationships.

1.8 ORGANIZATIONAL OF THE STRUCTURE

The background of the study, study objectives, research questions, problem statement, scope of the study, and significance of the study are all explained in chapter 1. The literature review will next be covered in chapter 2 by reviewing and elaborating on what has been done in previous studies by other researchers and by discussing theoretical models, conceptual frameworks, and hypothesis statements. Chapter 3 will discuss data collection, sampling design, data analysis, and research instruments. The results from IBM SPSS Statistics 26 will be interpreted in Chapter 4. In the last chapter, we will summarize the study's findings, discuss the research's potential policy implications, discuss its limitations, and provide recommendations for further work

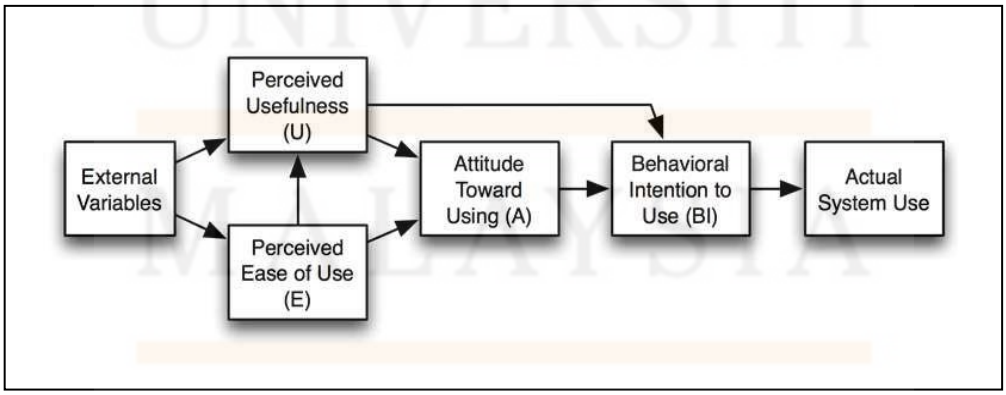
CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

The entirety of the literature review was devoted to discussing the factors influencing the intention to use an electronic wallet payment system among Generation Z in Penang, Malaysia. In order to research the hypotheses and previous observational investigations that relate to this study, a collection of published publications, journals, and websites was gathered. In this chapter, readers will gain a deeper understanding of the Dependent variable, which is the Intention to use E-Wallet Payment System Among Generation Z, and the independent variables, which are Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust. Additionally, this chapter will discuss the relationship between the two variables. This chapter comprises a study of the relevant literature, a review of the appropriate theoretical model, a conceptual framework, the creation of hypotheses, and an overall conclusion of Chapter 2.

2.2 UNDERPINNING THEORY

2.2.1 Technology Acceptance Model



Source: (Suleman et al., 2019)

Figure 2.1: First Modified Tam

The technology acceptance model (TAM), created by Davis 1989 is the most well-known paradigm for describing and evaluating individual aspirations to embrace new technology. This study has been supported by Diop et al. (2019), The TAM, the most extensively used technology adoption model, has been demonstrated to accurately forecast the intention to use new technologies. TAM, like TRA and TPB, predicts that an individual's attitude influences their behavioural intention (Chen, 2018). It focuses on two main factors influencing people's acceptance of new technology: perceived usefulness and Perceived ease of use. Perceived usefulness is defined as "the extent to which an individual believes that using a particular system would improve his or her job performance in an organizational context," whereas Perceived ease of use is defined as "the extent to which an individual believes that using a particular system would require no physical or mental effort" (Li et al., 2020). The core premise of TAM is that individuals act rationally when they employ an information technology product or service (Ajibade, 2018). TAM has been adopted as the foundation for a few research findings on mobile payments, with additional variables like security, cost, trust, mobility, emotionality, convenience, speed of transaction, use circumstance, social peer group, information quality, the allure of alternatives, privacy, system quality, and digital anxiety being adapted (Chen, 2018). Perceived security is then anticipated to significantly impact behavioural intentions. Since perceived security also has financial components, it needs to have a significant impact on the suggested approach. Furthermore, since perceived security is a composite construct, beliefs on a particular payment method do not immediately surface. Users assess a system's security over time based on its successes and failures throughout performance. Public sentiment and social influence are given weight in the aggregate security construct as well (Razif et al., 2020). The findings show that self-efficacy and social influence have little impact on behavioural intention (Momani, 2020). By extending TAM to look into consumers' acceptance of mobile payment and assessing their models in various contexts, the offered

theoretical constructs. For example, Rahman et al. (2020) To discover and evaluate the factors influencing consumers' inclination to use digital payments in developed countries, TAM was expanded, and a structure equation model was established. Ullah et al. (2022) evaluated the usefulness of TAM in their study of consumer acceptance of mobile payments and suggested that a new element, trust, be introduced to TAM. TAM was improved, modified, and multi-item scales to gauge the perceived usefulness, security, cost, trustworthiness, and emotionality of mobile payment users were made (Karim et al., 2020). TAM was used by Chen (2018) to investigate the impact of perceived usefulness and Perceived ease of use on consumer desire to utilize mobile payment systems in New Zealand. TAM was combined with consumer characteristics, four mobile payment system functionalities, and statistics from South Korea to examine the factors impacting the use of digital payments. To investigate the factors impacting the adoption of NFC-based mobile payment in Malaysia, Ho et al. (2019) introduced trust-based behavioural control theories into TAM. explored the role of Value-Added Services (VAS) in Danish customers' adoption of mobile payment using TAM and DOI. By creating a framework that incorporates technological readiness and acceptance into TAM, it was possible to analyse the factors influencing consumers' adoption of mobile payment in South Korea (Shin & Lee, 2021) . TAM was expanded to consider a person's own innovation capabilities, subjective norms, perception of risk, and perceived costs. The model was tested using data from Malaysia. The results of his model test validated the role of perceived usefulness and convenience of use as antecedents in customers' acceptance of mobile payment but also suggested that perceived security and trust influence consumers' attitudes and intentions. They demonstrated that customers' acceptance of mobile payment is significantly influenced both directly and indirectly by compatibility, perceived technology security, performance expectations, innovation, and impact on society. Finally, as previously said, several theories have been used in technology adoption studies, such as the TAM to foresee and explain users'

willingness to use information technology and to determine technology acceptance behaviour. As a result, the study implies that these influence the intention to use e-wallet payment system among gen Z In Penang, Malaysia.

2.3 PREVIOUS STUDIES

2.3.1 THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z

In this research, Intention refers to generation Z using the e-wallet based on the factors as a consideration utilizing the e-wallet. Generation Z, between the years 1997 and 2012 (Linardi & Anggono, 2019). is accustomed to turmoil. An E-wallet, often known as a digital wallet, is a software-based system that holds bank information and allows users to make payments using their mobile phones. Rather than carrying a traditional wallet containing all your debit and credit cards, you can upload your current bank account information to your digital wallet and use it anytime you want, as long as you have your phone with you. You can also use your phone to make purchases using a digital wallet: when you go to the checkout page, you should see which digital wallets the firm accepts and make a payment with a single click (Marques, 2021). These traits of Generation Z distinguish them in lifestyle and consumption behaviours. While Generation Z still prefers in-store purchases, internet purchases are increasing in popularity. In today's modern and dynamic technological evolution, consumer acceptance of technologies is reliable under specific conditions. The digital era has unquestionably begun as a result of the global evolution of financial technologies from cash payment to digital and E-wallets (Abdullah et al., 2020a). The electronic wallet, or e-wallet, is a card that may be used to make purchases digitally via a smartphone or computer. It accomplishes the same task as a debit or credit card. An E-wallet must be connected to the user's bank account in order to accept purchases (The Economic Times, 2022). Furthermore, it is adaptable with a "personal banking system" that includes a number and a pay-in option.

Payment by e-wallet is currently one of the most popular transaction systems since a digital transaction via a digital wallet provides convenience, flexibility, and security (Karim et al., 2020). These transactions are usually conducted in physical stores when customers scan the (QR) code with their mobile device to authenticate the payment (Lu, 2018). Customers gain from an E-Wallet because it supports a transaction that provides them with everything they desire: speed, convenience, and security. It eliminates the necessity for carrying a physical wallet with them when they go out and removes the need for them to dig out their debit card when making an online transaction. They don't have to memorize passwords or "long numbers" from credit cards. Customers may have quick, convenient, and secure access to the products or services they want if they have their smartphones nearby (GoCardless, 2022). Gopi further noted that 40% of Malaysian customers had increased their mobile/digital wallets, 26% had used contactless debit cards, and 22% had used contactless credit cards. Malaysia has also been at the forefront of e-wallet adoption in the region, surpassing the Philippines, Thailand, and Singapore. Malaysia now has around 42 e-Wallets that have gained formal licenses from BNM (Bank Negara Malaysia, 2022). The six most popular and frequently util-utilized consumers are AEON Wallet, Boost, Big Pay, Grab Pay, WeChat Pay, and Touch 'n Go E-wallet. Additionally, with the Penang state government preparing to completely implement and approve e-wallet operations throughout the state by March 2020, Penang could become the next cashless city in Malaysia (Yin, 2020). Touch 'n Go E-wallet is the first and only e-wallet that officially enable Penangites to experience and enjoy cashless purchases via the different bazaars and night markets in these key historical streets (Touch 'n Go, 2020). Based on the research, it can be said that Gen-Z in Penang uses e-wallets primarily due to their interoperability, flexibility, and user-friendly operations that are carried out via digital devices.

2.3.2 FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z

This section reviewed the body of research on the factors that influencing the intention to use e-wallet payment system among gen z. Several studies have been conducted to determine the factors that impact a user's use of an e-wallet. Furthermore, the Davis (1986) Technology Acceptance Model (TAM) was widely employed in the research field to investigate the factors that influence a user's choice to adopt a new technology system.

2.3.2.1 Perceived ease of use

EduTech Wiki contributors (2021) defined perceived ease of use as the degree to which a person believes using technology or systems requires no effort. As a result, a scheme or design should be simple enough to use. The ease of use refers to how quickly and easily the gadget can be utilized and how easily all operations and processes can be done electronically (Mustafa et al., 2022). Besides, To and Trinh (2021)) also note that perceived ease of use is based on how much time an e-wallet can save and how simple, easy, and intuitive it is.

According to findings from earlier studies, consumers have a greater propensity to accept a product or technology if they believe it to have a high level of ease of use (Alyoussef, 2021). Moreover, several other research also states that ease of use is the most significant factor determining whether people would use electronic wallets (Kumar et al., 2018). The significance of usability has been emphasized in other papers as well. Based on this, Chen (2018) found that a positive intention to use E-wallet was significantly connected with ease of use. This has been reinforced by the findings of Mustafa et al. (2022) who observed that the perceived ease of use was a favorable, principal, or crucial element in the willingness to use e-wallet services.

The perceived ease of use, usefulness and attitude were all positive indicators of the intention to use mobile services, as Mustafa et al. (2022) stated. Previous research has found

that perceived ease of use positively connects to actual usage intent. Thus, more customers would use the system if its operations and procedures were uncomplicated and straightforward to understand and carry out. In essence, the purpose of using an electronic wallet is the same as that of using cash. Consumers will go elsewhere for a solution if a procedure is too difficult or time-consuming for them (Karim et al., 2020). Furthermore, consumers will have preconceived beliefs about a product or service, which could impact how excited they are to utilize a particular system or technology.

In addition, customers will become more willing to use their mobile devices once they realize how simple it is to do so (Li et al., 2020). For example, Touch 'n Go E-wallet. The first e-wallet that formally enables Penangites to access experience and enjoys contactless payment via the numerous bazaars and night markets in these crucial historical streets is the Touch 'n Go E-wallet, which has transformed the renowned and historic island. From utilizing cashless to pay for parking to more services becoming cashless shortly, the goal is to limit cash transactions to a minimum (Editor, 2020). TNG Digital Sdn. Bhd. CEO Ignatius Ong stated, "We are genuinely delighted to be extending our expertise to Penang as this puts us on the correct route to attaining our vision of a cashless Malaysia." Enabling these heritage streets continues our long-term commitment to propel Penang forward by providing locals with a more convenient, safer, and hassle-free means of transacting daily (Amirul Mukminin, 2020). As a result, this study has supported that the simplicity of use is the most crucial element influencing the inclination to use e-wallets Mustafa et al. (2022). Therefore, perceived Ease of Use is a factor influencing the intention of Gen Z in Penang to use e-wallet payment system.

2.3.2.2 Perceived usefulness

According to the definition of perceived usefulness (PU), someone who thinks that utilizing a particular application will increase their work efficiency and increase productivity

To and Trinh (2021) & (Lim et al., 2021). According to Li et al. (2020), A person's motivation to enhance their performance of tasks assigned to them through a particular program is perceived usefulness. The use for which new technologies will be used will change whenever consumers see their value as being extraordinarily high (Li et al., 2020).

This research has been supported by Hanafi and Toolib (2020), who indicate that the perceived usefulness of a digital payment method considerably influences the willingness to use that payment method. According to the research findings, customers utilize the applications because they are committed to achieving their goals. Respondents indicated that they could rapidly complete a transaction involving mobile payments. Moreover, the benefits of earning awards and digital receipts increase the use of mobile phones. Consequently, the popularity of e-wallets by generation Z is attributable to the interoperability, flexibility, and accessibility of smart devices (Karim et al., 2020). According to research Bakar et al. (2022), the likelihood of using an e-wallet app is directly related to how valuable the user thinks it will be to them. However, perceived usefulness is only adequate to affect the continuation of using e-wallets if it is supported by customer happiness (Olivia & Marchyta, 2022).

Besides, a person's ability to use a system for a long time can be influenced by perceptions of the system's usefulness (Tiara & Usman, 2019). This study has been supported by Chan et al. (2021); one's perception of usefulness reflects how comfortable one is using technology to advance their career. Usefulness can be evaluated using the following criteria: helpful, beneficial, efficient, and productive. According to Li et al. (2020) research, when consumers believe they are using a digital wallet, they gain access to advantages like ease and payment ease. The ease of payment may make users believe it is unnecessary for someone always to carry cash to feel comfortable using the system. The degree of consistency with which digital wallets are used is influenced by indicators of confidence that affect a person's perception of comfort. System consistency is valuable since it ensures that the system continues

to fulfill a function in one's life. Li et al. (2020) proposes at least one indicator of perceived uses: high-risk, transaction security, and security systems.

Therefore, perceived usefulness has been used as a variable in several studies, and most of the findings indicate that it significantly affects people's willingness to adopt new technology. Perceived usefulness has a significant influence in determining technical acceptability, leading to better results for subsequent investigations. Therefore, perceived usefulness is a factor influencing the intention of Gen Z in Penang to use an e-wallet payment system.

2.3.2.3 Perceived security

The term "perceived security" refers to the user's sense of how effectively they are shielded from potential danger (Razif et al., 2020). Perceived security, as defined by Zhang et al. (2019), is an individual's confidence in their ability to transmit sensitive data over a network. (Osman & Yi, 2021) notes that the extent to which an individual feels that utilizing mobile payment processes would still be safe is a good indicator of the person's impression of security. In the context of digital wallet payments, "perceived security" is a psychological concept that refers to users' beliefs that their digital wallet transactions are secure in terms of both their financial information and personal information.

Many aspects must be highlighted in this modern era, including protecting personal information while utilizing e-wallets. According to studies by Lyra (2021),customers are less likely to use online payment systems if they have doubts about their safety. Studies have shown that consumers are put off from completing purchases due to concerns over their personal information not being kept secure (Alzaidi & Agag, 2022). If proper security measures are not given, cybercriminals may get access to private information through electronic wallet payments (Karim et al., 2020). This study has been supported by Shin (2020), discovered that cash is

more likely to be the preferred payment option than payment cards among Canadian clientele. This is because consumers do not have faith in the integrity of the POS system and are afraid of being victims of POS-related fraud. It was acknowledged by consumers' worries about online payment security would reduce their propensity to use such systems.

Furthermore, Mustafa et al. (2022) stated that users' perspectives on the usage of systems and technology would be affected by their perceptions of security. Customers are more inclined to accept and use techniques like e-payment when they feel confident in the system's security, usefulness, user-friendliness, and efficacy, as found by research by (Mustafa et al., 2022). At the time, People would not use systems and technology if they felt insecure (Yang et al., 2021). Therefore, any vulnerabilities in the security of e-wallets would harm their users.

Nonetheless, Li et al. (2020) found that the adoption of e-wallets is higher among Gen Z and that there is no significant relationship between the perceived security of e-wallets and their use. In comparison, Karim et al. (2020) reported an association between perceived security and the intention to use e-wallets in research on young Malaysian adults. This study had been supported by Sunny and George (2018), came to the same conclusion: perceived security affects people's intentions to use the e-wallet payment system. This finding also supported by Andrew and Tan (2019), which determined that security has a high relationship with the intent to use the E-wallet payment system. In contrast, other research that Aribake and Mat Aji (2020) on the integration of perceived security as a descriptive variable across payment instruments revealed that perceived security was no significant influence on the intention to use e-payment. Most researchers such as Rahmadhani et al. (2022) agreed that perceived security has a significant influence on consumers' intentions to use E-wallet payment systems. As a result, we can conclude that perceived security positively influences the choice of Gen Z in Penang to use the E-wallet payment system.

2.3.2.4 Perceived trust

Trust, as defined by Kagan (2022b), is the assurance that a customer's financial and private data will be kept secure. Mustafa et al. (2022) described trust or confidence as a person's readiness to expose oneself to the activities of a trusted party based on a sense of trust or assurance. In addition, trust is the conviction that one's prospective companion would not exploit one's confidence (Oswald A. J. Mascarenhas, 2019). Trust is also stated as the responsibility of a service provider and the capacity to satisfy consumers' expectations.

Previous research has indicated that trust is a strong predictor of the usage of technology and gadgets (Mondego, 2018). Researchers have shown that people's level of trust substantially affects whether or not they plan to use technologies like electronic wallets (Mustafa et al., 2022). According to Chao (2019), trust is a factor that motivates users to utilize and accept new technologies. This study has been supported by Cha et al. (2021), stating that if an e-wallet system is not entirely trustworthy, then users will not adopt it. Mondego (2018) notes that it is vital to create user trust to understand consumers' demands so that people can trust the e-wallet system and utilize it. Thus, confidence can nudge customers into making transactions online and through e-wallet systems.

Even though most research found a relationship between trust and intention to use, Chao (2019) concluded that trust is not a reliable indicator of a person's willingness to embrace new technologies and gadgets. This difference might result from beliefs that the digitally aware Generation Z members perceive as unimportant. Further, Ing et al. (2021) concludes that perceived trust is inadequate in motivating consumers, which is in line with the findings of Paramasivam et al. (2022), who found no objective evidence relating to perceived trust and desire to use e-wallets. However, research by Abdull Rahman et al. (2022) on young

Malaysians indicated that the acceptability of e-wallet platforms is significantly correlated with the level of confidence that users have in those systems.

An additional finding from the research supported by Paramasivam et al. (2022) showed that consumers' perceived trust affected their inclination to utilize an electronic wallet. Researchers Kolandaisamy and Subaramaniam (2020), discovered that consumers' faith in the E-Wallet payment system affects their propensity to use it. We can conclude that perceived trust impacts the intention of Gen Z in Penang to use the E-Wallet payment system.

2.4 CONCEPTUAL FRAMEWORK

The diagram below shows the relationship between independent and dependent variables in the form of a conceptual framework. From the framework, there are four independent variables: Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust. The dependent variable of this study is E-Wallet Payment System Among Gen Z.

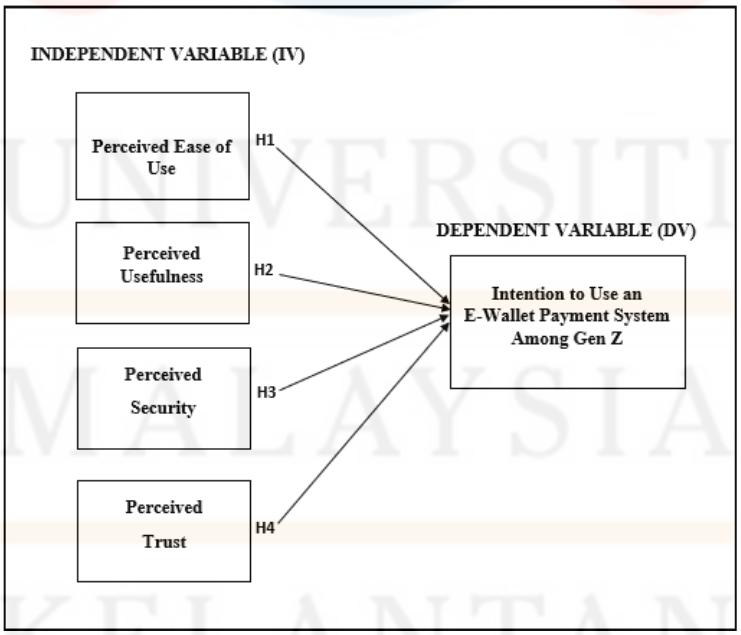


Figure 2.2: Conceptual Framework of the Factors Influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia

2.5 HYPOTHESS STATEMENT

The hypothesis is needed to establish the relationship among these variables mentioned and to test whether the relationship that has been theorized holds true.

H0: There is no significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H1: There is a significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H0: There is no significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H2: There is a significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H0: There is no significant relationship between perceived security and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H3: There is a significant relationship between perceived security and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H0: There is no significant relationship between perceived trust and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H4: There is a significant relationship between perceived trust and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

2.6 SUMMARY

To summarize, this chapter has discussed the underlying theory that will be applied in this investigation. After that, there was a discussion about previous examinations, followed by an explanation of those discussions. After that is a statement that states the effect that one variable has on another variable called a hypothesis statement. In conclusion, the dependent factors and independent variables were utilised to construct the conceptual framework for this investigation.

CHAPTER 3: RESEARCH METHODS

3.1 INTRODUCTION

This chapter explains the research methodology related to the theory and conceptual framework model based on the study's research evidence. As a result, the chapter is broken into sections explaining the study's approach, tactics, and verification methods in depth. Data gathering methodologies and data analysis methods are also described. A quick overview of the overall research design is one of the primary elements that explain how the research is carried out. The sampling method for the study is then detailed. A pilot test was also described in this chapter to test the viability of the investigation. The techniques utilized to acquire information from the given sample and the procedure for carrying out the whole thesis are detailed. Finally, outline the data analysis used to generate the study's findings. The explanation includes the logic and justification for the chosen technique and a complete description of the methodologies used. The chapter also explains the actions to guarantee that the study is conducted according to ethical research practices.

3.2 RESEARCH DESIGN

According to Li et al. (2020), the research design is a methodological framework that researchers utilize to efficiently handle research difficulties by logically merging diverse research components. The two types of research designs are qualitative research design and quantitative research design. The study's details are gathered coherently and logically to ensure that the researcher will effectively solve the research topic, which is to develop an action plan for data collecting, measurement, and analysis. These investigations' design processes can include forms, features, similarities, linkages, changes, and differences. This study employs quantitative methodologies since they are more objective in studying and understanding the link between independent variables and factors that influencing Gen Z's use of payment

systems via E-Wallet in Penang. After collecting the primary data for this study, it will be analysed utilizing a questionnaire survey. The researcher will then collect data since it is the most convenient, has the broadest coverage, and is the most versatile tool.

3.2.1 Quantitative Research

According to Imed Bouchrika (2022b), The first strategy is to design the study from a quantitative standpoint. This strategy works well for a study objective where a mathematical finding is connected to a practical understanding. The quantitative approach views statistics as an interpretation of the data, as its name suggests. According to TheIntactone (2019), When a study requires to draw inferences from the data in order to gather useful information, quantitative research is used. To properly appreciate key business decisions, use actual figures. Any company's success is based on quantitative research design because any conclusions reached through analysis and data collection will only be profitable for the company.

3.2.2 Correlational Research

Correlational research is a form of methodological approach in which two factors are observed to establish a significant correlation between them. The goal of correlational research is to uncover variables that are related in such a way that an alteration in one causes a change in another. Unlike experimental research, which is totally based on scientific methods and hypothesis, this form of research is descriptive (Pritha, 2021). Positive correlational research, negative correlational research, and no correlational research are the three forms of correlational study. Positive correlational research is a research strategy that involves two statistically correlated variables, at which a rise or decrease in one variable causes a similar change in the second. Negative correlational research is a study strategy that involves two statistically opposite variables, where a rise in one variable causes an equivalent effect or reduction in the other factor. A sort of correlational study in which two variables are not

highlighting important related is known as zero correlational research. A modification in one of the factors may not result in a corresponding or alternate change in the other variable in this scenario. Zero correlational research takes into account variables having ambiguous statistical correlations (Questionpro, 2022a).

3.2.3 Cross-Sectional Study

Statistics from one particular time period are examined in a cross-sectional study. In this kind of study, individuals are chosen based on certain variables that are important. Although cross-sectional studies are frequently utilized in adolescent development, they are also widely used in social science and education (Kendra Cherry, 2022). Cross-sectional studies are observational in nature and are classified as descriptive research; they are neither causal nor relational, therefore they cannot be used to ascertain the reason of an issue, such as a sickness. Research team would not alter factors; instead, they record the data that is existing in a demographic (Questionpro, 2022b).

3.2.3.1 Descriptive Research

According to the researcher Team Leverage Edu (2022), thoroughly discusses the circumstance or issue which is the factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia in their learning resources while using a descriptive research design. This kind of research design is entirely theoretical, with the researcher gathering data, processing it, organizing it, and then clearly presenting it. It is the type of study design that is the most open-ended. A descriptive design may make use of a variety of research methods to investigate one or much more factors. In contrast to experimental research, the researcher in a descriptive study approach simply observes and assesses the variables without changing or controlling any of them. In other words, even though descriptive research can also be used in qualitative studies, descriptive research methods are often thought of as a subset of

quantitative studies. The study design must be correctly built-in order to ensure that the findings are accurate and true (Shona McCombes, 2022).

3.3 METHOD OF DATA COLLECTION

To solve the research problem, data collecting involves acquiring information from all pertinent sources (BYJU'S, 2022). Data is a vital resource for any study. This is because researchers will analyze the information gathered from respondents to analyze the hypothesis and research questions. Data can be classified into two types: primary and secondary data.

3.3.1 Primary Data Collection

Primary data collection is collecting data from a live source, such as a human being. Primary data collection aims to collect data that is as accurate and complete as possible (Ines Maione, 2022). Primary data sources include surveys, observations, experiments, questionnaires, focus groups, interviews, and many more (Formplus Blog, 2022c). Primary research includes qualitative and quantitative analysis (Imed Bouchrika, 2022a).Quantitative data refers to any information that has been counted, measured, described, and given a numeric value. Qualitative data is expressive and communicated through words as opposed to figures (The FullStory Education Team, 2021)**.**

The essential data for this study comes out from the results of questionnaires. These surveys will be distributed online. Google forms, an internet software program, will be used to conduct the questionnaire forms. A questionnaire is a self-report data collection tool that every research subject uses to participate in a study (Pritha, 2022a). This analysis essentially incorporates the methods of quantitative data collection. Researchers can easily employ secondary data that has previously been gathered through primary sources for their research. This particular type of data has previously been gathered. Books, journals, papers, websites,

blogs, and many more are examples of secondary resources (Formplus Blog, 2022d). This information is easily accessible that can be used in this study.

3.4 SAMPLE DESIGN

The sampling procedure involves using a subset of the demographic to represent the complete population. This makes it possible for researchers to speculate about some insufficient sample traits. (Stephanie, 2022).

3.4.1 Study Population

Malaysia was chosen as the location for the issue review by the researcher. Before collecting data, researchers must first select and define the population. The study population is a subset of the target population from which the sample is selected (Sun et al., 2021). The study's target demographic included the residents of Penang, Malaysia. According to the Department Of Statistics Malaysia (2022b), the current population of Penang citizens on 21 Nov 2022 are 1,752,837 people. Moreover, the population targeted for this study is residents of Generation Z people who are male and female between 18 to 25 years old, which is 20.13% (352,846 people) of the overall population of Penang citizens (Department Of Statistics Malaysia, 2022a).We choose this age group as our population because they are primarily smartphone users. Furthermore, they are more aware of e-wallets, and most have used them (Chan et al., 2021). Moreover, we choose this area because it is more specific for us to get respondents to answer questionnaires through a google form.

Table 3.1: Total Number of Generation Z People in Penang

∴ **FORMULA TO FIND THE TOTAL NUMBER OF GENERATION Z PEOPLE IN PENANG:**

Total Number of Generation Z people in Penang = Number of total populations of Penang Residents × Percentage of Generation Z in Penang

Total Number of Generation Z people in Penang = 1,752,837 people × 20.13% of Generation Z

Total Number of Generation Z people in Penang = **352,846 Generation Z people in Penang**

3.4.2 Sample Size

The phrase "sample size" corresponds to the quantity of people who are included in a research study to accurately describe a population. The entire number of participants who were used in an investigation is referred to as the sample size. To ensure that the final sample encompasses the target population, the quantity is frequently divided into smaller subgroups according to demographic factors like age, gender, and geography (Kibuacha, 2021). Krejcie & Morgan (1970) presented a table for quick reference that calculated the sample size for a particular demographic (Bukhari, 2021). The population of Gen Z people in Penang is 20.13% (352,846 people), and the researcher determined the sample size in this study to be approximately 384 members to learn about the factors that influencing the intention to use E-Wallet payment system.

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

Source: (Bukhari, 2021)

Figure 3.1: Krejcie and Morgan sample size determination table

3.4.3 Sampling Technique

Sampling is a technique for choosing specific individuals or a specific group of respondents so that analytical conclusions can be drawn from them and the characteristics of the entire population may be determined (QuestionPro, 2022e). Probability sampling and non-probability sampling seem to be the two major categories of sampling procedures. Random sample is used in probability sampling, enabling the researcher to draw statistical conclusions well about entire demographic. Making a non-random choice based on convenience or other factors is known as non-probability sampling, and it allows researchers to gather data more effectively (McCombes, 2022). To accomplish the study's goal, a non-probability sampling technique called "Convenience sampling" was adopted. The “convenience sampling" refers to a technique used by researchers to gather market research data from a group of participants who are readily accessible (Fleetwood, 2022). The primary goal of this sampling method was

to select representatives at random based on their accessibility and proximity to the respondent. The sample was assigned randomly to 384 respondents. Therefore, Due to the time constraints and huge sample size, convenience sampling is the best strategy for this investigation. As a result, this sampling approach is appropriate for this research and will help researchers to achieve accurate study results.

3.5 RESEARCH INSTRUMENT DEVELOPMENT

The concept "research instrument" refers to any tool you can use to collect or get data, measure, and analyze related to your study topic (DiscoverPhDs, 2020). Some examples of research instruments include interviews, questionnaires, online surveys, and checklists (StudySmarter, 2022). This study found that quantitative and descriptive methodologies use questionnaires as their primary research tool. It is a list of inquiries to gather responses' private information and statistically significant data.

3.5.1 Questionnaire Survey

The questionnaire is made to gather all the information needed to accomplish the research aim and objectives. In order to learn more about participants' views, behaviours, or viewpoints, questionnaires are used (Pritha, 2022a). In this study, the primary purpose of a questionnaire is to collect exact data in the most feasible method. Thus, the correctness and consistency of questionnaires are crucial parts of the research method, logy known as validity and reliability.

The responders, who are members of Penang's Gen Z, will receive the questionnaires from the researcher. It will be disseminated through social media platforms including Telegram, Instagram, and WhatsApp. Moreover, Google Forms not only gives us a rapid means to design an online survey, but also enables us to gather quick replies online because

respondents may complete the survey using virtually any search engine, including a smartphone or tablet browser.

Furthermore, this study will employ a quantitative approach to quantify the issue. Any d expresses its worth through counts, or numbers are considered quantitative, and each data set has a unique numerical value. The information received from the distributed questionnaires will be supplied as quantitative data, often in graphs, to order simplicity for the researcher to comprehend, analyze, and draw conclusions.

3.5.2 Questionnaire Design

Since questionnaire surveys were utilised in the research, participants' comments are selected from response alternatives on the questionnaire. Given that the responses from a wide range of people were consistent, the process for interpreting the data was streamlined. Additionally, it occupies less time for responders to respond when they just rate the response in accordance with the question posed. Both the respondent and the researcher will gain from this (Stephanie, 2022). To make it easier for respondents to understand and respond appropriately, the questionnaire will be created in two languages (Dwibahasa), English and Malay. The questionnaire will be distributed to 384 respondents in this study. Section A, Section B, and Section C are the questionnaire's three main sections. Section A collects demographic data on Gen Z respondents from Penang, such as gender, age, marital status, sector, and others. Section B is then developed to collect data on the dependent variable, the efficiency of the Intention of the E-wallet Payment System. Meanwhile, sections C explains the study's independent variables, which include Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust. Sections B and C are the questionnaires that employs a Likert scale measurement. On a scale of 1 to 5, the level of consent is stated. This aims to

determine which elements influencing Gen Z's intention to use e-wallet payment system in Penang, Malaysia.

3.5.3 Pilot Test

According to Formplus Blog (2022b), Pilot testing includes a range of procedures which it enable us to examine different elements of your project in advance. You can think of this as a practice session or test run to help you find any holes or weaknesses in your plan before you put it into action. Both qualitative and quantitative investigations should have pilot experiments (Enago Academy, 2022). In contrast, Pilot testing is crucial because it helps in a variety of ways, including software and running tests procedure bug fixing, establishing whether a product is capable of full-scale implementation, improving time and resource best use of resources, gauging the response of your target group to the programme, evaluating programme success, and allowing the team to practise activities that will be used for usability testing (Hamilton, 2022).

To elaborate, the pilot test will be conducted on subgroups within the sample required for the research (Satterlund et al., 2011). Chosen participants will get 30 sets of questionnaires for the pilot test. Statistical Package for Social Sciences (SPSS) will be used to test the data's dependability after it has been collected. Lastly, the questionnaires would be disseminated for the main study after almost being amended considering the pilot findings if any problems are discovered.

3.6 MEASUREMENT OF VARIABLES

An unidentified characteristic that can receive one or more values and measure a particular entity is called a measurement variable. The scale of measurements refers to how the researcher measures the elements and affects how the data may be analysed and what assumptions can be drawn from it. The four measuring variables are nominal, ordinal, interval,

and ratio (Formplus Blog, 2022a). The researcher uses three measurement scales in this study: nominal, ordinal, and interval.

Nominal Scale

An element is only identified or categorised using numbers on a nominal scale, which is a measuring scale. Usually, non-numerical (quantitative) variables or situations where figures have no significance are measured using this method (QuestionPro, 2022d). The nominal scale throughout this survey is categorised in Section A. Age and gender make up the subsidiary scale in this survey.

Example of Nominal Scale:

"Gender":

☐ MALE

☐ FEMALE

Ordinal Scale

The Likert scale, an agreement scale intended to gauge respondents' level of conformity with various claims, was the scale utilised in this study's questionnaire. Since the items in Likert-type inquiries have a distinct rank order, they are typically regarded as ordinal data (Pritha, 2022b). Participants can react to questions using Likert scales by rating how much they agree, disagree, or are satisfied with the answer (Statistics Solutions, 2022a). According to Jamieson (2021), the size of a Likert scale may vary. Traditionally, researchers have employed a five-point scale (e.g., strongly agree, agree, neutral, disagree, strongly disagree). The questionnaire used a five-point Likert scale, where respondents were asked to rank each statement of each variable accordingly. This study has five points ranging from strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1.

Example of Ordinal Scale:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I often use an e-wallet.	1	2	3	4	5

Interval Scale

The data type described as interval data, or an integer, is one that is evaluated along a scale to every point being equally spaced from the other points. Another trait that can be rated on a scale is age (Questionpro, 2022c). As a result, the researcher in this study employed an interval scale to represent the age of the respondents. Section A applies this scale.

Example of interval scale:

"Age"

☐ 18 to 21 years old

☐ 22 to 25 years old

3.6.1 Origin of The Constructs

The questionnaires used in this study were adopted from Chan et al. (2021), MUNIANDY (2021), and Cha et al. (2021). Table below showed all the questions will be asked in each variable:

Table 3.2: Questionnaire Reference

SECTION	VARIABLES	ITEMS	AUTHORS
A	Demographic Profile	7	(Chan et al., 2021) (MUNIANDY, 2021)
B	Perceived ease of use	6	(MUNIANDY, 2021
	Perceived usefulness	6	(MUNIANDY, 2021
	Perceived security	6	(MUNIANDY, 2021
	Perceived trust	6	(MUNIANDY, 2021
	The intention to use E-wallet Payment System	6	(Cha et al., 2021)

3.7 PROCEDURE FOR DATA ANALYSIS

Data analysis involves looking closely at, purifying, transforming, and modelling data to find relevant information, support inferences, and strategic decision. In data analysis, IBM SPSS Statistics 26 software will be used in the process of data analysis, which there are two main requirements: the process of editing and coding. This analysis will allow the researcher to investigate the dependent variable (intention of use e-wallet payment system among Gen Z) and independent variables (ease of use, usefulness, trust, and security). A statistical diagram and table will present the data

.

3.7.1 Descriptive Analysis

The most fundamental data analysis for each research endeavour is described as "descriptive analysis." It condenses and deconstructs voluminous data, making it more approachable using straightforward graphical analysis (Miksza et al., 2018). It also allows us to simplify a considerable amount of data and create a basic explanation of the data we are studying (William M.K, 2022). In other words, descriptive analysis displays the core quantitative data analysis together with graphics such as histograms or pie charts. It is used to deliver quantitative data analysis on a specific data set (Sharma, 2019). In contrast, The descriptive analysis also includes the creation of statistics for variables which include the standard deviation, variance, minimum and maximum variables, kurtosis, and skewness as well as central tendency metrics such as the mean, median, and mode (Adam, 2022). Additionally, pie charts are made to organize and summarize gathered from Section A.

3.7.2 Reliability Test

The reliability test is in charge of evaluating and determining the validity and reliability of the scale. Researchers can examine the characteristics of the measurement scales and the components that make up the scales using reliability analysis (IBM SPSS Statistics, 2021). The researchers employed Cronbach's Alpha reliability test to demonstrate the suitability of the test and scale. Additionally, it may be used to check the inter-correlation of each variable element in questionnaires (Statistics Solutions, 2022b). The internal reliability of a test or scale is also measured by Cronbach's alpha, which has a scale from 0 to 1. Rankings are not suitable or unacceptable when the value of Cronbach's alpha is lower than 0.59. When the alpha is less than 0.6, the dependability will be poor. Then, fair scale dependability occurs when Cronbach's alpha is more than or equal to 0.6 but less than 0.7. However, the scale shows strong reliability from 0.7 to less than 0.8. Moreover, an unprecedented dependability scale is more significant

than or equivalent to 0.89 or even more than 0.9. As a result, the alpha value rises as the pieces are joined. It is advised that reliability should reach at least 0.60 for an experimental or pilot test. The figure below shows the range of reliability and its coefficient of Cronbach's alpha.

No	Coefficient of Cronbach's Alpha	Reliability Level
1	More than 0.90	Excellent
2	0.80-0.89	Good
3	0.70-0.79	Acceptable
4	0.6-.69	Questionable
5	0.5-0.59	Poor
6	Less than 0.59	Unacceptable

Source: (Mohd Arof et al., 2018)

Figure 3.2: Range of reliability level and its coefficient of Cronbach's alpha

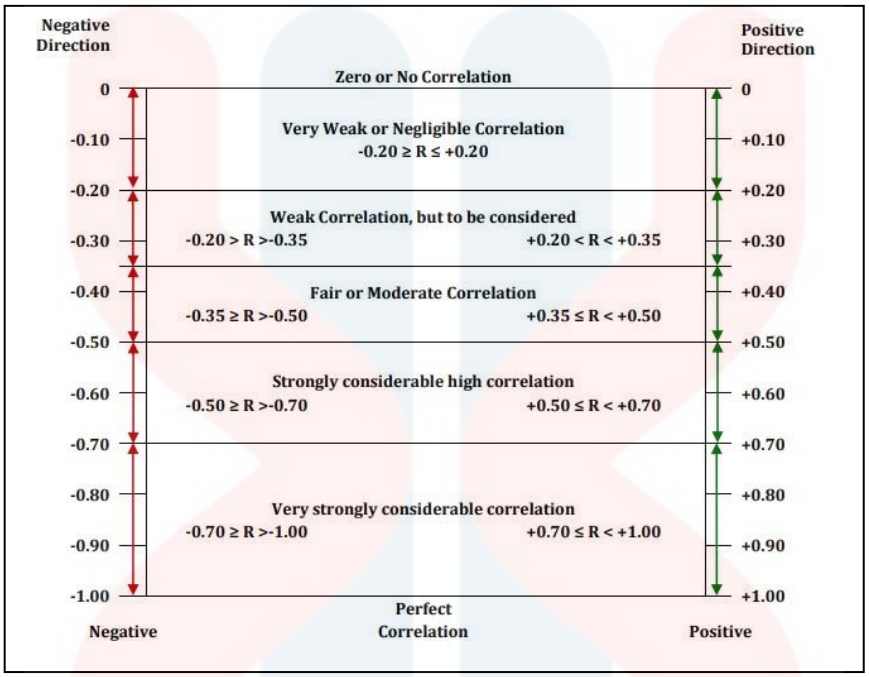
3.8 INFERENTIAL ANALYSIS

Inferential statistics is the process of drawing conclusions from investigations and observations of a sample from a group of people. SPSS suggests performing the relevant analysis in this research either Spearman's rank correlation coefficient or Pearson's Correlation Analysis.

3.8.1 Pearson Correlation Coefficient

The Pearson correlation coefficient (r) often used metric for determining a linear relationship. It is a number ranging from -1 to 1 that indicates the direction and strength of a link between two variables (Turney, 2022a). Correlation analysis is extremely effective in determining the functional relationship among two variables. The relationship can often be classified as positive, negative, or zero. When two variables have a positive correlation, it means they are moving in the same direction; when they have a negative correlation, they are travelling in the opposite direction. A zero correlation suggests that two variables have no

relationship, which is uncommon. The rule of thumb for correlation coefficient is shown in figure below.



Source: (Senthilnathan, 2019)

Figure 3.3: Usefulness of Correlation Analysis

3.8.2 Spearman's Rank Correlation Coefficient

Spearman Correlation is used to test information from two factors and test whether there is direct relationship between them or not. Spearman Correlation Analysis is used to test whether there is linier relationship between dependent variable and independent variable (Laerd Statistics, 2022). Figure below shows Spearman Correlation values and level of significance.

Spearman (p)	Correlation
≥0.70	Very strong relationship
0.40 until 0.69	Strong relationship
0.30 until 0.29	Moderate relationship
0.20 until 0.29	Weak relationship
0.01 until 0.19	No or negligible relationship

Source: (Laerd Statistics, 2022)

Figure 3.4: Spearman's Correlation Coefficient

3.9 NORMALITY TEST ANALYSIS

The results of a normality test show whether the sample data actually came out of a normal distribution. For numerous statistical tests, for instance the student's t-test and one-way and two-way ANOVA, a time with the people with a regular distribution is necessary (Mishra et al., 2019). Studies frequently involve tests of a null hypothesis, particularly a goodness-of-fit test to determine whether the data were likely drawn from a normal population (Glossary, 2022). According to Mishra et al. (2019), In these tests, several measures, notably the very well-known p-value, are utilized to examine the data and determine if its distribution deviates considerably from the normal distribution. If the p-value is much less than 0.05, the distribution varies substantially from the normal distribution. The most prominent methods for testing continuous data's normality include nine tests. First is the Shapiro-Wilk test while second is the Kolmogorov-Smirnov test. The third test is the skewness, followed by the kurtosis, and the fifth and sixth tests are histograms and box plots. Finally, the seventh test is P-P Plot, and the eighth test is Q-Q Plot, following the ninth trial, which is mean with Standard Deviation. The statistical program "SPSS" may be used to perform normality tests (Mishra et al., 2019).

3.10 SUMMARY

This chapter explains the methodological method used throughout the review. A quantitative approach is used when numerical data in the distributed questionnaire will be reported and evaluated in chapters 4 and 5. Every factor was analysed to test hypotheses with an estimation of builds as per past investigations, topic to the completion of pre-test obligation. The questionnaire concept is devised based on primary and secondary data from other sources obtained by another study. Data is handled once questionnaires are gathered. The data is analysed for descriptive and inferential analysis. The findings are presented in detail in Chapter 4.

CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.1 INTRODUCTION

This chapter explains the data analysis and findings. This chapter also analyses and interpret the result gained through the distributed questionnaires. This study adopted an online survey and questionnaire to study the "factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia." There are 384 sets of data from questionnaires were gained. All the data will be analyzed and interpreted by using the SPSS 26 (Statistical Package for Social Science) software, and the final result analysis statistical was viewed in this chapter. This chapter would be discussed preliminary analysis, the demographic profile of respondents, descriptive analysis, validity and reliability test, normality test, and Hypotheses Testing. The results obtained will be presented in charts and tables. Lastly, this chapter concludes with a summary of the hypothesis findings.

4.2. Preliminary Analysis

The data collected will be analyzed and collected data will be run through the IBM SPSS 26 version software. The pilot study is done completely when the details are collected from the 30 respondents of this study. The pilot study is then done by using the reliability analysis, which can test the reliability of the questions of this study. The main of using reliability analysis is that it is the first step to analyzing the data and will ensure that the data from the survey is correct and reliable for the study. The reliability analysis then clearly shows Cronbach's Alpha value which measures the data in SPSS. There is various range of internal consistency to each Cronbach's alpha value mentioned in figure 4.1.

No	Coefficient of Cronbach's Alpha	Reliability Level
1	More than 0.90	Excellent
2	0.80-0.89	Good
3	0.70-0.79	Acceptable
4	0.6-.69	Questionable
5	0.5-0.59	Poor
6	Less than 0.59	Unacceptable

Source: (Mohd Arof et al., 2018).

Figure 4.1: Selection of coefficient of alpha to observe the extent of reliability of Instrument

Table 4.1: Pilot study test of each variable

Variable	**Content**	**Cronbach's Alpha**	**Sum Of Items**	**N (Sample Size)**
Independent Variable	Perceived ease of use	0.869	6	30
Independent Variable	Perceived usefulness	0.903	6	30
Independent Variable	Perceived security	0.908	6	30
Independent Variable	Perceived trust	0.910	6	30
Dependent Variable	The intention to use e-wallet payment system among Gen Z	0.882	6	30

According to table 4.1, the dependent variable of this study which is the intention to use e-wallet payment system among gen Z is having 0.882 as the Cronbach's Alpha which stands as good reliability. The independent variable which is Perceived ease of use is having Cronbach's Alpha of 0.869 which stands as good reliability. However, followed by perceived usefulness, which is 0.903, perceived security which is 0.908 and perceived trust is 0.910. These three independent variables are excellent reliability in this study according to Table 4.1.

4.3 Demographic Profile of Respondents

Table 4.2: Data of respondents by age group

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
18-21 years old	167	43.5	43.5
22-25 years old	217	56.5	100.0
Total	384	100.0	

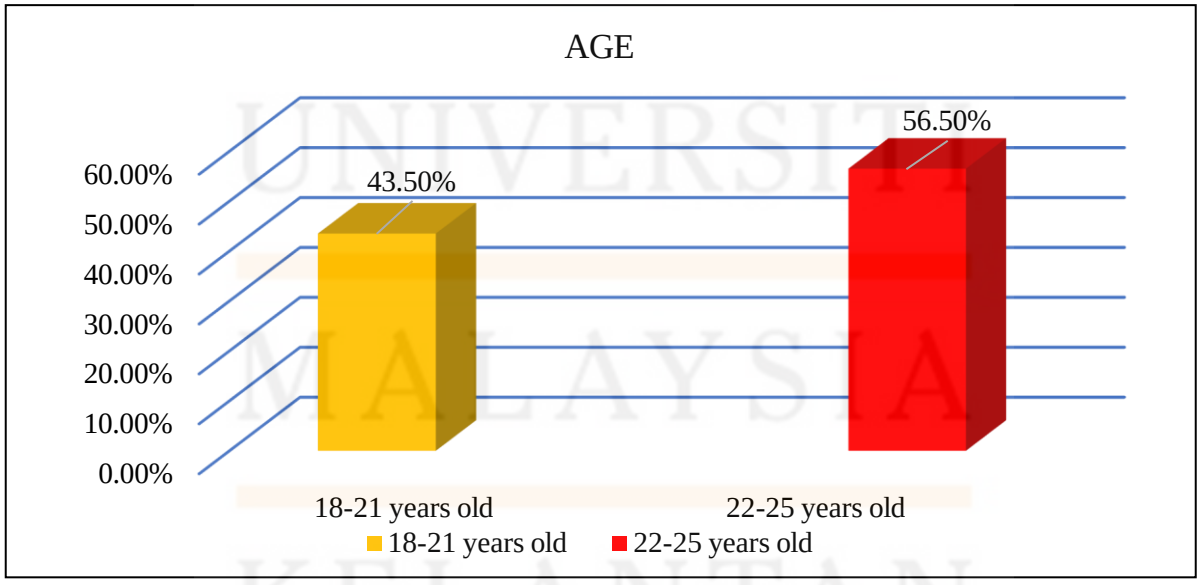


Figure 4.2: Percentage of respondents by age

Figure 4.2 and Table 4.2 are indicating the number of respondents which depending on the range of age. There are 384 respondents who answered this question. Majority age range group is 22-25 age which is 56.5% (217 respondents). However, minority age range group is 18-21 age with 167 respondents which is 43.5%.

Table 4.3: Data of respondents by gender

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
Male	197	51.3	51.3
Female	187	48.7	100.0
Total	384	100.0	

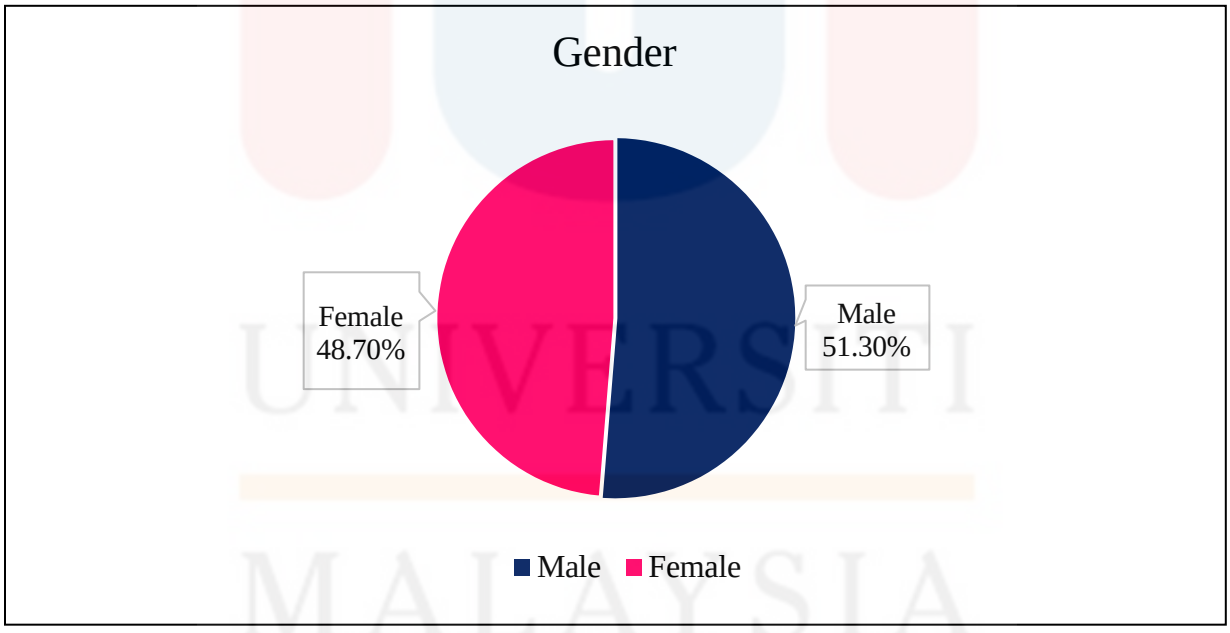


Figure 4.3: Percentage of respondents by gender

Figure 4.3 and Table 4.3 are showing the number of respondents which depending on the range of gender. There are 384 respondents who answered this question. Majority group is

male with 197 respondents of 51.3%. Minority is female group which is contribute 187 respondents with 48.7%.

Table 4.4: Data of respondents by race

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
Malay	154	40.1	40.1
Indian	95	24.7	64.8
Chinese	120	31.3	96.1
Others	15	3.9	100.0
Total	384	100.0	

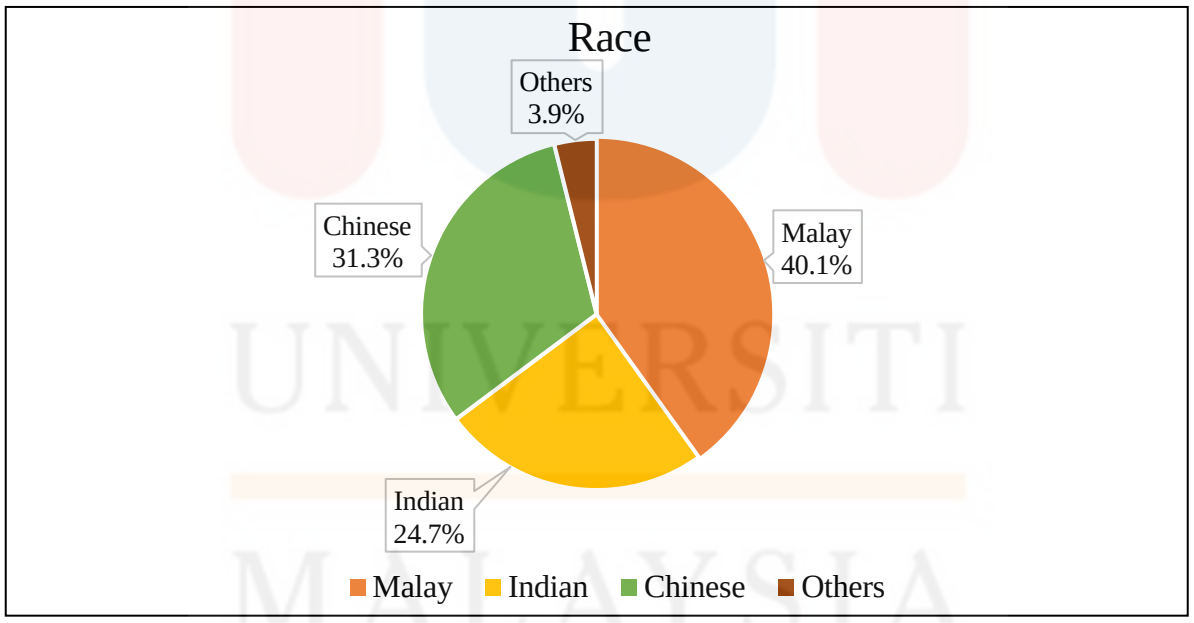


Figure 4.4: Percentage of respondents by race

Figure 4.4 and Table 4.4 are indicating the number of respondents which depending on the range of race. There are 384 respondents who answered this question. Malay is majority group with 154 respondents of 40.1%. Minority group is others with 15 respondents which is

3.9%. Middle is Chinese race group contribute 120 respondents with 31.3% and Indian race come up with 95 respondents with 24.7%.

Table 4.5: Data of respondents by How do you know about E-wallet?

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
Internet	160	41.7	41.7
Social Media	111	28.9	70.6
Recommendations by Friends/Family Members/Colleague	62	16.1	86.7
Magazine	17	4.4	91.1
Television	20	5.2	96.4
Others	14	3.6	100.0
Total	384	100.0	

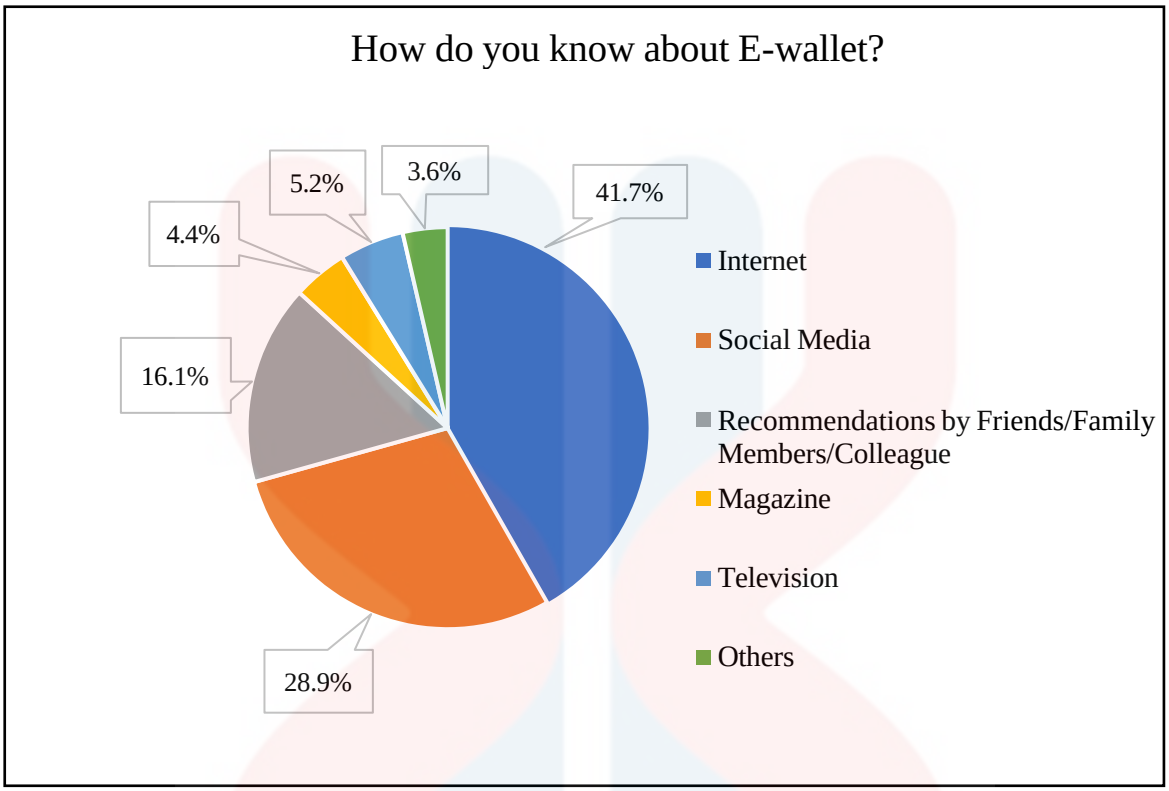


Figure 4.5: Percentage of respondents by How do you know about E-wallet?

Figure 4.5 and Table 4.5 are indicating the number of respondents which depending on How do you know about E-wallet. There are 384 respondents who answered this question. Internet is the majority group with 160 respondents of 41.7%. The second highest was chosen is social media with 111 respondents (28.9%). Next, followed up by Recommendations by Friends/Family Members/Colleague with 62 respondents of 16.1%. Then, Television contributes 20 respondents (5.2%) and, Magazine are 17 respondents with 4.4%. Minority group is others with only 14 respondents which is 3.6%.

Table 4.6: Data of respondents by Frequency of using E-wallet in One Month?

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
Never use	17	4.4	4.4
Seldom	95	24.7	29.2
Frequently	108	28.1	57.3
Very Frequently	164	42.7	100.0
Total	384	100.0	

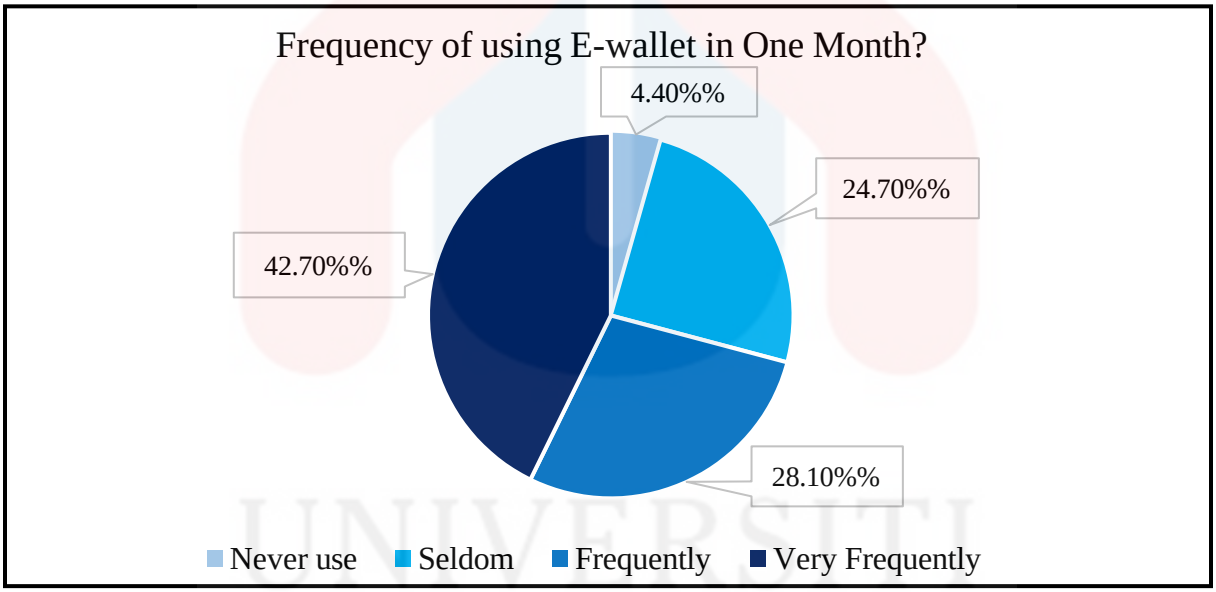


Figure 4.6: Percentage of respondents by Frequency of using E-wallet in One Month?

Figure 4.6 and Table 4.6 are indicating the number of respondents which depending on the range of Frequency of using E-wallet in One Month. There are 384 respondents who answered this question. Very Frequently is majority group with 164 respondents of 42.7% which illustrates the frequency of using e-wallets in one month. Next, followed up by Frequently with 108 respondents with 28.1 and seldom contributes 95 respondents (24.7%). The minority group is Never use with 17 respondents which are 4.4%.

Table 4.7: Data of respondents by How much do you top up for E-wallet monthly?

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
Never top up	22	5.7	5.7
RM1 – RM100	176	45.8	51.6
RM101 – RM200	82	21.4	72.9
RM201 – RM300	64	16.7	89.6
Above RM300	40	10.4	100.0
Total	384	100.0	

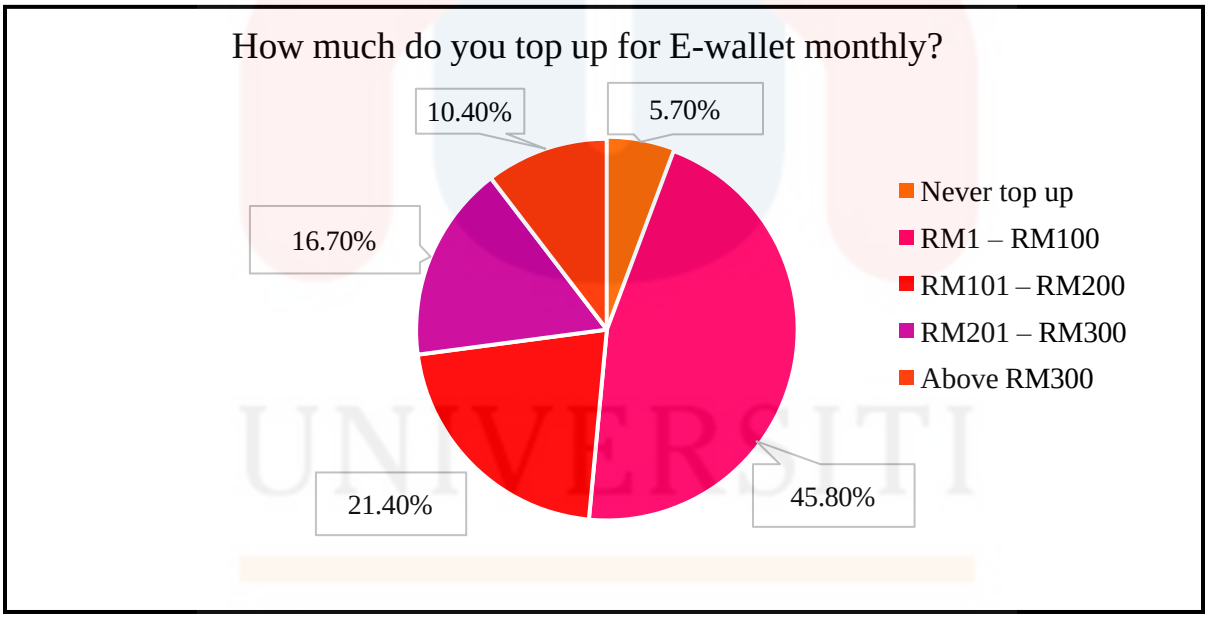


Figure 4.7: Percentage of respondents by How much do you top up for E-wallet monthly?

Figure 4.7 and Table 4.7 are indicating the number of respondents which depending on How much do you top up for E-wallet monthly. There are 384 respondents who answered this question. RM1-RM100 is the majority group with 176 respondents of 45.8%. The second highest is RM101– RM200 with 82 respondents (21.4%). Next, followed up by RM201–

RM300 with 64 respondents of 16.7% and Above RM300 are 40 respondents (10.4%). Minority group is Never Use with only 22 respondents which is 5.7%.

Table 4.8: Data of respondents by Which E-wallet do you usually use?

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
Boost	94	24.5	24.5
Touch ‘n Go	162	42.2	66.7
WeChat Pay	53	13.8	80.5
Grab pay	43	11.2	91.7
Others	32	8.3	100.0
Total	384	100.0	

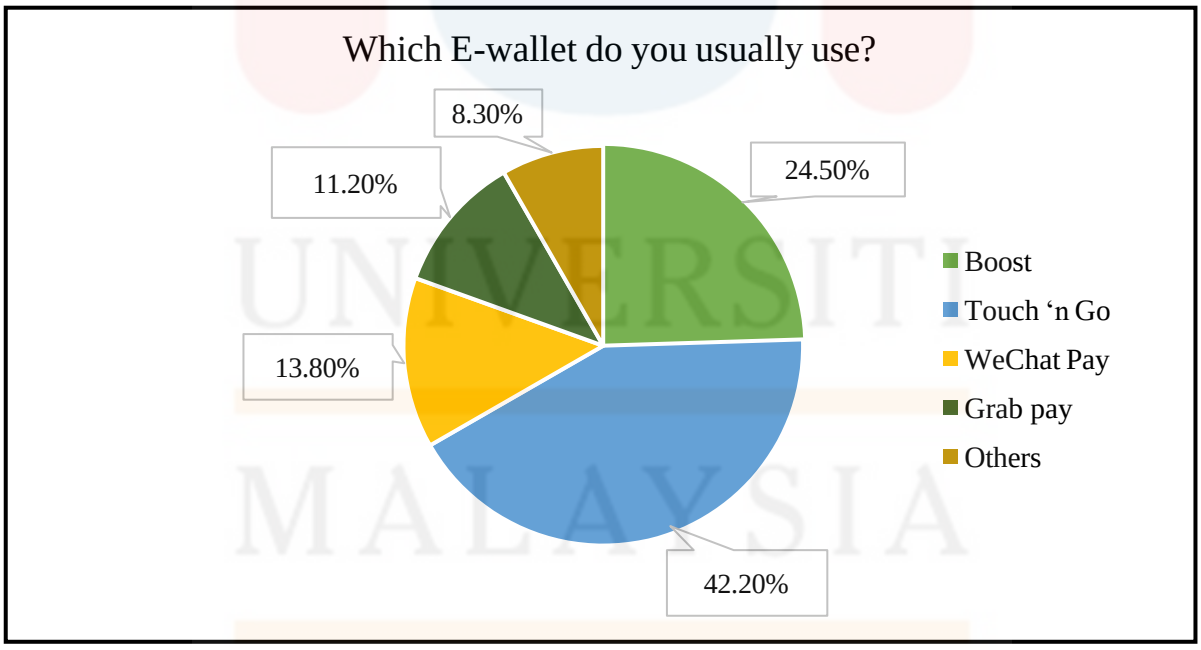


Figure 4.8: Percentage of respondents by Which E-wallet do you usually use?

Figure 4.8 and Table 4.8 are indicating the number of respondents which depending on Which E-wallet do you usually use. There are 384 respondents who answered this question. Touch ‘n Go is the majority group of usage with 162 respondents of 42.2%. The second highest is Boost e-wallet with 94 respondents (24.5%). Next, followed up by WeChat Pay with 53 respondents of 13.8% and Grab pay e-wallet with 43 respondents (11.2%). Minority group is others with only 32 respondents which is 8.3%.

4.4 Descriptive Statistics

A descriptive analysis is used to summarize and analyze statistics in terms of explaining a huge volume of data (Chung & Al-Khaled, 2021). The central tendency is prominent feature of a single variable used by a researcher in research for purpose to evaluate the data. The mean was used to define the central tendency where all the value is summed up and divided by value’s number. Same goes to this study, descriptive statistical evaluation was used to calculate that variable’s average. 384 respondents’ data have been used in this research. The result showed the mean value and standard deviation of each variable. For descriptive analysis, the researcher had come out with this analysis in order to find the mean for every section of the dependent variable and independent variables. The table below shows how to determine the level of mean.

Table 4.9: Level of Mean

Level	Mean
Strongly Agree	4.51 - 5.00
Agree	3.51 - 4.50
Neutral	2.51 - 3.50
Disagree	1.51 - 2.50
Strongly Disagree	0.00 - 1.50

Source: (Mangaba, 2019)

Table 4.10: Descriptive analysis of Perceived ease of use

	N	Minimum	Maximum	Mean	Std. Deviation
It is simple for me to learn how to use an e-wallet service.	384	1	5	4.39	0.743
My interaction with e-wallet service is clear and understandable.	384	1	5	4.25	0.837
I rarely get frustrated when I use e-wallet.	384	1	5	4.28	0.808
I rarely get confused when I use e-wallet.	384	1	5	4.23	0.821
I find it simple to use e-wallet services.	384	1	5	4.35	0.793
I rarely make errors when using the e-wallet.	384	1	5	4.23	0.869
Valid N (listwise)	384				

Table 4.10 shows the means and standard deviation of independent variable for Perceived ease of use. The highest mean score for this independent variable is 4.39, which indicates it is simple to learn how to use e-wallet service. On the other side, the lowest mean score for this independent variable is 4.23, which presumed that I rarely get confused when I use e-wallet and I rarely make errors when using the e-wallet. The standard deviation of I

rarely make errors when using the e-wallet is highest standard deviation (0.869) and the lowest standard deviation indicates it is simple for me to learn how to use an e-wallet service (0.743).

Table 4.11: Descriptive analysis of Perceived usefulness

	N	Minimum	Maximum	Mean	Std. Deviation
Using e-wallet services saves my time.	384	1	5	4.37	0.771
Using e-wallet helps me buy easily.	384	1	5	4.35	0.796
E-wallet services have improved my productivity.	384	1	5	4.24	0.882
E-wallet has improved quality of my job performance.	384	1	5	4.18	0.892
I find E-wallet useful in the buying process.	384	1	5	4.27	0.869
E-wallet services increase my effectiveness.	384	1	5	4.27	0.837
Valid N (listwise)	384				

Table 4.11 shows the means and standard deviation of independent variable for Perceived usefulness. The highest mean score for this independent variable is 4.37, which indicates using e-wallet services saves my time. On the other side, the lowest mean score for this independent variable is 4.18, which presumed that E-wallet has improved quality of my

job performance. The standard deviation of E-wallet has improved quality of my job performance is highest standard deviation (0.892) and the lowest standard deviation indicates Using e-wallet services saves my time (0.771).

Table 4.12: Descriptive analysis of Perceived security

	N	Minimum	Maximum	Mean	Std. Deviation
I am confident in making payments through my E-wallet.	384	1	5	4.32	0.826
I believe that transactions conducted through E-wallets are secure.	384	1	5	4.26	0.882
I believe the service has the potential to be safer than traditional payment options such as credit cards and cash.	384	1	5	4.22	0.888
I believe the chances of losing money stored in E-wallet are low.	384	1	5	4.17	0.836
E-wallets ensure protection against risk.	384	1	5	4.23	0.864

I believe the technology used in E-wallets is very secure.	384	1	5	4.24	0.832
Valid N (listwise)	384				

Table 4.12 shows the means and standard deviation of independent variable for Perceived security. The highest mean score for this independent variable is 4.32, which indicates I am confident in making payments through my E- wallet. On the other side, the lowest mean score for this independent variable is 4.17, which presumed that I believe the chances of losing money stored in e-wallet are low. The standard deviation of I believe the service has the potential to be safer than traditional payment options such as credit cards and cash is highest standard deviation (0.888), and the lowest standard deviation indicates I am confident in making payments through my E- wallet (0.826).

Table 4.13: Descriptive analysis of Perceived trust

	N	Minimum	Maximum	Mean	Std. Deviation
I feel safe providing personal privacy information over the E-wallet app that I use.	384	1	5	4.27	0.842
I believe that e-wallet service provider will act ethically when capturing,	384	1	5	4.20	0.911

retaining, processing, and managing my personal data.					
I trust on the ability of an e-wallet system to protect my privacy.	384	1	5	4.23	0.870
I believe that legal frameworks for e-wallet provision are sufficiently robust to protect consumers.	384	1	5	4.22	0.794
I feel the risk associated with e-wallet system is low.	384	1	5	4.24	0.875
I can trust on my e-wallet to reliably complete my transactions.	384	1	5	4.23	0.858
Valid N (listwise)	384				

Table 4.13 shows the means and standard deviation of the independent variable for Perceived trust. The highest mean score for this independent variable is 4.27, which indicates I feel safe providing personal privacy information over the E-wallet app that I use. On the other side, the lowest mean score for this independent variable is 4.20, which presumed that I believe that the e-wallet service providers will act ethically when capturing, retaining, processing, and managing my personal data. The standard deviation of I believe that e-wallet service provider will act ethically when capturing, retaining, processing, and managing my personal data is the highest standard deviation (0.911) and the lowest standard deviation

indicates I believe that legal frameworks for e-wallet provision are sufficiently robust to protect consumers (0.794).

Table 4.14: Descriptive analysis of Intention to Use E-Wallet Payment System

	N	Minimum	Maximum	Mean	Std. Deviation
I use e-wallet more frequently than traditional (cash) payment.	384	1	5	4.21	0.947
I have the intention to purchase using E-wallet	384	1	5	4.28	0.763
I am willing to use an e-wallet all the time.	384	1	5	4.30	0.810
I am willing to continue using e-wallet services in the near future rather than not use them.	384	1	5	4.29	0.772
I believe e-wallet is better than cash payment.	384	1	5	4.25	0.843
I will use the E-wallet when the shops are available with the E-wallet code.	384	1	5	4.29	0.796
Valid N (listwise)	384				

Table 4.14 shows the means and standard deviation of the dependent variable for the intention to use e-wallet payment system among gen z. The highest mean score for this dependent variable is 4.30, which indicates I am willing to use an e-wallet all the time. On the other side, the lowest mean score for this dependent variable is 4.21, which presumed that I use e-wallet more frequently than traditional (cash) payments. The standard deviation of I use e-wallet more frequently than traditional (cash) payment is the highest standard deviation (0.947) and the lowest standard deviation indicates I have the intention to purchase using e-wallet (0.763).

Table 4.15: Overall Descriptive analysis

Category	N	Std. Deviation	Mean
Perceived ease of use	384	0.63144	4.2904
Perceived usefulness	384	0.69134	4.2795
Perceived security	384	0.70755	4.2405
Perceived trust	384	0.71390	4.2313
Intention to Use E-Wallet Payment System among gen z	384	0.65398	4.2691

Based on the table 4.15, it shows the overall of descriptive analysis. The table shows the mean and standard deviation for the dependent variable and independent variables. There are a few questions in every section of these dependent variable and independent variables. The highest mean score shows Perceived ease of use which is 4.2904 and the highest standard deviation is 0.71390 on Perceived trust. On other hand, the lowest mean is 4.2103 on Perceived trust and the lowest standard deviation is Perceived ease of use which is 0.63144.

4.5 Validity and Reliability test

The purpose of the reliability study is to see if the researchers' data collecting techniques and analysis techniques might be duplicated or recreated by some other researcher. A validity test determines the extent to which a tool is valid or invalid. It demonstrates the relationship between a scale and a measure for an independent variable. In order to be exact in a study, the data must be both dependable and valid (Chung & Al-Khaled, 2021). The Cronbach's alpha value from the reliability test would be used to determine this study's reliability test.

Table 4.16 Reliability Test for Perceived ease of use

Reliability Statistics	
Cronbach's Alpha	N of Items
0.869	6

In this research, there are six questions that act as items in this test were used to measure the Perceived ease of use as the independent variable. Table 4.16 indicates that Cronbach's Alpha coefficient of Perceived ease of use is 0.869 which resulted in good strength of internal consistency. Due to the coefficient obtained for the questions of Perceived ease of use having a good consistency and strength, consequently, all questions utilized for this variable are valid and reliable.

Table 4.17 Reliability Test for Perceived usefulness

Reliability Statistics	
Cronbach's Alpha	N of Items
0.903	6

In this research, there are six questions that act as items in this test were used to measure the Perceived usefulness as the independent variable. Table 4.17 indicates that Cronbach's Alpha coefficient of Perceived usefulness is 0.903 which resulted in excellent strength of internal consistency. Due to the coefficient obtained for the questions of Perceived usefulness having excellent consistency and strength, consequently, all questions utilized for this variable are valid and reliable.

Table 4.18 Reliability Test for Perceived security

Reliability Statistics	
Cronbach's Alpha	N of Items
0.908	6

In this research, there are six questions that act as items in this test were used to measure Perceived security as an independent variable. Table 4.18 indicates that Cronbach's Alpha coefficient of Perceived security is 0.908 which resulted in excellent strength of internal consistency. Due to the coefficient obtained for the questions of Perceived security having excellent consistency and strength, consequently, all questions utilized for this variable are valid and reliable.

Table 4.19 Reliability Test for Perceived trust

Reliability Statistics	
Cronbach's Alpha	N of Items
0.910	6

In this research, there are six questions that act as items in this test were used to measure Perceived trust as an independent variable. Table 4.19 indicates that Cronbach's Alpha coefficient of Perceived trust is 0.910 which resulted in excellent strength of internal consistency. Due to the coefficient obtained for the questions of Perceived trust having excellent consistency and strength, consequently, all questions utilized for this variable are valid and reliable.

Table 4.20 Reliability Test for intention to use e-wallet payment system among gen z

Reliability Statistics	
Cronbach's Alpha	N of Items
0.882	6

In this research, there are six questions that act as items in this test were used to measure the intention to use e-wallet payment system as the dependent variable. Table 4.20 indicates that Cronbach's Alpha coefficient of intention to use e-wallet payment system is 0.882 which resulted as good strength of internal consistency. Due to the coefficient obtained for the questions of intention to use e-wallet payment system have a good consistency and strength, consequently all questions utilized for this variable is valid and reliable.

Table 4.21 Summary of the Reliability

Variable	Content	Cronbach's Alpha	Sum Of Items	N (Sample Size)
Independent Variable	Perceived ease of use	0.869	6	384
Independent Variable	Perceived usefulness	0.903	6	384
Independent Variable	Perceived security	0.908	6	384
Independent Variable	Perceived trust	0.910	6	384
Dependent Variable	Intention to Use E-Wallet Payment System among gen	0.882	6	384

Table 4.21 shows reliability analysis for dependent variable and independent variables. The test of reliability analysis indicates intention to use e-wallet payment system which is dependent variable is 0.882 which stands for good reliability. Then, this table also shows a test of reliability analysis for four independent variables. Cronbach's Alpha of Perceived ease of use is 0.869 which stands for good reliability. However, Perceived usefulness Cronbach's alpha is 0.903, Perceived security is 0.908 and Perceived trust Cronbach's alpha is 0.910. These three independent variables Cronbach Alpha stands for excellent reliability. It indicates the questions of variables in the survey is reliable.

4.6 Normality Test

Table 4.22 Summary of the Normality test of each variable

Variables	N	Skewness		Kurtosis	
	Statistics	Statistics	Std.Error	Statistics	Std.Error
Perceived ease of use (IV1)	384	-1.098	0.125	1.623	0.248
Perceived usefulness (IV2)	384	-1.005	0.125	0.901	0.248
Perceived security (IV3)	384	-0.933	0.125	0.821	0.248
Perceived trust (IV4)	384	-0.822	0.125	0.357	0.248
Intention to Use E-Wallet Payment System (DV)	384	-0.947	0.125	1.171	0.248

Table 4.22 indicates the normality test of dependent variable and independent variables of factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia. According to Cha et al. (2021), normal distribution will occur when the skewness coefficient falls between negative two to positive two, and the kurtosis coefficient falls between negative seven to positive seven if the sample size is larger than 300. Both of which have an

associated standard error. Based on Table 4.22, every skewness and kurtosis coefficient fall between negative two to positive two and negative seven to positive seven. The largest skewness coefficient goes to Perceived trust (-0.822), while the lowest skewness coefficient goes to Perceived ease of use (-1.098). However, the largest kurtosis coefficient goes to Perceived ease of use, which is 1.623, while the lowest kurtosis coefficient goes to Perceived trust (0.357). As a result, it is normally distributed as all the skewness coefficient falls between negative two to positive two, and the kurtosis value falls between negative seven to positive seven. Therefore, all are variables are acceptable and considered normal.

4.7. Regression Analysis

In order to investigate the influence of all independent variables which are Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust on the intention to use e-wallet payment system, multiple linear regression analysis was applied in this research.

Table 4.23: Modal Summaries

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.844[a]	.713	.710	.35235

a. Predictors: (Constant), MEAN_PT, MEAN_PEU, MEAN_PU, MEAN_PS

b. Dependent Variable: MEAN_D

As can be seen from the model summary, it was found that the R2 value is 0.713 which implies 71.3 % of the variance in the intention to use e-wallet payment system. It can be concluded that factors influence had slightly higher claims in intention to use e-wallet payment system, thereby confirming the strong of the models.

4.7.1 Anova

Table 4.24: ANOVA test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	116.752	4	29.188	235.106	.000[b]
	Residual	47.052	379	.124		
	Total	163.804	383			

a. Dependent Variable: MEAN_D

b. Predictors: (Constant), MEAN_PT, MEAN_PEU, MEAN_PU, MEAN_PS

According to ANOVA analysis, P-values for each t-statistics are smaller than 0.05. Table 4.24 shows the F is 235.106. It is a significant relationship was established between factors that influence Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust and the intention to use e-wallet payment system with P= 0.000. This also implies that factors influencing which is Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust had a positive and significant relationship with the intention to use e-wallet payment system.

4.7.2 Coefficients

Table 4.25: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.579	0.128		4.512	0.000
	MEAN_PEU	0.211	0.046	0.204	4.588	0.000
	MEAN_PU	0.070	0.050	0.074	1.406	0.161
	MEAN_PS	0.143	0.056	0.155	2.563	0.011
	MEAN_PT	0.444	0.050	0.485	8.902	0.000
a. Dependent Variable: MEAN_D						

In terms of each predictive variable's contribution, beta values are used to compare their influence on the two constructs (The Pennsylvania State University, 2018). All the variables were shown to have a positive and statistically significant influence on factors influence and the intention to use e-wallet payment system. In the case of testing, there are four independent variables which are Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust, and one dependent variable which is the intention to use e-wallet payment system. Specifically, Perceived trust (B = .485) had a strong effect on the intention to use e-wallet payment system followed by Perceived ease of use (B = .204). Whereas Perceived security (B=.155) and Perceived usefulness showed a very weak effect which is (B = .074) on the intention to use e-wallet payment system among gen Z in Penang, Malaysia.

This can be taken Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust are good predictors of the intention to use e-wallet payment system among gen

Z in Penang, Malaysia. Therefore, in this study, the researcher found that the overall influence of Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust had more effect on the Intention to Use E-wallet Payment System.

4.8 Hypotheses testing (Pearson Correlation Analysis)

Hypothesis testing is a method used to determine whether a hypothesis is plausible by utilizing the sample data (Majaski, 2021). Pearson's correlation coefficient is to examine the strength of the mixture and the significant relationship between the independent variable and dependent variable. A table of the Pearson correlation coefficient is shown in Table 4.26.

Table 4.26: Table of Pearson Correlation Coefficient

Size of correlation	Interpretation
0.9 to 1.0 / -0.9 to -1.0	Very high
0.7 to 0.9 / -0.7 to -0.9	High
0.5 to 0.7 / -0.5 to -0.7	Moderate
0.3 to 0.5 / -0.3 to -0.5	Low
0.0 to 0.3 / -0.0 to -0.3	Negligible

Source: (Jaadi, 2019)

Table 4.25 show the result of the correlation coefficient among independent variables and dependent variables by using Pearson's Correlation Coefficient. It is a number ranging from -1 to 1 that indicates the direction and strength of a link between two variables (Turney, 2022b). A p-value less than 0.05 (typically ≤ 0.05) is statistically significant (McLeod, 2019).

4.8.1 Perceived ease of use

H0: There is no significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen z.

H1: There is a significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen z.

Table 4.27 The Pearson Correlations between perceive ease of use and intention to use e-wallet payment system among gen Z.

Correlations			
		MEAN_D	MEAN_PEU
MEAN_D	Pearson Correlation	1	.709**
	Sig. (2-tailed)		.000
	N	384	384
MEAN_PEU	Pearson Correlation	.709**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

From table 4.27, there is a significant and strong correlation between the intention to use e-wallet payment system and Perceived ease of use among gen Z in Penang, Malaysia because the P value is 0.000 where P < 0.005. The relationship between the variables is 0.709 which is a relatively high relationship between the independent variable and dependent variable.

Therefore, Hypothesis 1 is accepted.

4.8.2 Perceived usefulness

H0: There is no significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z.

H2: There is a significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z.

Table 4.28 The Pearson Correlations between perceive usefulness and intention to use e-wallet payment system among gen Z

Correlations			
		MEAN_D	MEAN_PU
MEAN_D	Pearson Correlation	1	.725**
	Sig. (2-tailed)		.000
	N	384	384
MEAN_PU	Pearson Correlation	.725**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

From the table 4.28, The P value is 0.000 which is P < 0.005. There is a significant and strong correlation between the intention to use e-wallet payment system and Perceived usefulness among Gen Z in Penang, Malaysia. The relationship between the variables is 0.725 which is a relatively high relationship between the independent variable and dependent variable.

Therefore, Hypothesis 2 is accepted.

4.8.3 Perceived security

H0: There is no significant relationship between perceived security and intention to use e-wallet payment system among gen Z.

H3: There is a significant relationship between perceived security and intention to use e-wallet payment system among gen Z.

Table 4.29 The Pearson Correlations between perceived security and intention to use e-wallet payment system among gen Z.

Correlations			
		MEAN_D	MEAN_PS
MEAN_D	Pearson Correlation	1	.775**
	Sig. (2-tailed)		.000
	N	384	384
MEAN_PS	Pearson Correlation	.775**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

From the table 4.29, There is a significant and strong correlation between the intention to use e-wallet payment system and perceived security among gen Z in Penang, Malaysia because the P value is 0.000 where P < 0.005. The relationship between the variables is 0.775 which is a relatively high relationship between the independent variable and dependent variable.

Therefore, Hypothesis 3 is accepted.

4.8.4 Perceived trust

H0: There is no significant relationship between perceived trust and intention to use e-wallet payment system among gen Z.

H4: There is a significant relationship between perceived trust and intention to use e-wallet payment system among gen Z.

Table 4.30 The Pearson Correlations between perceived trust and intention to use e-wallet payment system among gen Z.

Correlations			
		MEAN_D	MEAN_PT
MEAN_D	Pearson Correlation	1	.815**
	Sig. (2-tailed)		.000
	N	384	384
MEAN_PT	Pearson Correlation	.815**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

Lastly, From the table 4.30 the P value is 0.000 which is $P < 0.005$. There is a significant and strong correlation between the intention to use e-wallet payment system and perceived trust among gen Z in Penang, Malaysia. The relationship between the variables is 0.815 which is a relatively high relationship between the independent variable and dependent variable.

Therefore, Hypothesis 4 is accepted.

Table 4.31: Summary of Hypothesis

Code	Hypothesis	Status
H1	There is a relationship between Perceived ease of use and the intention to use e-wallet payment system among gen Z In Penang, Malaysia	Accepted
H2	There is a relationship between perceived usefulness and the intention to use e-wallet payment system among gen Z In Penang, Malaysia	Accepted
H3	There is a relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia	Accepted
H4	There is a relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia	Accepted

Based on the results analysed above, all four proposed hypotheses H1, H2, and H3, H4 are supported. A summary of the hypotheses is presented in Table 4.31.

4.9 Summary

In conclusion, chapter 4 is about describing the overall results of a few testing's have been done in IBM SPSS 26 version software. There is the result of frequency analysis, descriptive analysis, and reliability test. The normality test result shows all variables are acceptable, considered normal, and well-modelled by a normal distribution. The Pearson correlation coefficient and regression analysis is all about the discussion based on the research which is mentioned the relationship between independent variables and dependent variable.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter will discuss the key findings that have been mentioned briefly in this previous chapter, and it is about the demographic profile and independent variables and dependent variable. Then, follow up with a discussion that will explain the hypotheses of this study. The outcome of this research is an implication of the study which describes the importance of this research and who is essential. The limitation of the study is to explain the problem faced during the ongoing research. Lastly, the recommendation is provided for use by future researchers.

5.2 Key Findings

This research examines the relationship between independent variables (Perceived ease of use, perceived usefulness, perceived security, and perceived trust) and dependent variable (The intention of e-wallet payment system) among gen Z in Penang, Malaysia. The data is analyzed after the survey was collected from 384 respondents which is the sample size of this study. A quantitative method has been used in the research which data was collected from the questionnaire distributed to Gen Z in Penang, Malaysia.

The key findings are about the findings that have been analyzed from the data of the questionnaire which was distributed. The data from the questionnaire showed the result of respondents' demographic profiles. Firstly, the demographic profile starts with age 18 - 21 with 43.5%, and the age group 22 - 25 with 56.5% of respondents shows higher than others. Next, it followed up with gender which is female with 48.7 %, and male with 51.3% respondents which showed more male respondents than females.

Then, the race of the respondents shows that Malay respondents are high as Malay (40.1%), Chinese (31.3%), Indian (24.7%), and Others (3.9%). The percentage of respondents by How do you know about E-wallet shows Internet was the majority group of respondents as the results show Internet (41.7%), social media (28.9%), Recommendations by Friends/Family Members/Colleagues (16.1%), Television (5.2%), Magazine (4.4%) and Others (3.6%). Followed by the range of Frequency of using E-wallet in One Month respondents showed that Very Frequent is higher than other ranges which Very frequently (42.7%), frequently (28.1%), seldom (24.7%), and never use (4.4%).

Moreover, the percentage of respondents who depend on how much do you top up for E-wallet monthly are illustrated RM1-RM100 top-up was the majority group of respondents which is RM1-RM100 (45.8%), RM101-RM200 (21.4%), RM201-RM300 (16.7%), Above RM300 (10.4%) and never top up (5.7%). Lastly, the percentage of respondents depending on Which E-wallet usually use showed Touch ‘n Go is the most used e-wallet which is Touch ‘n Go (42.2%), Boost (24.5%), WeChat Pay (13.8%), Grab pay (11.2%) and others (8.3%).

It is essential to use Cronbach’s alpha to measure the reliability test of this study. Cronbach’s alpha value is considered good when it is $0.7 \leq a \geq 0.9$, the Cronbach’s alpha value for the dependent variable which is the intention of e-wallet payment system among Gen Z in Penang, Malaysia is 0.882. Cronbach’s alpha value for independent variables is Perceived ease of use is 0.869, for perceived usefulness is 0.903, for perceived security 0.908, and for perceived trust is 0.910.

In this research, Pearson Correlation Coefficient analysis is used to identify the relationship between the independent variable and dependent variable. From the Perceived ease of use correlation analysis, r is 0.709, which is a strong positive correlation relationship between Perceived ease of use and the intention to use of e-wallet payment system among Gen

Z in Penang because of P < 0.005. Moreover, the observation correlation coefficient, r is 0.725, which recommends a high positive correlation relationship between perceived usefulness and the intention to use e-wallet payment system among Gen Z in Penang as P < 0.005. The observed correlation coefficient, r is 0.775, which recommends a high positive correlation relationship between perceived security and the intention to use e-wallet payment system among Gen Z in Penang as P < 0.005. Lastly, the observed correlation coefficient, r is 0.815, which recommends high positive correlation relationship between perceived trust and the intention to use e-wallet payment system among Gen Z in Penang, Malaysia as P < 0.005.

In this study, to examine the factor (independent variables) that influence the most on the intention to use e-wallet payment system (dependent variable), multiple linear regression is used. From the beta value, which is from the coefficient, perceived trust has the highest beta value which is 0.485 and it indicates has significance influence on online the intention to use e-wallet payment system with P value is 0.000. Next, it followed up with Perceived ease of use which has the second highest beta value (0.204), and it has a significance influence on the intention to use e-wallet payment system with P value is 0.000. Moreover, Perceived security has the 0.155 beta value, and it has a significance in an influence on the intention to use e-wallet payment system with a P value is 0.011 and perceived usefulness has the lowest beta value which is 0.074 and it has less significance in influence the intention to use e-wallet payment system with P value is 0.161.

Table 5.1: Summary of Findings

Research Question and Objective	Hypothesis Result	Finding
RQ 1: What is the relationship between perceived ease of use and intention to use e-wallet payment system among gen Z In Penang, Malaysia? RO 1: To examine the relationship between Perceived ease of use and intention to use e-wallet payment system among gen Z In Penang, Malaysia	P=0.000 ($p<0.005$) R=0.709	There is a relationship between perceived ease of use and the intention to use e-wallet payment system among gen Z In Penang, Malaysia
RQ 2: What is the relationship between the perceived usefulness and intention to use e-wallet payment system among gen Z In Penang, Malaysia? RO 2: To examine the relationship between perceived usefulness and intention to use e-wallet payment system among gen Z In Penang, Malaysia	P=0.000 ($p<0.005$) R=0.725	There is a relationship between perceived usefulness and the intention to use e-wallet payment system among gen Z In Penang, Malaysia
RQ 3: What is the relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia? RO 3: To examine the relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia	P=0.000 ($p<0.005$) R=0.775	There is a relationship between perceived security and the intention to use e-wallet payment system among gen Z In Penang, Malaysia
RQ 4: What is the relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia? RO 4: To examine the relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia.	P=0.000 ($p<0.005$) R=0.815	There is a relationship between perceived trust and the intention to use e-wallet payment system among gen Z In Penang, Malaysia

5.3 Discussion

This section summarizes the result in Chapter 4, which focuses on the research objective, research question, and hypothesis for this analysis.

5.3.1 Hypothesis 1: (There is a significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen Z)

From the previous chapter, the first objective of this research is to examine the relationship between Perceived ease of use and intention to use e-wallet payment system among gen z in Penang, Malaysia. The first research question is the relationship between Perceived ease of use and intention to use e-wallet payment system among gen z in Penang, Malaysia? The hypothesis of this variable is that Perceived ease of use significantly influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This study's findings showed a high positive relationship between Perceived ease of use and the intention to use e-wallet payment system among gen z in Penang, Malaysia with a correlation coefficient of 0.709 and a P value is 0.000 which is a $P < 0.005$. Based on the beta value from coefficient regression analysis, Perceived ease of use has the second highest beta value which is 0.204. So, Perceived ease of use positively influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This discussion indicates that this research objective was achieved, and hypothesis 1 (H1) is accepted.

According to findings from earlier studies, consumers have a greater propensity to accept a product or technology if they believe it to have a high level of ease of use (Alyoussef, 2021). Moreover, several other research also states that ease of use is the most significant factor determining whether people would use electronic wallets (Kumar et al., 2018). The significance of usability has been emphasized in other papers as well. Based on this, Chen (2018) found that a positive intention to use E-wallet was significantly connected with ease of use. This has been

reinforced by the findings of Mustafa et al. (2022) who observed that the perceived ease of use was a favorable, principal, or crucial element in the willingness to use e-wallet services. This is because users can communicate with the new scheme in a plain and acceptable manner. It influences consumer acceptability of the new system and its ease of implementation. As a result, many individuals are eager to learn about and embrace the new system, which will hasten consumer adoption of e-wallets. This indicates how consumers will be motivated to use it if Perceived ease of use is high. Therefore, perceived ease of use should be considered as one of the factors influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia

5.3.2 Hypothesis 2: (**There is a significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z)**

Based on the previous chapter, the second objective of this research is to identify examine the relationship between perceived usefulness and intention to use e-wallet payment system among gen z in Penang, Malaysia. The second research question is what is the relationship between perceived usefulness and intention to use e-wallet payment system among gen z in Penang, Malaysia? The hypothesis of this variable is that perceived usefulness significantly influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This study's findings showed a high positive relationship between perceived usefulness and intention to use e-wallet payment system among gen z in Penang with a correlation coefficient of 0.725 and a P value of 0.000 which is $P < 0.005$. Based on the beta value from coefficient regression analysis, perceived usefulness has the last highest beta value which is 0.074. So perceived usefulness positively influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This discussion indicates that this research objective is achieved hypothesis 2 (H2) is accepted.

According to previous studies, when consumers believe they are using a digital wallet, they gain access to advantages like ease and payment ease. The ease of payment may make users believe it is unnecessary for someone always to carry cash to feel comfortable using the system (Li et al., 2020). This study has been supported by Chan et al. (2021); one's perception of usefulness reflects how comfortable one is using technology to advance their career. According to the research findings, customers utilize the applications because they are committed to achieving their goals. Respondents indicated that they could rapidly complete a transaction involving mobile payments. Moreover, the benefits of earning awards and digital receipts increase the use of mobile phones. Consequently, the popularity of e-wallets by generation Z is attributable to the interoperability, flexibility, and accessibility of smart devices (Karim et al., 2020). This is because the desire to utilise an e-wallet payment system will be impacted by the usefulness of mobile devices, including personalisation, accessibility, localisation, timeliness, and network reliability. Users can easily accept if these functions benefit them due to the utility of mobile devices. Even though the user found the item challenging to operate, they continued to do so because it was valuable and may increase their productivity. Therefore, perceived usefulness should be considered as one of the factors influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia.

5.3.3 Hypothesis 3: (There is a significant relationship between perceived security and intention to use e-wallet payment system among gen Z)

Based on the previous chapter, the third objective of this research is to identify examine the relationship between perceived security and intention to use e-wallet payment system among gen z in Penang, Malaysia. The third research question is what is the relationship between perceived security and intention to use e-wallet payment system among gen z in Penang, Malaysia? The hypothesis of this variable is that perceived security significantly influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This

study's findings showed a high positive relationship between perceived security and intention to use e-wallet payment system among gen z in Penang with a correlation coefficient of 0.775 and a P value of 0.000 which is $P < 0.005$. Based on the beta value from coefficient regression analysis, perceived security has the third highest beta value which is 0.155. So perceived security positively influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This discussion indicates that this research objective is achieved hypothesis 3 (H3) is accepted.

Based on the previous studies, Karim et al. (2020) reported an association between perceived security and the intention to use e-wallets in research on young Malaysian adults. Moreover, most researchers such as Rahmadhani et al. (2022) also agreed that perceived security has a significant influence on consumers' intentions to use E-wallet payment systems. This study had been supported by Sunny and George (2018), came to the same conclusion: perceived security affects people's intentions to use the e-wallet payment system. This finding also supported by Andrew and Tan (2019), which determined that security has a high relationship with the intent to use the E-wallet payment system. This is because merchants may reassure customers believe their website is a safer and more reliable place to create and sustain long term relationships, while also giving the impression of a trustworthy organisation. This could be accomplished by teaching generation Z consumers about the safety and security features available in their payment gateways, as well as which websites are fully secure to browse using digital certificates and secure servers. As a result, improved levels of perceived security will encourage generation Z users to use or embrace systems that contain the e-wallet system. This study adds to the evidence that perceived security should be given more attention because it is crucial to the effective intention of e-wallets by generation Z consumers in Penang, Malaysia.

5.3.4 Hypothesis 4: (**There is a significant relationship between perceived trust and intention to use e-wallet payment system among gen Z)**

Based on the previous chapter, the fourth objective of this research is to identify examine the relationship between perceived trust and intention to use e-wallet payment system among gen z in Penang, Malaysia. The fourth research question is what is the relationship between perceived trust and intention to use e-wallet payment system among gen z in Penang, Malaysia? The hypothesis of this variable is that perceived trust significantly influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This study's findings showed a high positive relationship between perceived trust and intention to use e-wallet payment system among gen z in Penang, Malaysia with a correlation coefficient of 0.815 and a P value of 0.000 which is $P < 0.005$. Based on the beta value from coefficient regression analysis, perceived security has the highest beta value which is 0.485. So perceived trust positively influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This discussion indicates that this research objective is achieved hypothesis 4 (H4) is accepted.

According to the previous studies, trust is a strong predictor of the usage of technology and gadgets (Mondego, 2018). Researchers have shown that people's level of trust substantially affects whether or not they plan to use technologies like electronic wallets (Mustafa et al., 2022). According to Chao (2019), trust is a factor that motivates users to utilize and accept new technologies. This study has been supported by Cha et al. (2021), stating that if an e-wallet system is not entirely trustworthy, then users will not adopt it. Mondego (2018) notes that it is vital to create user trust to understand consumers' demands so that people can trust the e-wallet system and utilize it. This is because Generation Z consumers will not adopt the e- wallet system if it is less trustworthy. Therefore, the higher the level of trust is in people, the higher will be the adoption and chances of Generation Z consumers to use any e-wallet system for

online shopping and transactions. It illustrates Generation Z users in Penang will be more likely to accept and utilise any e-wallet system to perform online interactions the higher their degree of confidence in individuals.

5.4 Implications of the Study

The implications of a study describe what the results of the research indicate for researchers or for specific subgroups or populations in addition to the fundamental facts and interpretation of the results (Kevin, 2022). Despite Malaysia's ongoing interest in e-wallets and their potential for fast expansion, there is a dearth of knowledge about their features and the consequences for consumer marketing. This is mostly because e-wallets are still relatively new in Malaysia and are only now starting to supplant other payment methods used by consumers to purchase products and services. As a result, the study's results aided e-wallet firms and developers by offering insight into the elements that influence consumers' propensity to embrace e-wallets, helping them to improve their apps and better satisfy their customers' demands. The present research may assist e-wallet companies in understanding customer preferences and developing marketing tactics to help them sell their items and create a solid reputation.

Second, it was discovered that perceived usefulness and Perceived ease of use were significant factors affecting Gen Z's desire to utilize an e-wallet payment system in Penang, Malaysia. According to this study's findings, people are more inclined to use an electronic wallet if they believe it to be convenient and beneficial. In order to improve customers' perspectives, e-wallet application developers may thus concentrate on other innovation and convenience elements, such as the speed of payment transactions, the time and effort required to set up and learn to use, or even merchant accessibility.

Thirdly, factors of perceived security and perceived trust was also important in influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia. However, consumers have been reluctant to embark on this journey owing to misunderstandings regarding the security of e-wallets. By educating and raising awareness about cyber security, e-wallet fraud statistics, and the steps taken to combat e-wallet fraud incidents, relevant authorities such as retailers and businesses, financial institutions, and the government can positively and accurately deliver information about e-wallet security features to their users. This will assist to dispel this myth and boost customers' trust in e-wallets.

Furthermore, governance would be the party who gets advantages from this study. Governments can be aware of the key factors influencing consumer choices to embrace e-wallets. A few tactics may be used by the government to encourage customers to use e-wallets. The government may, for instance, provide new customers an RM30 incentive. To access the funds, customers will download an e-wallet application. From this research, government may learn more about how to encourage users to keep using e-wallets after utilizing the provided funds rather than discontinued.

Finally, this study might be useful to future researchers who are interested in acceptability and the many aspects that influence the desire to use an e-wallet. It may use the factors from this study as a guide for a later investigation. Our study's findings indicate that important factors are Perceived ease of use, perceived usefulness, perceived security, and perceived trust. When doing their future research on various target respondents throughout various time periods, the future researchers might either delete irrelevant characteristics or take other considerations into account. Only a few academics have studied the issue of e-wallets since it is a relatively new one in Malaysian financial technology. As a consequence, this study may be used as a guide for future research and to help researchers and facility development teams work together.

5.5 Limitations of the study

The restrictions in design, techniques, or even the researchers' own limits that have an impact on and influence how a research's final results are interpreted are known as research limitations (Abbadia, 2022). Finding a limitation might be a crucial chance to spot fresh literature gaps and highlight the need for more study. There are some limitations to this study that can lead to suggestions for future studies.

Firstly, self-administered survey forms were used in this study's data collection, along with a single way of collection. The questionnaire that is impacted by the time frame may get careless responses from the participants. They could get to choose the response without carefully going through the question. It will present inaccurate statements and have an impact on the study's outcome. Additionally, some of the questionnaire's questions can be sensitive to the respondents. Respondents can find it unpleasant to reply. They may not respond in accordance with their own opinions, which will impact the study's findings.

Additionally, the demographic range of this study is somewhat constrained. We only target Generation Z customers in Penang. The study's conclusions are only applicable to generation Z customers in Penang, and people from other generations are not affected. E-wallets are used by members of generation Z, as well as those in generations X, Y, and the Baby Boomers. Consumers of different ages will view the e-wallet payment system differently. For instance, a lot of people from generations X and Y are amenable to the concept of an electronic wallet payment system. Even among Baby Boomers who can use technology, few will accept the e-wallet payment option. Therefore, it can have an impact on the study's accuracy.

Finally, we employed a quantitative approach in the form of an online questionnaire survey. This is because filling out surveys is more straightforward and less time-consuming. The questionnaire is organized using closed-ended questions. The answer provided by the respondents is only one of several possible ones. There are just five answer options: "strongly agree, agree, neutral, disagree and strongly disagree". The lack of a qualitative technique prevented participants from contributing their suggestions and thoughts. Therefore, our inquiry will only provide modest findings.

5.6 Recommendations/ Suggestion for Future Research

Future researchers should utilize **both qualitative and mix methods** to gather data. In this research, the researchers used the quantitative method to gather data regarding factors that influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia, and other elements. The qualitative method is also an effective way to gather quality information. When a researcher is able to utilize both methods, they may gain a deeper understanding of the relationship between the factors that influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia. Interviews with respondents enable the researcher to know the respondent's perspective in various dimensions, and with the implementation of this action, future researchers also have the possibility of revealing new factors that influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia.

In addition, the future researcher should **increase the sample size and population** and cover other districts and states to achieve a more reliable and representative study result. This study was conducted among people of generation Z in Penang, using only 384 questionnaires and in a short period of time. It is recommended to future researchers that it is necessary to

lengthen the period and examine probabilistic sampling techniques to obtain more information or outcomes.

Other than that, future researchers are urged to focus on **survey participants from a variety of age groups**, including members of generations other than generation Z, such as generation X, generation Y, and baby boomers. Through the introduction of e-wallets, customer segments of different generations have varied viewpoints. By complying with the opinions of a tremendous number of respondents, future researchers would contribute better research and lead to a different outcome.

Furthermore, in selecting respondents, it is recommended that the researchers **selected other state gen Z peoples** in Malaysia. So, it enables future researchers to see the differences of results studying the determinants of "intention to use" e-wallet among other state gen Z peoples. It is used to test the determinants again whether significant to the intention to use e-wallet among gen z. Hence, it is recommended to run a research thesis with the collaboration of other states researches among the generation Z peoples. It enables us to explore more, and the results will be more quality which helps the development of the economy in Malaysia.

Moreover, we urge that future academics do research on **merchandiser perspectives**. This is due to the fact that merchants are an essential component in the decision to adopt an e-wallet payment method. Further research should be conducted to determine why just a few merchants intend to use an e-wallet in their payment system. It will provide more information and more accurate findings about e-wallet intention from many different people's points of view.

Lastly, researchers in the future should **devote more time to their studies** and read more papers, books, and other sources that may be relevant to the subject. Future researchers should use other internet platforms to improve their study results and gain useful information

from other countries' research papers and related articles, as the intention to use e-wallet payment system among Gen Z is not limited to Malaysia and may be a problem in other countries as well.

5.7 Conclusion

Throughout this chapter, this piece sums up the whole of this review. This study focused on an in-depth investigation of factors influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia. The objectives of this study were to identify the independent variables of Gen Z's intention to use e-wallet payment system, which are Perceived ease of use, perceived usefulness, perceived security, and perceived trust, and to identify the relationship between factors and the intention to use e-wallet payment. Meanwhile, the findings from the Pearson correlation coefficient analysis show that Perceived ease of use, perceived usefulness, perceived security, and perceived trust have a significant positive relationship with the intention to use e-wallet payment. Multiple linear regression analysis shows that Perceived ease of use, perceived usefulness, perceived security, and perceived trust have significant influence on the intention to use e-wallet payment system among Gen Z in Penang, Malaysia. This is because the beta value of four independent variables is positive and the P value is also less than 0.005, which is significant.

Furthermore, the perceived trust variable has more influence on the intention to use e-wallet payment system among Gen Z in Penang, Malaysia, than other variables, whose beta value is the highest among others at 0.485. For the users to deposit money into the system, perceived trust is essential, whereby the users believe that the safety of the e-wallet is sufficient, and their money is safe. When the integrity of the service provider is perceived to be sufficient, the user will develop trust. It may indicate that perceived trust is not an issue among consumers, but it is important for the service provider to increase the security of their transactions and

network from any potential cybercriminal risk and hazard. So, it will increase consumer intention and the idea of using e-wallets in their daily purchases compared to cash.

With the results and finding of this research, e-wallet firms and developers by offering insight into the elements that influence consumers' propensity to embrace e-wallets, helping them to improve their apps and better satisfy their customers' demands. Moreover, e-wallet application developers may thus concentrate on other innovation and convenience elements, such as the speed of payment transactions, the time and effort required to set up and learn to use, or even merchant accessibility. Furthermore, by educating and raising awareness about cyber security, e-wallet fraud statistics, and the steps taken to combat e-wallet fraud incidents, relevant authorities such as retailers and businesses, financial institutions, and the government can positively and accurately deliver information about e-wallet security features to their users. From this research, future studies can use this research as a reference to carry out their future research.

However, there are some limitations in this research. In this research self-administered survey forms were used in this study's data collection, along with a single way of collection. The questionnaire that is impacted by the time frame may get careless responses from the participants. Secondly, the demographic range of this study is somewhat constrained. The study's conclusions are only applicable to generation Z customers in Penang, and people from other generations are not affected. Thirdly, we employed a quantitative approach in the form of an online questionnaire survey. This is because filling out surveys is more straightforward and less time-consuming.

Some of recommendations have been discussed since there are existences of limitation. In the future study, researchers should utilize both qualitative and mix methods to gather data. When a researcher is able to utilize both methods, they may gain a deeper understanding of the

relationship between the independent and dependent variable. In addition, the future researcher should increase the sample size and population and cover other districts and states to achieve a more reliable and representative study result. Moreover, we urge that future academics do research on merchandiser perspectives and researchers in the future should devote more time to their studies and read more papers, books, and other sources that may be relevant to the subject. Lastly, in selecting respondents, it is recommended that the researchers selected other state gen Z peoples in Malaysia. So, it enables future researchers to see the differences of results studying the determinants of "intention to use" e-wallet among other state gen Z peoples.

As a conclusion, the outcome of this research indicated that perceived trust is the most important factor influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia. This is because, without our realizing the purpose and benefits of e-wallets, there will be a lack of appreciation among e-wallet consumers for their contribution towards their strong belief in this cashless society. In summary, this research can help the service provider gain a competitive advantage and researchers from other countries can also use the data for their usage.

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APPENDIX A: DRAFT QUESTIONNAIRES

Good day everyone!

We are the 4th year students from the Bachelor of Entrepreneurship (Commerce) with Honours, who are now researching "Factors Influence the Intention to use e-wallet payment system Among Gen Z In Penang." Hence, we will be appreciate getting responses and feedback from you. The survey will only take a few minutes, and your responses will be anonymous. We would appreciate it if you could spare a moment to help us complete this survey to enable us to further our study. Thank you so much for your attention and participation.

Salam sejahtera semua!

Kami merupakan pelajar tahun 4 dari Sarjana Muda Keusahawanan (Perdagangan) Dengan Kepujian menjalankan kajian mengenai "Faktor Yang Mempengaruhi Niat Menggunakan Sistem Pembayaran E-wallet Dalam Kalangan Gen Z Di Pulau Pinang". Oleh itu, kami akan menghargai maklum balas daripada anda. Tinjauan hanya akan mengambil masa beberapa minit dan jawapan anda akan menjadi awanama sepenuhnya. Kami amat menghargai jika anda dapat meluangkan sedikit masa anda untuk membantu kami melengkapkan tinjauan ini daripada membolehkan kami melanjutkan kajian kami. Terima Kasih atas penyertaan anda.

Regards,

1. ESWARAN A/L MORGAN (A19A0126)
2. NANCY KONG KAH MENG (A19A0396)
3. NOR NASIHAH BINTI ZAINI (A19A0460)
4. NURFARAHIN HANANI BINTI MOHD ASRI (A19A0669)

Section A: Demographic Profile. Please tick (/) the answer in the box provided. /

Bahagian A: *Profil Demografi. Sila tandakan (/) jawapan pada petak yang disediakan.*

1. Age / *Umur*

☐ 18 - 21 years old / *18 - 21 tahun*

☐ 22 - 25 years old / *22 - 25 tahun*

2. Gender / *Jantina*

☐ Male / *Lelaki*

☐ Female / *Perempuan*

3. Race / *Bangsa*

☐ Malay / *Melayu*

☐ Indian / *Indian*

☐ Chinese / *Cina*

☐ Others / *Lain-lain*

4. How do you know about E-wallet? / *Bagaimana anda tahu tentang e-wallet?*

☐ Internet / *Internet*

☐ Social Media / *Media Sosial*

☐ Recommendations by Friends/ Family Members/Colleague / *Dicadangkan oleh Rakan /Ahli Keluarga / Rakan Sekerja*

☐ Magazine / *Majalah*

☐ Television / *Televisyen*

☐ Others/ *Lain-lain*

5. Frequency of using E-wallet in one month. / *Kekerapan menggunakan e-wallet dalam sebulan.*

☐ Never Use / *Tidak pernah menggunakannya*

☐ Seldom / *Jarang*

☐ Frequently / *Kerap*

☐ Very Frequently / *Sangat kerap*

6. How much do you top-up for E-wallet monthly? / *Berapakah jumlah tambah nilai anda untuk e-wallet setiap bulan?*

☐ Never top-up / *Tidak Pernah Tambah Nilai*

☐ RM 1 – RM 100 / *RM 1 – RM 100*

☐ RM 101 – RM 200 / *RM 101 – RM 200*

☐ RM 201 – RM 300 / *RM 201 – RM 300*

☐ Above RM 300 / *Rm 300 ke atas*

7. Which e-wallet do you usually use? / *E-wallet yang manakah anda biasa gunakan?*

☐ Boost / *Boost*

☐ Touch'n Go / *Touch'n Go*

☐ WeChat Pay / *WeChat Pay*

☐ Grab pay / *Grab pay*

☐ Others / *Lain-lain*

SECTION B: Please choose one answer to the degree to which you agree or disagree with each statement by putting (/) in the box provided. /

BAHAGIAN B*: Sila pilih satu jawapan mengikut tahap yang anda bersetuju atau tidak bersetuju dengan setiap penyataan dengan meletakkan (/) pada petak yang disediakan.*

	Strongly Disagree / *Sangat Tidak Setuju*	Disagree / *Tidak Setuju*	Neutral / *Berkecuali*	Agree / *Setuju*	Strongly Agree / *Sangat Setuju*
	1	2	3	4	5

PERCEIVED EASE OF USE / *RASAKAN KEMUDAHAN PENGGUNAAN*

PERCEIVED EASE OF USE / *RASAKAN KEMUDAHAN PENGGUNAAN*		Strongly Disagree / *Sangat Tidak Setuju*	Disagree / *Tidak Setuju*	Neutral / *Berkecuali*	Agree / *Setuju*	Strongly Agree / *Sangat Setuju*
		1	2	3	4	5
PEU1	It is simple for me to learn how to use an e-wallet service / *Mudah untuk saya belajar cara menggunakan perkhidmatan e-wallet*					
PEU2	My interaction with e-wallet service is clear and understandable. / *Interaksi saya dengan perkhidmatan e-wallet adalah jelas dan boleh difahami.*					
PEU3	I rarely get frustrated when I use e-wallet. / *Saya jarang*					

	berasa kecewa apabila menggunakan e-wallet.					
PEU4	I rarely get confused when I use e-wallet. / *Saya jarang berasa keliru apabila menggunakan e-wallet.*					
PEU5	I find it simple to use e-wallet services. / *Saya rasa mudah menggunakan perkhidmatan e-wallet.*					
PEU6	I rarely make errors when using the e-wallet. / *Saya jarang membuat kesilapan semasa menggunakan e-wallet.*					

PERCEIVED USEFULNESS / *KEGUNAAN YANG DIRASAKAN*

PERCEIVED USEFULNESS / *KEBERGUNAAN YANG DIRASAKAN*		Strongly Disagree / *Sangat Tidak Setuju*	Disagree / *Tidak Setuju*	Neutral / *Berkecuali*	Agree / *Setuju*	Strongly Agree / *Sangat Setuju*
		1	2	3	4	5
PU1	E-wallet make the payment transaction easier compared to cash payments (eg: save time in exchanging coins) / *E-wallet menjadikan transaksi pembayaran lebih mudah berbanding dengan pembayaran tunai (cth: menjimatkan masa dalam pertukaran syiling)*					
PU2	Using e-wallet helps me buy easily. / *Menggunakan e-wallat memudahkan saya membeli.*					
PU3	E-wallet minimizes the time I usually spend on payments. / *E-wallet meminimumkan masa yang biasanya saya habiskan untuk pembayaran.*					
PU4	E-wallet services allow for faster usage of mobile applications (e.g ticket purchases, bill payment) / *Perkhidmatan e-wallet membolehkan penggunaan aplikasi mudah alih yang lebih pantas (cth pembelian tiket, pembayaran bil)*					

PU5	I find E-Wallet useful in the buying processes. / *Saya mendapati e-wallet berguna dalam proses pembelian.*					
PU6	E-wallet helps me in terms of making better payment decisions. / *E-wallet membantu saya dari segi membuat keputusan pembayaran yang lebih baik.*					

PERCEIVED SECURITY / *KESELAMATAN YANG DIRASAKAN*

PERCEIVED SECURITY / *KESELAMATAN YANG DIRASAKAN*		Strongly Disagree / *Sangat Tidak Setuju*	Disagree / *Tidak Setuju*	Neutral / *Berkecuali*	Agree / *Setuju*	Strongly Agree / *Sangat Setuju*
		1	2	3	4	5
PS1	I will be confident making payments through my E-wallet. / *Saya akan berasa yakin apabila membuat pembayaran melalui E-wallet saya.*					
PS2	I believe that transactions conducted through E-wallets are secure. / *Saya percaya bahawa transaksi yang dijalankan melalui E-wallet adalah selamat.*					
PS3	I believe the service has the potential to be safer than traditional payment options such as credit cards and cash. / *Saya percaya perkhidmatan ini mempunyai potensi untuk menjadi lebih selamat daripada pilihan pembayaran tradisional seperti kad kredit dan wang tunai.*					

PS4	I believe the chances of losing money stored in E-wallet are low. / *Saya percaya kemungkinan kehilangan wang yang disimpan dalam e-wallet adalah rendah.*					
PS5	E-wallets ensure protection against risk / *E-wallet memastikan perlindungan terhadap risiko*					
PS6	I believe the technology used in E-wallets is very secure. / *Saya percaya teknologi yang digunakan dalam e-wallet adalah sangat selamat.*					

PERCEIVED TRUST / *KEPERCAYAAN YANG DIRASAKAN*

PERCEIVED TRUST / *KEPERCAYAAN YANG DIRASAKAN*		Strongly Disagree / *Sangat Tidak Setuju*	Disagree / *Tidak Setuju*	Neutral / *Berkecuali*	Agree / *Setuju*	Strongly Agree / *Sangat Setuju*
		1	2	3	4	5
PT1	I feel safe providing personal privacy information over the E-wallet app that I use. / *Saya berasa selamat memberikan maklumat privasi peribadi melalui aplikasi e-wallet yang saya gunakan.*					
PT2	*I believe that e-wallet service provider will act ethically when capturing, retaining, processing, and managing my personal data. / Saya percaya bahawa penyedia perkhidmatan e-wallet akan bertindak secara beretika apabila menangkap, menyimpan, memproses dan mengurus data peribadi saya.*					
PT3	I trust on the ability of an e-wallet system to protect my privacy. / *Saya mempercayai keupayaan sistem e-wallet untuk melindungi privasi saya.*					

PT4	I believe that legal frameworks for e-wallet provision are sufficiently robust to protect consumers. / *Saya percaya bahawa rangka kerja undang-undang untuk penyediaan e-wallet adalah cukup teguh untuk melindungi pengguna.*					
PT5	I feel the risk associated with e-wallet system is low. / *Saya merasakan risiko yang berkaitan dengan sistem e-pembayaran adalah rendah.*					
PT6	I can trust on my e-wallet to reliably complete my transactions. / *Saya boleh mempercayai e-wallet saya untuk menyelesaikan transaksi saya dengan pasti.*					

INTENTION TO USE E-WALLET PAYMENT SYSTEM/ *NIAT MENGGUNAKAN SISTEM PEMBAYARAN E-WALLET*

INTENTION TO USE E-WALLET PAYMENT SYSTEM/ *NIAT MENGGUNAKAN SISTEM PEMBAYARAN E-WALLET*		Strongly Disagree / *Sangat Tidak Setuju*	Disagree / *Tidak Setuju*	Neutral / *Berkecuali*	Agree / *Setuju*	Strongly Agree / *Sangat Setuju*
		1	2	3	4	5
D1	I use e-wallet more frequently than traditional (cash) payment. / *Saya menggunakan e-wallet lebih kerap daripada pembayaran tradisional (tunai).*					
D2	Using E-wallet is beneficial / *Menggunakan E-wallet adalah berfaedah*					
D3	I am willing to use an e-wallet all the time. / *Saya bersedia menggunakan e-wallet sepanjang masa.*					
D4	I am willing to continue using e-wallet services in the near future rather than not use them. / *Saya bersedia untuk terus menggunakan perkhidmatan e-wallet dalam masa terdekat daripada tidak menggunakannya.*					

D5	I believe e-wallet is better than cash payment. / *Saya percaya e-wallet lebih baik daripada pembayaran tunai.*					
D6	I will use the E-wallet when the shops are available with the E-wallet code. / *Saya akan menggunakan e-wallet apabila kedai tersedia dengan kod E-wallet.*					

- END OF QUESTIONAIRE -

APPENDIX B: GANTT CHART

GANTT CHART

No	ACTIVITIES	*WEEK 1* (16/10/22 - 22/10/22)	*WEEK 2* (23/10/22 - 29/10/22)	*WEEK 3* (30/10/22 - 5/11/22)	*WEEK 4* (6/11/22 - 12/11/22)	*WEEK 5* (13/11/22 - 19/11/22)	*WEEK 6* (20/11/22 - 26/11/22)	*WEEK 7* (27/11/22 - 3/12/22)	*WEEK 8* (4/12/22 - 10/12/22)	*WEEK 9* (11/12/22 - 17/12/22)	*WEEK 10* (18/12/22 - 24/12/22)	*WEEK 11* (25/12/22 - 31/12/22)	*WEEK 12* (1/1/23 - 7/1/23)	*WEEK 13* (8/1/23 - 14/1/23)	*WEEK 14* (15/1/23 - 21/1/23)
A)	**Planning for research** i) -Discussion with supervisor (F2F) - finding the title and related thesis														
	ii) -Discussion with supervisor (GM) -Decide the topic -Start to do thesis (Introduction)														
B)	**Action on plans** -Progress of chapter 1 -Discuss with supervisor (F2F) -Correction for chapter 1														

	-Discussion with group members (F2F) -Start to do chapter 2 (Literature review)														
	-Discuss with supervisor (F2F) -Correction for Literature review -Start to do chapter 3 (Research Methodology)														
	-Sending full report to supervisor for report check -Correction -Preparing slide														
	Submission and presentation														
C)	**Data Gathering** -Creating questionnaire -Discussion with supervisor to check the questionnaire														
	-Distribution the questionnaire														

D)	**Analysis of data collected** -Analysis the questionnaire -SPSS														
	Discussion with supervisor about checking and correction of analysis data														
E)	**Conclusion of the research and recommendation**														
	-Reference & Appendix -discussion with supervisor about full report (final outcome) -Correction and full report editing														
	-Final report submission -Project presentation														

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UNIVERSITI MALAYSIA KELANTAN

BORANG KELULUSAN PENYERAHAN
LAPORAN AKHIR PROJEK PENYELIDIKAN TANPA JILID

Kepada,

Dekan,
Fakulti Keusahawanan dan Perniagaan
Universiti Malaysia Kelantan

Kelulusan Penyerahan Draf Akhir Laporan Akhir Projek Penyelidikan Tahun Akhir Tanpa Jilid

Saya, DR. NUR IZZATI BINTI MOHAMMAD ANUAR, penyelia kepada pelajar berikut, bersetuju membenarkan penyerahan dua (2) naskah draf akhir Laporan Akhir Projek Penyelidikan Tahun Akhir tanpa jilid untuk pentaksiran.

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Tajuk Penyelidikan:

FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z IN PENANG, MALAYSIA

Sekian, terima kasih

_____
Tandatangan Penyelia
DR. NUR IZZATI BINTI MOHAMMAD ANUAR
Tarikh: 26/01/2023

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Pengesahan
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Tarikh/*Date: 26/01/2023*

Group 17

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ABSTRAK

Tajuk kajian ini merupakan "Faktor-Faktor yang Mempengaruhi Penggunaan Sistem Pembayaran "e-wallet" dalam Kalangan Gen Z di Pulau Pinang, Malaysia". Tujuan kajian ini dijalankan adalah untuk mengenal pasti faktor- faktor yang mempengaruhi percepsi mudah digunakan, percepsi kegunaan, persepsi keselamatan dan persepsi kepercayaan mempengaruhi penggunaan sistem pembayaran "e-wallet" dalam kalangan Gen Z di Pulau Pinang, Malaysia. Saiz sampel kajian ini mewakili 384 orang responden. Kaedah kuantitatif digunakan untuk mengumpul data daripada para responden. Pekali korelasi Pearson telah digunakan dalam penyelidikan ini untuk menganalisis korelasi dan pekali serta mengenal pasti faktor-faktor yang mempengaruhi penggunaan sistem pembayaran "e-wallet" dalam kalangan Gen Z. "The Statistical Package for Sciences (SPSS)", versi 26 digunakan untuk kaedah menganalisis data. Melalui dapatan kajian ini, persepsi kemudahan penggunaan, persepsi kegunaan, persepsi keselamatan dan persepsi kepercayaan mempunyai hubungan signifikan yang positif dengan penggunaan sistem pembayaran "e-Wallet" dalam kalangan Gen Z di Pulau Pinang, Malaysia. Tambahan pula, kajian ini menunjukkan faktor kepercayaan mempengaruhi penggunaan sistem pembayaran 'e-Wallet' berbanding faktor- faktor lain dalam kalangan Gen Z di Pulau Pinang, Malaysia. Oleh itu, keempat-empat hipotesis kajian ini diterima. Hasil kajian ini menghuraikan batasan kajian serta cadangan bagi menunjukkan gambaran yang lebih baik kepada para pengkaji yang akan datang mengenai kajian yang melibatkan "Faktor-Faktor yang Mempengaruhi Penggunaan Sistem Pembayaran 'e- wallet' dalam Kalangan Gen Z di Pulau Pinang, Malaysia."

KATA KUNCI: percepsi mudah digunakan, percepsi kegunaan, persepsi keselamatan dan persepsi kepercayaan, penggunaan sistem pembayaran "e-wallet" dalam kalangan Gen Z

ABSTRACT

The topic of this research is factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia. The purpose of this research is to determine how the Perceived ease of use, perceived usefulness, perceived security and perceived trust factors influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. The sample size of this study is 384 respondents. A quantitative method used to gather the respondent's data. A Pearson correlation coefficient have used in this research to analyse the correlation and coefficients among the factors that influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia. The Statistical Package for Sciences (SPSS) version 26 was used for data analysis. From the findings of this research, it shows that Perceived ease of use, perceived usefulness, perceived security and perceived trust have a positive significant relationship with influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia. Furthermore, it demonstrates that among Gen Z in Penang, Malaysia, perceived trust influences the intention to use e-wallet payment system more than other factors. Therefore, all four hypothesis of this research is accepted. From the outcome of this research, limitations of this study and recommendations are included in this study to give a better idea for future researchers related to studies involving the factor influences more on the intention to use e-wallet payment system among gen z in Penang, Malaysia.

KEYWORDS: Perceived ease of use, Perceived usefulness, Perceived security and Perceived trust, intention to use e-wallet payment system among gen z

CHAPTER 1 INTRODUCTION

In the first chapter, an explanation is given regarding an introduction to this study, encompassing the eight key elements that introduce the background, problem statement, research objectives, and questions. In this study, the researcher has been investigating the factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia. Then, it is followed by a different variable that represents the significance of this study, the definition of the terms used in the conceptual model of the intention of the E-wallet payment system, and the limitations of this study. Finally, it is followed by a different position representing this study's implications. The chapter is summed up in the closing section.

1.1 BACKGROUND OF THE STUDY

Technological innovation is transforming financial services and products. The desire for faster and easier payment methods has been fuelled by the advent of innovative services like e-commerce made possible by the constantly expanding and changing technologies (Hammond, 2018). Payments have been and continue to be the most affected by technological innovation (Hancock, 2020). Traditional payments are ones in which the majority of transactions take place with the aid of cash. In addition, there are letters of credit, demand draughts, and checks (Paytm for Business, 2022a, 2022b). Unfortunately, the traditional modes of payment, which were growing slowly, could not meet the demand for new payment systems. As a result, new digital payment methods are emerging (Hammond, 2018). Transactions conducted via digital procedures are referred to as electronic payment systems. Credit/debit cards, net banking, and mobile wallets are all examples of e-payment mechanisms (Paytm for Business, 2022a, 2022b).Due to the form of online shopping and e-commerce websites, the need for electronic payment methods has increased dramatically. Therefore, the complicated consumer intention affects the e-wallet system for online payments.

While cash remains, the primary means of payment, its use has declined due to advancements in payment virtualization, digital technology, and system infrastructure. The expansion of e-commerce and apps has become ingrained in our daily life. With mobile and Internet banking channels, paying is quickly becoming obsolete (Dato' Azmi Mohd Ali & Syaizta Kamal, 2018). E-wallet is one of the most well-known forms of payment available today among e-settlements. A payment card that is authorised for you to conduct exchanges electronically is known as an electronic wallet, sometimes known as a "digital wallet" or "E-wallet" (Abdull Rahman et al., 2022). E-wallet is a by-product of this technological advancement and a major driving force in the increasing volume of digital transactions (Dato' Azmi Mohd Ali & Syaizta Kamal, 2018). The e-wallet, often owns as a digital wallet, can help to make purchases more frictionless. Near-field communications technology combines software and data that enables users to make quick and easy purchases (GoCardless, 2022).

When Coca-Cola built several vending machines in Helsinki that enabled customers to buy a can via push notifications in 1997, those were the first E-wallet transactions. Although very different from contemporary e-wallet transactions, this is nonetheless regarded as the beginning. Soon, movie and airline bookings, hotel reservations, and food delivery were all made using mobile devices. Over 95 million people had acquired a mobile device by 2003 (Sachdev, 2019). Google was the very first significant business to create a digital wallet during 2011. However, Apple's Passbook not intended for digital payments, was introduced in 2012. It can hold tickets, vouchers, and boarding passes. Apple Pay was introduced two years later. It started in the United States and quickly spread to China and the United Kingdom. Samsung Pay and Android debuted in 2015. Since that day, this payment mechanism has become more widely used thanks in part to digital wallets like Grab Pay, Lazada Wallet, PayPal, Touch 'n Go, and more (Francesca Sacco, 2020).

The Financial Sector Blueprint (FSBP) 2011-2020, which is the main driver behind Malaysia's e-payment ambition to create a digital economy by 2020, was introduced by Bank Negara Malaysia (BNM) in response to the global pattern of financial technological advancements in e-payments towards the cashless society (Abdullah et al., 2020b) .The transition of Malaysia to contactless transactions, which also eliminates the usage of paper-based resources like checks and bank draughts, can theoretically save the nation 1% of its GDP, or roughly RM13 billion (TAN, 2020). The use of e-wallets has grown significantly in recent years, particularly in Malaysia. According to estimates, about 15.7 million Malaysians, or 48% of the nation's 32.6 million, were e-wallet users (TAN, 2020). About 42 e-wallets in Malaysia had received legal permits from BNM (Bank Negara Malaysia). The six most well-known and widely used e-wallets include Touch's Go e-wallet, WeChat Pay, Grab Pay, Boost, and Big Pay (Cha et al., 2021). On July 21, 2016, in conjunction with the Maybank Treats Fair 2016 in Kuala Lumpur, the Maybank Group President announced Maybank Pay as the initial e-Wallet payment method via smartphone or e - wallets. By offering a new gateway through which cardholders can "carry their card within their mobile devices," Maybank Pay has revolutionized Malaysian e-payment. It is where customers begin when making digital transactions using their smartphones (Maybank Treats Fair, 2016).

Moreover, based on the Malay Mail (2020),The Finance Ministry has set aside RM450 million to launch the e-Tunai Rakyat program, which aims to increase the country's use of E-wallets. In an initiative subsidized by the government, Touch 'n Go e-wallet and others promoted the usage of electronic wallets. This is because of their enormous user base, wide-ranging merchant networks, and technological know-how. Moreover, these e-wallets play a dominant role in transforming the nation toward a cashless future (Adrian oh, 2018). Many e-wallet providers offer enticing benefits like coupons and rewards to persuade clients of all ages to use the e-wallet. Despite the idea that adolescence is a time of transition from childhood to

maturity, it is nevertheless a very fragile and susceptible time psychologically (Pfeifer & Berkman, 2018).

According to Department of Statistics Malaysia, Malaysia has a high number of young individuals among its 32.6 million population with a median age of approximately 28 years (Santander, 2019). In comparison to the Baby Boomers (13%) and Generation X (18%), Generation Y (26%) and Generation Z (25%) represent the largest generational cohorts in Malaysia (Tjiptono et al., 2020). Generation Z is born between 1997 and 2012and it illustrates that Malay ethnicity is the bulk of Generation Z, followed by Chinese and Indian. Given that they were raised in an age of technology and the internet, Generation Z is regarded as among the most technologically adept generations(Abd Razak et al., 2021). Generation Z would graduate from college, enter the workforce, and make up the largest client segment for e-wallets and other electronic payment methods by the year 2020 (Victoria Petrock, 2021). As a result, Generation Z can be targeted as a critical customer segment for e-wallets (May et al., 2021). Although using a wallet is easy, consumers, particularly young buyers, are always concerned. Regardless of the risk, this youthful generation is eager to investigate and experience this new payment option and its simplicity and security (Karim et al., 2020). Traction is increasing daily, particularly among Gen Z and millennials, who account for roughly 45 percent of the total population (Rohiman Haroon, 2020).

Despite the fact that Generation Z will likely be the largest group of e-payments consumers in the future, little research has been done on the factors that influence how they use e-wallets. Studies on the use of e-wallets by Generation Z for online purchasing are scarce in Penang. This research will investigate how Generation Z's perceptions of e-wallets' usefulness, trust, security, and ease of use affect their intentions to utilise them in Penang, Malaysia. The Penang state government hopes to fully implement and facilitate e-wallet transactions throughout the entire state by March 2020, making Penang potentially the first

cashless state in Malaysia (Digital News Asia, 2020). At the introduction of the Touch 'n Go E-wallet program in Penang, Chief Minister Chow Kon Yeow said, "I wholeheartedly support this effort towards turning cashless, and I would like to encourage all Penangites to embrace this cashless lifestyle." He continued by expressing interest in learning how long it would take Penang to achieve the ideal level of transitioning to a cashless community. This declaration of the state's intention comes as Touch 'n Go recently started offering its e-wallet services to proprietors of small businesses at several wet markets and hawker centres in Penang (Yin, 2020). Furthermore, the Penang state government has implemented a large-scale cashless system to pay for city council parking lots on the island and in Seberang Perai through the Penang Smart Parking smartphone app, which can be paid for and reloaded using an e-wallet (Isa et al., 2021). According to a market survey by OPPOTUS (2020), e-wallet usage increased fast from 38% to 63% in the first quarter of 2020 due to the e-Tunai Rakyat Campaign but decreased to 49% in the second quarter of 2020. As we can see, this study will investigate the factors that influencing Generation Z's trust, Perceived ease of use, perceived security, and perceived usefulness in their behavioural intention to use e-wallets in Penang, Malaysia. The study employs TAM theories to examine the factors that drive e-wallet adoption. Businesses pursuing digital markets can benefit from the insights.

1.2 PROBLEM STATEMENT

According to Cheng et al. (2018) , the new payment mechanism, E-wallet, will aid in the expansion of e-commerce by replacing the role of a traditional wallet. However, According to Tan and Li (2018), despite the growing relevance of E-wallets, Malaysia has still considered a regional laggard due to its low adoption compared to China, India, and Singapore. Furthermore, Malaysians were rarely engaged in E-wallets because of numerous problems, such as a lack of internet expertise, which led to a lack of confidence in adopting e-wallets (Saxena et al., 2019). Some people continue to utilize traditional payment methods such as

cash, debit card, credit card, and cheques because they are sceptical of the benefits of E-wallets (Osman & Yi, 2021).

Furthermore, customers declined to use E-wallets because they did not believe the system settings were valuable and capable of meeting their expectations and requirements (Osman & Yi, 2021). Consumers refused to use E-wallets because they viewed it as a waste of time to install and set up an E-wallet during the initial verification stage, even though E-wallet firms claim to be easier to use. Furthermore, consumers may believe E-wallets are ineffective due to insufficient merchant acceptance. According to Osman and Yi (2021), 27% of consumers do not use E-wallets due to limited merchant adoption at this early stage of the system's development.

On the Contrary, people refused to use E-wallets because they regarded them as challenging. Even though most Malaysians own smartphones, they may be unfamiliar with E-wallets, particularly among the elderly, who take more time to learn about new technology (Fintech News Malaysia, 2019). As a result, features such as completing a transaction payment or topping up value via an E-wallet may be complex and confusing for a new user.

According to the Osman and Yi (2021), people are hesitant to use E-wallets because they are unaware of their security features. Due to their perception of a high risk of security and privacy issues, including the tracking or hacking of personal information, the use of unencrypted transactions rather than those involving credit and debit cards, and the likelihood of unauthorized purchases, consumers declined to use e-wallets. Some of the consumers' concerns may result from misinformation and incorrect information regarding E-wallets, which has hampered their willingness to embrace them (Yun, 2022).

Moreover, customers' belief in their online sellers comes next after carefully assessing their qualities. Trust is the fundamental idea that unites honesty, reliability, goodness, and dependability (Alkhalifah, 2021). The degree to which people view the use of mobile payment

technologies as trustworthy is referred to as trust. Mobile payments are still heavily influenced by users' lack of confidence in their degree of trust, security, and confidentiality because they are a relatively new technology (Sleiman et al., 2021). The lack of face-to-face interaction between buyers and sellers during online transactions is often the cause of the lack of confidence in e-commerce. Therefore, customers worry that the seller might mislead or utilize their personal information improperly (Sleiman et al., 2021) .Therefore, a lack of trust may make consumers hesitant to buy goods or services from online sources.

According to Zhou et al. (2022) research, the Technology Acceptance Model (TAM) is an updated suit to people's demands. Sahi et al. (2021) exhibited for the first time how the model forecasts customer adoption and usage of digital payments. As a result, in TAM by Zhou et al. (2022), acceptance to determine Perceived ease of use and perceived usefulness is used to determine individuals' intention to embrace new information technology. Purohit (2022) used the TAM model to assess earlier research on mobile payments, which revealed that perceived usefulness and ease of use were the two factors which had the greatest impact, accompanied by security and trust.

Because there has been little research on factors influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia a comprehensive system with additional assets related to diary data set and time must be developed. Thus, researchers employed the aspects of the four significant difficulties **(Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust)** that have previously been evaluated and cited (Mustafa et al., 2022). These four variables were investigated by experts to gain a better understanding of the intention to use e-wallet payment system among Penangite's gen Z. This study is essential for Penang Gen-Z citizens since the intention of E-Wallet Payment System in the local country has yet to be fully achieved, so the following generations, such as Gen Z, will significantly increase the use of online payment system in the coming years.

1.3 RESEARCH QUESTIONS

The research questions will help determine the relationship between those variables. To answer the research objectives, there are research questions developed such as:

1. What is the relationship between perceived ease of use and intention to use e-wallet payment system among gen Z In Penang, Malaysia?

2. What is the relationship between the perceived usefulness and intention to use e-wallet payment system among gen Z In Penang, Malaysia?

3. What is the relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia?

4. What is the relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia?

1.4 RESEARCH OBJECTIVES

Research objectives will focus on the outcome of this study and help achieve the research goal. The research objectives of this study are:

1. To examine the relationship between perceived ease of use and intention to use e-wallet payment system among gen Z In Penang, Malaysia.

2. To examine the relationship between perceived usefulness and intention to use e-wallet payment system among gen Z In Penang, Malaysia.

3. To examine the relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia.

4. To examine the relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia.

1.5 SCOPE OF STUDY

Specific scopes can be discovered in this study. First, consider the study's population. This research aimed to identify the factors that generation Z millennials between the ages of 15 and 24 consider essential when deciding whether to utilize an electronic wallet as a payment method. This study was limited to individuals of Generation Z in Penang who were of various races. Secondly, the geographical area is also the scope of the study. Penang state is the scope of the survey to be taken. The results from the research can be used to generalize similar case studies. In addition, the data will be gathered in a survey using a questionnaire at a particular time in the city of Penang in Malaysia.

1.6 SIGNIFICANCE OF THE STUDY

This e-Wallet brings about a significant change in the community's daily life, particularly for the younger generation, such as Gen Z, who are already exposed to increasingly sophisticated technology such as this application. This study was conducted to identify common occurrences among e-Wallet users, particularly Generation Z users. The previous generation may be less comfortable with technological matters and more comfortable with manual payment financial systems. As a result, they believe more in what is happening in front of them and what they have always used.

E-wallet consumers, customers, supermarkets, marketers, banks, and legislators will all gain from the research. This will happen whenever an examination reveals the consequences that various user groups, depending on their gender, age, and level of income, experience when using various e-wallet platforms, and whether there are any differences between them given that this technology is still relatively new among consumers.

RESEARCHERS

The significance of this study is that it can identify the characteristics that cause users to prefer e-Wallet applications over others, allowing developers to improve their existing applications. These features can be used to promote e-Wallets and decrease the need for physical money transfers. The researcher will investigate whether this prevalence is caused by their reading's Perceived ease of use, perceived trust, perceived security, and perceived usefulness. Each related matter will prompt them to prove that the e-Wallet is a better application and appropriate for their daily lives.

GOVERNMENT

It should have been noted that since there are so many laws governing mobile banking and e-wallets, this research will assist politicians and legislators in putting effective e-payment policy ideas that cater to the needs of consumers and sellers of goods into place, as well as in adding sound rules to safeguard system users. Users are expected to use the study's findings to fill in their brains with some of the consequences the e-wallet system will have before starting to use it, and all decisions will be made based on the system's knowledge.

The results can help mobile wallet service providers prioritise their efforts, determine how the system affects users, and subsequently modify or sway users' opinions about it. Although important and helpful to Gen Z consumers, this discovery will also add to the body of knowledge on digital and mobile payment systems.

E-WALLET MERCHANTS

Merchant Wallets offers more than just payments; they also provide various value-added services. This could also benefit e-wallet providers by expanding their customer base. This study is thus essential for entrepreneurs interested in developing e-wallet service in Penang. This system manages liquid cash exchanges between a business and a customer,

enhancing the accuracy and speed of financial exchanges on both sides. The amount is transferred into the merchant's wallet and is readily transferable to the merchant's savings account when the merchant detects the QR code from the customer's smartphone. The user must insert a debit or credit card into the wallet and could also store the card information for later use.

1.7 DEFINITION OF TERMS

1.7.1 E-Wallet

E-wallet is a mobile wallet or digital wallet, an application that only allows users to use online through a computer or smartphone to make payments. This e-wallet has the same function as a credit or debit card (Kagan, 2022a). When making any payment, users can use an e-wallet by scanning a QR code, tapping, and paying on the phone with NFC features or online transfer. Malaysia has many e-wallets, such as Touch n Go, Grab Pay, Boost, etc (The Economic Times, 2022).

1.7.2 Generation Z

Numerous scholars refer to the current generation of adolescents as Generation Z. According to Demir and Sönmez (2021), Generation Z consists of individuals born after 1995. On the other hand, Dimock (2019) argued that Generation Z was born between 1997 and 2012. Moreover, Generation Z is also known as the "digital natives" and the "digital society,"(Heather A. Turner, 2019). These names are generated from the birth year of the generation.

1.7.3 Perceived ease of use

The term "Perceived ease of use" refers to the extent people believe the technology they utilize is simple to operate. Another definition of Perceived ease of use is the comfort one experiences when employing a specific technological solution (Keni, 2020).

1.7.4 Perceived usefulness

Perceived usefulness can be explained by how people use or implement a specific technology to help themselves and improve job performance. Perceived usefulness defined as the confidence that a new piece of technology will aid in attaining one's objectives (Keni, 2020).

1.7.5 Perceived security

The term "perceived security" refers to the confidence with which a mobile payment user completes financial and identification-related transactions using their mobile device. Perceived security is described by Razif et al. (2020) as the customer's perceptions and subjective evaluations of a system's security and how well they are protected from potential hazards. Also, according to Lyra (2021), users are more likely to back out of e-payment transactions if they have a deficient level of trust in the system's safety.

1.7.6 Perceived trust

The term "perceived trust" refers to the internal state of mind that prompts one to trust another based on the other's laudable actions. Therefore, perceived trust is vital in adopting new technologies, and it supports business owners in cultivating healthy ties with their customers (Ali & Bhasin, 2019). Furthermore, according to Singh and Sinha (2020), trust has been a critical factor in buyer-seller transactions, giving purchasers long-standing high expectations of the success of their commercial relationships.

1.8 ORGANIZATIONAL OF THE STRUCTURE

The background of the study, study objectives, research questions, problem statement, scope of the study, and significance of the study are all explained in chapter 1. The literature review will next be covered in chapter 2 by reviewing and elaborating on what has been done in previous studies by other researchers and by discussing theoretical models, conceptual frameworks, and hypothesis statements. Chapter 3 will discuss data collection, sampling design, data analysis, and research instruments. The results from IBM SPSS Statistics 26 will be interpreted in Chapter 4. In the last chapter, we will summarize the study's findings, discuss the research's potential policy implications, discuss its limitations, and provide recommendations for further work

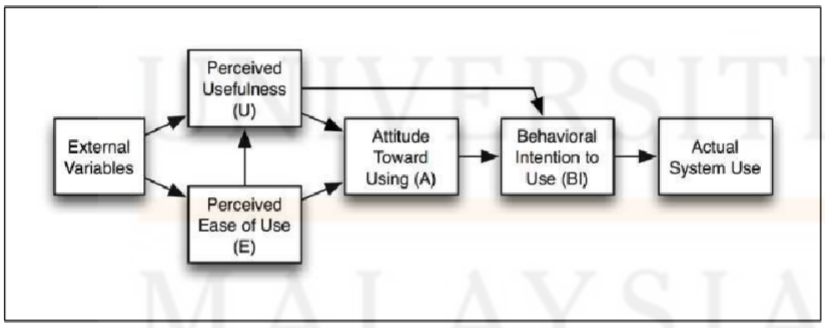
CHAPTER 2: LITERATURE REVIEW

2.1 INTRODUCTION

The entirety of the literature review was devoted to discussing the factors influencing the intention to use an electronic wallet payment system among Generation Z in Penang, Malaysia. In order to research the hypotheses and previous observational investigations that relate to this study, a collection of published publications, journals, and websites was gathered. In this chapter, readers will gain a deeper understanding of the Dependent variable, which is the Intention to use E-Wallet Payment System Among Generation Z, and the independent variables, which are Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust. Additionally, this chapter will discuss the relationship between the two variables. This chapter comprises a study of the relevant literature, a review of the appropriate theoretical model, a conceptual framework, the creation of hypotheses, and an overall conclusion of Chapter 2.

2.2 UNDERPINNING THEORY

2.2.1 Technology Acceptance Model



Source: (Suleman et al., 2019)

Figure 2.1: First Modified Tam

The technology acceptance model (TAM), created by Davis 1989 is the most well-known paradigm for describing and evaluating individual aspirations to embrace new technology. This study has been supported by Diop et al. (2019), The TAM, the most extensively used technology adoption model, has been demonstrated to accurately forecast the intention to use new technologies. TAM, like TRA and TPB, predicts that an individual's attitude influences their behavioural intention (Chen, 2018). It focuses on two main factors influencing people's acceptance of new technology: perceived usefulness and Perceived ease of use. Perceived usefulness is defined as "the extent to which an individual believes that using a particular system would improve his or her job performance in an organizational context," whereas Perceived ease of use is defined as "the extent to which an individual believes that using a particular system would require no physical or mental effort" (Li et al., 2020). The core premise of TAM is that individuals act rationally when they employ an information technology product or service (Ajibade, 2018). TAM has been adopted as the foundation for a few research findings on mobile payments, with additional variables like security, cost, trust, mobility, emotionality, convenience, speed of transaction, use circumstance, social peer group, information quality, the allure of alternatives, privacy, system quality, and digital anxiety being adapted (Chen, 2018). Perceived security is then anticipated to significantly impact behavioural intentions. Since perceived security also has financial components, it needs to have a significant impact on the suggested approach. Furthermore, since perceived security is a composite construct, beliefs on a particular payment method do not immediately surface. Users assess a system's security over time based on its successes and failures throughout performance. Public sentiment and social influence are given weight in the aggregate security construct as well (Razif et al., 2020). The findings show that self-efficacy and social influence have little impact on behavioural intention (Momani, 2020). By extending TAM to look into consumers' acceptance of mobile payment and assessing their models in various contexts, the offered

theoretical constructs. For example, Rahman et al. (2020) To discover and evaluate the factors influencing consumers' inclination to use digital payments in developed countries, TAM was expanded, and a structure equation model was established. Ullah et al. (2022) evaluated the usefulness of TAM in their study of consumer acceptance of mobile payments and suggested that a new element, trust, be introduced to TAM. TAM was improved, modified, and multi-item scales to gauge the perceived usefulness, security, cost, trustworthiness, and emotionality of mobile payment users were made (Karim et al., 2020). TAM was used by Chen (2018) to investigate the impact of perceived usefulness and Perceived ease of use on consumer desire to utilize mobile payment systems in New Zealand. TAM was combined with consumer characteristics, four mobile payment system functionalities, and statistics from South Korea to examine the factors impacting the use of digital payments. To investigate the factors impacting the adoption of NFC-based mobile payment in Malaysia, Ho et al. (2019) introduced trust-based behavioural control theories into TAM. explored the role of Value-Added Services (VAS) in Danish customers' adoption of mobile payment using TAM and DOI. By creating a framework that incorporates technological readiness and acceptance into TAM, it was possible to analyse the factors influencing consumers' adoption of mobile payment in South Korea (Shin & Lee, 2021) . TAM was expanded to consider a person's own innovation capabilities, subjective norms, perception of risk, and perceived costs. The model was tested using data from Malaysia. The results of his model test validated the role of perceived usefulness and convenience of use as antecedents in customers' acceptance of mobile payment but also suggested that perceived security and trust influence consumers' attitudes and intentions. They demonstrated that customers' acceptance of mobile payment is significantly influenced both directly and indirectly by compatibility, perceived technology security, performance expectations, innovation, and impact on society. Finally, as previously said, several theories have been used in technology adoption studies, such as the TAM to foresee and explain users'

willingness to use information technology and to determine technology acceptance behaviour. As a result, the study implies that these influence the intention to use e-wallet payment system among gen Z In Penang, Malaysia.

2.3 PREVIOUS STUDIES

2.3.1 THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z

In this research, Intention refers to generation Z using the e-wallet based on the factors as a consideration utilizing the e-wallet. Generation Z, between the years 1997 and 2012 (Linardi & Anggono, 2019). is accustomed to turmoil. An E-wallet, often known as a digital wallet, is a software-based system that holds bank information and allows users to make payments using their mobile phones. Rather than carrying a traditional wallet containing all your debit and credit cards, you can upload your current bank account information to your digital wallet and use it anytime you want, as long as you have your phone with you. You can also use your phone to make purchases using a digital wallet: when you go to the checkout page, you should see which digital wallets the firm accepts and make a payment with a single click (Marques, 2021). These traits of Generation Z distinguish them in lifestyle and consumption behaviours. While Generation Z still prefers in-store purchases, internet purchases are increasing in popularity. In today's modern and dynamic technological evolution, consumer acceptance of technologies is reliable under specific conditions. The digital era has unquestionably begun as a result of the global evolution of financial technologies from cash payment to digital and E-wallets (Abdullah et al., 2020a). The electronic wallet, or e-wallet, is a card that may be used to make purchases digitally via a smartphone or computer. It accomplishes the same task as a debit or credit card. An E-wallet must be connected to the user's bank account in order to accept purchases (The Economic Times, 2022). Furthermore, it is adaptable with a "personal banking system" that includes a number and a pay-in option.

Payment by e-wallet is currently one of the most popular transaction systems since a digital transaction via a digital wallet provides convenience, flexibility, and security (Karim et al., 2020). These transactions are usually conducted in physical stores when customers scan the (QR) code with their mobile device to authenticate the payment (Lu, 2018). Customers gain from an E-Wallet because it supports a transaction that provides them with everything they desire: speed, convenience, and security. It eliminates the necessity for carrying a physical wallet with them when they go out and removes the need for them to dig out their debit card when making an online transaction. They don't have to memorize passwords or "long numbers" from credit cards. Customers may have quick, convenient, and secure access to the products or services they want if they have their smartphones nearby (GoCardless, 2022). Gopi further noted that 40% of Malaysian customers had increased their mobile/digital wallets, 26% had used contactless debit cards, and 22% had used contactless credit cards. Malaysia has also been at the forefront of e-wallet adoption in the region, surpassing the Philippines, Thailand, and Singapore. Malaysia now has around 42 e-Wallets that have gained formal licenses from BNM (Bank Negara Malaysia, 2022). The six most popular and frequently util-utilized consumers are AEON Wallet, Boost, Big Pay, Grab Pay, WeChat Pay, and Touch 'n Go E-wallet. Additionally, with the Penang state government preparing to completely implement and approve e-wallet operations throughout the state by March 2020, Penang could become the next cashless city in Malaysia (Yin, 2020). Touch 'n Go E-wallet is the first and only e-wallet that officially enable Penangites to experience and enjoy cashless purchases via the different bazaars and night markets in these key historical streets (Touch 'n Go, 2020). Based on the research, it can be said that Gen-Z in Penang uses e-wallets primarily due to their interoperability, flexibility, and user-friendly operations that are carried out via digital devices.

2.3.2 FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z

This section reviewed the body of research on the factors that influencing the intention to use e-wallet payment system among gen z. Several studies have been conducted to determine the factors that impact a user's use of an e-wallet. Furthermore, the Davis (1986) Technology Acceptance Model (TAM) was widely employed in the research field to investigate the factors that influence a user's choice to adopt a new technology system.

2.3.2.1 Perceived ease of use

EduTech Wiki contributors (2021) defined perceived ease of use as the degree to which a person believes using technology or systems requires no effort. As a result, a scheme or design should be simple enough to use. The ease of use refers to how quickly and easily the gadget can be utilized and how easily all operations and processes can be done electronically (Mustafa et al., 2022). Besides, To and Trinh (2021)) also note that perceived ease of use is based on how much time an e-wallet can save and how simple, easy, and intuitive it is.

According to findings from earlier studies, consumers have a greater propensity to accept a product or technology if they believe it to have a high level of ease of use (Alyoussef, 2021). Moreover, several other research also states that ease of use is the most significant factor determining whether people would use electronic wallets (Kumar et al., 2018). The significance of usability has been emphasized in other papers as well. Based on this, Chen (2018) found that a positive intention to use E-wallet was significantly connected with ease of use. This has been reinforced by the findings of Mustafa et al. (2022) who observed that the perceived ease of use was a favorable, principal, or crucial element in the willingness to use e-wallet services.

The perceived ease of use, usefulness and attitude were all positive indicators of the intention to use mobile services, as Mustafa et al. (2022) stated. Previous research has found

that perceived ease of use positively connects to actual usage intent. Thus, more customers would use the system if its operations and procedures were uncomplicated and straightforward to understand and carry out. In essence, the purpose of using an electronic wallet is the same as that of using cash. Consumers will go elsewhere for a solution if a procedure is too difficult or time-consuming for them (Karim et al., 2020). Furthermore, consumers will have preconceived beliefs about a product or service, which could impact how excited they are to utilize a particular system or technology.

In addition, customers will become more willing to use their mobile devices once they realize how simple it is to do so (Li et al., 2020). For example, Touch 'n Go E-wallet. The first e-wallet that formally enables Penangites to access experience and enjoys contactless payment via the numerous bazaars and night markets in these crucial historical streets is the Touch 'n Go E-wallet, which has transformed the renowned and historic island. From utilizing cashless to pay for parking to more services becoming cashless shortly, the goal is to limit cash transactions to a minimum (Editor, 2020). TNG Digital Sdn. Bhd. CEO Ignatius Ong stated, "We are genuinely delighted to be extending our expertise to Penang as this puts us on the correct route to attaining our vision of a cashless Malaysia." Enabling these heritage streets continues our long-term commitment to propel Penang forward by providing locals with a more convenient, safer, and hassle-free means of transacting daily (Amirul Mukminin, 2020). As a result, this study has supported that the simplicity of use is the most crucial element influencing the inclination to use e-wallets Mustafa et al. (2022). Therefore, perceived Ease of Use is a factor influencing the intention of Gen Z in Penang to use e-wallet payment system.

2.3.2.2 Perceived usefulness

According to the definition of perceived usefulness (PU), someone who thinks that utilizing a particular application will increase their work efficiency and increase productivity

To and Trinh (2021) & (Lim et al., 2021). According to Li et al. (2020), A person's motivation to enhance their performance of tasks assigned to them through a particular program is perceived usefulness. The use for which new technologies will be used will change whenever consumers see their value as being extraordinarily high (Li et al., 2020).

This research has been supported by Hanafi and Toolib (2020), who indicate that the perceived usefulness of a digital payment method considerably influences the willingness to use that payment method. According to the research findings, customers utilize the applications because they are committed to achieving their goals. Respondents indicated that they could rapidly complete a transaction involving mobile payments. Moreover, the benefits of earning awards and digital receipts increase the use of mobile phones. Consequently, the popularity of e-wallets by generation Z is attributable to the interoperability, flexibility, and accessibility of smart devices (Karim et al., 2020). According to research Bakar et al. (2022), the likelihood of using an e-wallet app is directly related to how valuable the user thinks it will be to them. However, perceived usefulness is only adequate to affect the continuation of using e-wallets if it is supported by customer happiness (Olivia & Marchyta, 2022).

Besides, a person's ability to use a system for a long time can be influenced by perceptions of the system's usefulness (Tiara & Usman, 2019). This study has been supported by Chan et al. (2021); one's perception of usefulness reflects how comfortable one is using technology to advance their career. Usefulness can be evaluated using the following criteria: helpful, beneficial, efficient, and productive. According to Li et al. (2020) research, when consumers believe they are using a digital wallet, they gain access to advantages like ease and payment ease. The ease of payment may make users believe it is unnecessary for someone always to carry cash to feel comfortable using the system. The degree of consistency with which digital wallets are used is influenced by indicators of confidence that affect a person's perception of comfort. System consistency is valuable since it ensures that the system continues

to fulfill a function in one's life. Li et al. (2020) proposes at least one indicator of perceived uses: high-risk, transaction security, and security systems.

Therefore, perceived usefulness has been used as a variable in several studies, and most of the findings indicate that it significantly affects people's willingness to adopt new technology. Perceived usefulness has a significant influence in determining technical acceptability, leading to better results for subsequent investigations. Therefore, perceived usefulness is a factor influencing the intention of Gen Z in Penang to use an e-wallet payment system.

2.3.2.3 Perceived security

The term "perceived security" refers to the user's sense of how effectively they are shielded from potential danger (Razif et al., 2020). Perceived security, as defined by Zhang et al. (2019), is an individual's confidence in their ability to transmit sensitive data over a network. (Osman & Yi, 2021) notes that the extent to which an individual feels that utilizing mobile payment processes would still be safe is a good indicator of the person's impression of security. In the context of digital wallet payments, "perceived security" is a psychological concept that refers to users' beliefs that their digital wallet transactions are secure in terms of both their financial information and personal information.

Many aspects must be highlighted in this modern era, including protecting personal information while utilizing e-wallets. According to studies by Lyra (2021),customers are less likely to use online payment systems if they have doubts about their safety. Studies have shown that consumers are put off from completing purchases due to concerns over their personal information not being kept secure (Alzaidi & Agag, 2022). If proper security measures are not given, cybercriminals may get access to private information through electronic wallet payments (Karim et al., 2020). This study has been supported by Shin (2020), discovered that cash is

more likely to be the preferred payment option than payment cards among Canadian clientele. This is because consumers do not have faith in the integrity of the POS system and are afraid of being victims of POS-related fraud. It was acknowledged by consumers' worries about online payment security would reduce their propensity to use such systems.

Furthermore, Mustafa et al. (2022) stated that users' perspectives on the usage of systems and technology would be affected by their perceptions of security. Customers are more inclined to accept and use techniques like e-payment when they feel confident in the system's security, usefulness, user-friendliness, and efficacy, as found by research by (Mustafa et al., 2022). At the time, People would not use systems and technology if they felt insecure (Yang et al., 2021). Therefore, any vulnerabilities in the security of e-wallets would harm their users.

Nonetheless, Li et al. (2020) found that the adoption of e-wallets is higher among Gen Z and that there is no significant relationship between the perceived security of e-wallets and their use. In comparison, Karim et al. (2020) reported an association between perceived security and the intention to use e-wallets in research on young Malaysian adults. This study had been supported by Sunny and George (2018), came to the same conclusion: perceived security affects people's intentions to use the e-wallet payment system. This finding also supported by Andrew and Tan (2019), which determined that security has a high relationship with the intent to use the E-wallet payment system. In contrast, other research that Aribake and Mat Aji (2020) on the integration of perceived security as a descriptive variable across payment instruments revealed that perceived security was no significant influence on the intention to use e-payment. Most researchers such as Rahmadhani et al. (2022) agreed that perceived security has a significant influence on consumers' intentions to use E-wallet payment systems. As a result, we can conclude that perceived security positively influences the choice of Gen Z in Penang to use the E-wallet payment system.

2.3.2.4 Perceived trust

Trust, as defined by Kagan (2022b), is the assurance that a customer's financial and private data will be kept secure. Mustafa et al. (2022) described trust or confidence as a person's readiness to expose oneself to the activities of a trusted party based on a sense of trust or assurance. In addition, trust is the conviction that one's prospective companion would not exploit one's confidence (Oswald A. J. Mascarenhas, 2019). Trust is also stated as the responsibility of a service provider and the capacity to satisfy consumers' expectations.

Previous research has indicated that trust is a strong predictor of the usage of technology and gadgets (Mondego, 2018). Researchers have shown that people's level of trust substantially affects whether or not they plan to use technologies like electronic wallets (Mustafa et al., 2022). According to Chao (2019), trust is a factor that motivates users to utilize and accept new technologies. This study has been supported by Cha et al. (2021), stating that if an e-wallet system is not entirely trustworthy, then users will not adopt it. Mondego (2018) notes that it is vital to create user trust to understand consumers' demands so that people can trust the e-wallet system and utilize it. Thus, confidence can nudge customers into making transactions online and through e-wallet systems.

Even though most research found a relationship between trust and intention to use, Chao (2019) concluded that trust is not a reliable indicator of a person's willingness to embrace new technologies and gadgets. This difference might result from beliefs that the digitally aware Generation Z members perceive as unimportant. Further, Ing et al. (2021) concludes that perceived trust is inadequate in motivating consumers, which is in line with the findings of Paramasivam et al. (2022), who found no objective evidence relating to perceived trust and desire to use e-wallets. However, research by Abdull Rahman et al. (2022) on young

Malaysians indicated that the acceptability of e-wallet platforms is significantly correlated with the level of confidence that users have in those systems.

An additional finding from the research supported by Paramasivam et al. (2022) showed that consumers' perceived trust affected their inclination to utilize an electronic wallet. Researchers Kolandaisamy and Subaramaniam (2020), discovered that consumers' faith in the E-Wallet payment system affects their propensity to use it. We can conclude that perceived trust impacts the intention of Gen Z in Penang to use the E-Wallet payment system.

2.4 CONCEPTUAL FRAMEWORK

The diagram below shows the relationship between independent and dependent variables in the form of a conceptual framework. From the framework, there are four independent variables: Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust. The dependent variable of this study is E-Wallet Payment System Among Gen Z.

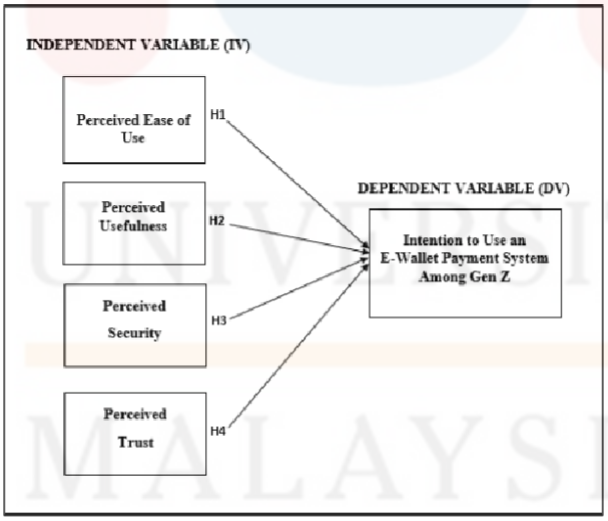


Figure 2.2: Conceptual Framework of the Factors Influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia

2.5 HYPOTHESS STATEMENT

The hypothesis is needed to establish the relationship among these variables mentioned and to test whether the relationship that has been theorized holds true.

H0: There is no significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H1: There is a significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H0: There is no significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H2: There is a significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H0: There is no significant relationship between perceived security and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H3: There is a significant relationship between perceived security and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H0: There is no significant relationship between perceived trust and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

H4: There is a significant relationship between perceived trust and intention to use e-wallet payment system among gen Z in Penang, Malaysia.

2.6 SUMMARY

To summarize, this chapter has discussed the underlying theory that will be applied in this investigation. After that, there was a discussion about previous examinations, followed by an explanation of those discussions. After that is a statement that states the effect that one variable has on another variable called a hypothesis statement. In conclusion, the dependent factors and independent variables were utilised to construct the conceptual framework for this investigation.

CHAPTER 3: RESEARCH METHODS

3.1 INTRODUCTION

This chapter explains the research methodology related to the theory and conceptual framework model based on the study's research evidence. As a result, the chapter is broken into sections explaining the study's approach, tactics, and verification methods in depth. Data gathering methodologies and data analysis methods are also described. A quick overview of the overall research design is one of the primary elements that explain how the research is carried out. The sampling method for the study is then detailed. A pilot test was also described in this chapter to test the viability of the investigation. The techniques utilized to acquire information from the given sample and the procedure for carrying out the whole thesis are detailed. Finally, outline the data analysis used to generate the study's findings. The explanation includes the logic and justification for the chosen technique and a complete description of the methodologies used. The chapter also explains the actions to guarantee that the study is conducted according to ethical research practices.

3.2 RESEARCH DESIGN

According to Li et al. (2020), the research design is a methodological framework that researchers utilize to efficiently handle research difficulties by logically merging diverse research components. The two types of research designs are qualitative research design and quantitative research design. The study's details are gathered coherently and logically to ensure that the researcher will effectively solve the research topic, which is to develop an action plan for data collecting, measurement, and analysis. These investigations' design processes can include forms, features, similarities, linkages, changes, and differences. This study employs quantitative methodologies since they are more objective in studying and understanding the link between independent variables and factors that influencing Gen Z's use of payment

systems via E-Wallet in Penang. After collecting the primary data for this study, it will be analysed utilizing a questionnaire survey. The researcher will then collect data since it is the most convenient, has the broadest coverage, and is the most versatile tool.

3.2.1 Quantitative Research

According to Imed Bouchrika (2022b), The first strategy is to design the study from a quantitative standpoint. This strategy works well for a study objective where a mathematical finding is connected to a practical understanding. The quantitative approach views statistics as an interpretation of the data, as its name suggests. According to TheIntactone (2019), When a study requires to draw inferences from the data in order to gather useful information, quantitative research is used. To properly appreciate key business decisions, use actual figures. Any company's success is based on quantitative research design because any conclusions reached through analysis and data collection will only be profitable for the company.

3.2.2 Correlational Research

Correlational research is a form of methodological approach in which two factors are observed to establish a significant correlation between them. The goal of correlational research is to uncover variables that are related in such a way that an alteration in one causes a change in another. Unlike experimental research, which is totally based on scientific methods and hypothesis, this form of research is descriptive (Pritha, 2021). Positive correlational research, negative correlational research, and no correlational research are the three forms of correlational study. Positive correlational research is a research strategy that involves two statistically correlated variables, at which a rise or decrease in one variable causes a similar change in the second. Negative correlational research is a study strategy that involves two statistically opposite variables, where a rise in one variable causes an equivalent effect or reduction in the other factor. A sort of correlational study in which two variables are not

highlighting important related is known as zero correlational research. A modification in one of the factors may not result in a corresponding or alternate change in the other variable in this scenario. Zero correlational research takes into account variables having ambiguous statistical correlations (Questionpro, 2022a).

3.2.3 Cross-Sectional Study

Statistics from one particular time period are examined in a cross-sectional study. In this kind of study, individuals are chosen based on certain variables that are important. Although cross-sectional studies are frequently utilized in adolescent development, they are also widely used in social science and education (Kendra Cherry, 2022). Cross-sectional studies are observational in nature and are classified as descriptive research; they are neither causal nor relational, therefore they cannot be used to ascertain the reason of an issue, such as a sickness. Research team would not alter factors; instead, they record the data that is existing in a demographic (Questionpro, 2022b).

3.2.3.1 Descriptive Research

According to the researcher Team Leverage Edu (2022), thoroughly discusses the circumstance or issue which is the factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia in their learning resources while using a descriptive research design. This kind of research design is entirely theoretical, with the researcher gathering data, processing it, organizing it, and then clearly presenting it. It is the type of study design that is the most open-ended. A descriptive design may make use of a variety of research methods to investigate one or much more factors. In contrast to experimental research, the researcher in a descriptive study approach simply observes and assesses the variables without changing or controlling any of them. In other words, even though descriptive research can also be used in qualitative studies, descriptive research methods are often thought of as a subset of

quantitative studies. The study design must be correctly built-in order to ensure that the findings are accurate and true (Shona McCombes, 2022).

3.3 METHOD OF DATA COLLECTION

To solve the research problem, data collecting involves acquiring information from all pertinent sources (BYJU'S, 2022). Data is a vital resource for any study. This is because researchers will analyze the information gathered from respondents to analyze the hypothesis and research questions. Data can be classified into two types: primary and secondary data.

3.3.1 Primary Data Collection

Primary data collection is collecting data from a live source, such as a human being. Primary data collection aims to collect data that is as accurate and complete as possible (Ines Maione, 2022). Primary data sources include surveys, observations, experiments, questionnaires, focus groups, interviews, and many more (Formplus Blog, 2022c). Primary research includes qualitative and quantitative analysis (Imed Bouchrika, 2022a).Quantitative data refers to any information that has been counted, measured, described, and given a numeric value. Qualitative data is expressive and communicated through words as opposed to figures (The FullStory Education Team, 2021).

The essential data for this study comes out from the results of questionnaires. These surveys will be distributed online. Google forms, an internet software program, will be used to conduct the questionnaire forms. A questionnaire is a self-report data collection tool that every research subject uses to participate in a study (Pritha, 2022a). This analysis essentially incorporates the methods of quantitative data collection. Researchers can easily employ secondary data that has previously been gathered through primary sources for their research. This particular type of data has previously been gathered. Books, journals, papers, websites,

blogs, and many more are examples of secondary resources (Formplus Blog, 2022d). This information is easily accessible that can be used in this study.

3.4 SAMPLE DESIGN

The sampling procedure involves using a subset of the demographic to represent the complete population. This makes it possible for researchers to speculate about some insufficient sample traits. (Stephanie, 2022).

3.4.1 Study Population

Malaysia was chosen as the location for the issue review by the researcher. Before collecting data, researchers must first select and define the population. The study population is a subset of the target population from which the sample is selected (Sun et al., 2021). The study's target demographic included the residents of Penang, Malaysia. According to the Department Of Statistics Malaysia (2022b), the current population of Penang citizens on 21 Nov 2022 are 1,752,837 people. Moreover, the population targeted for this study is residents of Generation Z people who are male and female between 18 to 25 years old, which is 20.13% (352,846 people) of the overall population of Penang citizens (Department Of Statistics Malaysia, 2022a).We choose this age group as our population because they are primarily smartphone users. Furthermore, they are more aware of e-wallets, and most have used them (Chan et al., 2021). Moreover, we choose this area because it is more specific for us to get respondents to answer questionnaires through a google form.

Table 3.1: Total Number of Generation Z People in Penang

∴ **FORMULA TO FIND THE TOTAL NUMBER OF GENERATION Z PEOPLE IN PENANG:**	
Total Number of Generation Z people in Penang	= Number of total populations of Penang Residents × Percentage of Generation Z in Penang
Total Number of Generation Z people in Penang	= 1,752,837 people × 20.13% of Generation Z = **352,846 Generation Z people in Penang**

3.4.2 Sample Size

The phrase "sample size" corresponds to the quantity of people who are included in a research study to accurately describe a population. The entire number of participants who were used in an investigation is referred to as the sample size. To ensure that the final sample encompasses the target population, the quantity is frequently divided into smaller subgroups according to demographic factors like age, gender, and geography (Kibuacha, 2021). Krejcie & Morgan (1970) presented a table for quick reference that calculated the sample size for a particular demographic (Bukhari, 2021). The population of Gen Z people in Penang is 20.13% (352,846 people), and the researcher determined the sample size in this study to be approximately 384 members to learn about the factors that influencing the intention to use E-Wallet payment system.

N	S	N	S	N	S
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	1000000	384

Note.—*N* is population size. *S* is sample size.
Source: Krejcie & Morgan, 1970

Source: (Bukhari, 2021)

Figure 3.1: Krejcie and Morgan sample size determination table

3.4.3 Sampling Technique

Sampling is a technique for choosing specific individuals or a specific group of respondents so that analytical conclusions can be drawn from them and the characteristics of the entire population may be determined (QuestionPro, 2022e). Probability sampling and non-probability sampling seem to be the two major categories of sampling procedures. Random sample is used in probability sampling, enabling the researcher to draw statistical conclusions well about entire demographic. Making a non-random choice based on convenience or other factors is known as non-probability sampling, and it allows researchers to gather data more effectively (McCombes, 2022). To accomplish the study's goal, a non-probability sampling technique called "Convenience sampling" was adopted. The "convenience sampling" refers to a technique used by researchers to gather market research data from a group of participants who are readily accessible (Fleetwood, 2022). The primary goal of this sampling method was

to select representatives at random based on their accessibility and proximity to the respondent. The sample was assigned randomly to 384 respondents. Therefore, Due to the time constraints and huge sample size, convenience sampling is the best strategy for this investigation. As a result, this sampling approach is appropriate for this research and will help researchers to achieve accurate study results.

3.5 RESEARCH I STRUMENT DEVELOPMENT

The concept "research instrument" refers to any tool you can use to collect or get data, measure, and analyze related to your study topic (DiscoverPhDs, 2020). Some examples of research instruments include interviews, questionnaires, online surveys, and checklists (StudySmarter, 2022). This study found that quantitative and descriptive methodologies use questionnaires as their primary research tool. It is a list of inquiries to gather responses' private information and statistically significant data.

3.5.1 Questionnaire Survey

The questionnaire is made to gather all the information needed to accomplish the research aim and objectives. In order to learn more about participants' views, behaviours, or viewpoints, questionnaires are used (Pritha, 2022a). In this study, the primary purpose of a questionnaire is to collect exact data in the most feasible method. Thus, the correctness and consistency of questionnaires are crucial parts of the research method, logy known as validity and reliability.

The responders, who are members of Penang's Gen Z, will receive the questionnaires from the researcher. It will be disseminated through social media platforms including Telegram, lnstagram, and WhatsApp. Moreover, Google Forms not only gives us a rapid means to design an online survey, but also enables us to gather quick replies online because

respondents may complete the survey using virtually any search engine, including a smartphone or tablet browser.

Furthermore, this study will employ a quantitative approach to quantify the issue. Any d expresses its worth through counts, or numbers are considered quantitative, and each data set has a unique numerical value. The information received from the distributed questionnaires will be supplied as quantitative data, often in graphs, to order simplicity for the researcher to comprehend, analyze, and draw conclusions.

3.5.2 Questionnaire Design

Since questionnaire surveys were utilised in the research, participants' comments are selected from response alternatives on the questionnaire. Given that the responses from a wide range of people were consistent, the process for interpreting the data was streamlined. Additionally, it occupies less time for responders to respond when they just rate the response in accordance with the question posed. Both the respondent and the researcher will gain from this (Stephanie, 2022). To make it easier for respondents to understand and respond appropriately, the questionnaire will be created in two languages (Dwibahasa), English and Malay. The questionnaire will be distributed to 384 respondents in this study. Section A, Section B, and Section C are the questionnaire's three main sections. Section A collects demographic data on Gen Z respondents from Penang, such as gender, age, marital status, sector, and others. Section B is then developed to collect data on the dependent variable, the efficiency of the Intention of the E-wallet Payment System. Meanwhile, sections C explains the study's independent variables, which include Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust. Sections B and C are the questionnaires that employs a Likert scale measurement. On a scale of 1 to 5, the level of consent is stated. This aims to

determine which elements influencing Gen Z's intention to use e-wallet payment system in Penang, Malaysia.

3.5.3 Pilot Test

According to Formplus Blog (2022b), Pilot testing includes a range of procedures which it enable us to examine different elements of your project in advance. You can think of this as a practice session or test run to help you find any holes or weaknesses in your plan before you put it into action. Both qualitative and quantitative investigations should have pilot experiments (Enago Academy, 2022). In contrast, Pilot testing is crucial because it helps in a variety of ways, including software and running tests procedure bug fixing, establishing whether a product is capable of full-scale implementation, improving time and resource best use of resources, gauging the response of your target group to the programme, evaluating programme success, and allowing the team to practise activities that will be used for usability testing (Hamilton, 2022).

To elaborate, the pilot test will be conducted on subgroups within the sample required for the research (Satterlund et al., 2011). Chosen participants will get 30 sets of questionnaires for the pilot test. Statistical Package for Social Sciences (SPSS) will be used to test the data's dependability after it has been collected. Lastly, the questionnaires would be disseminated for the main study after almost being amended considering the pilot findings if any problems are discovered.

3.6 MEASUREMENT OF VARIABLES

An unidentified characteristic that can receive one or more values and measure a particular entity is called a measurement variable. The scale of measurements refers to how the researcher measures the elements and affects how the data may be analysed and what assumptions can be drawn from it. The four measuring variables are nominal, ordinal, interval,

and ratio (Formplus Blog, 2022a). The researcher uses three measurement scales in this study: nominal, ordinal, and interval.

Nominal Scale

An element is only identified or categorised using numbers on a nominal scale, which is a measuring scale. Usually, non-numerical (quantitative) variables or situations where figures have no significance are measured using this method (QuestionPro, 2022d). The nominal scale throughout this survey is categorised in Section A. Age and gender make up the subsidiary scale in this survey.

Example of Nominal Scale:

"Gender":

☐ MALE

☐ FEMALE

Ordinal Scale

The Likert scale, an agreement scale intended to gauge respondents' level of conformity with various claims, was the scale utilised in this study's questionnaire. Since the items in Likert-type inquiries have a distinct rank order, they are typically regarded as ordinal data (Pritha, 2022b). Participants can react to questions using Likert scales by rating how much they agree, disagree, or are satisfied with the answer (Statistics Solutions, 2022a). According to Jamieson (2021), the size of a Likert scale may vary. Traditionally, researchers have employed a five-point scale (e.g., strongly agree, agree, neutral, disagree, strongly disagree). The questionnaire used a five-point Likert scale, where respondents were asked to rank each statement of each variable accordingly. This study has five points ranging from strongly agree = 5, agree = 4, neutral = 3, disagree = 2, and strongly disagree = 1.

Example of Ordinal Scale:

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I often use an e-wallet.	1	2	3	4	5

Interval Scale

The data type described as interval data, or an integer, is one that is evaluated along a scale to every point being equally spaced from the other points. Another trait that can be rated on a scale is age (Questionpro, 2022c). As a result, the researcher in this study employed an interval scale to represent the age of the respondents. Section A applies this scale.

Example of interval scale:

"Age"

☐ 18 to 21 years old

☐ 22 to 25 years old

3.6.1 Origin of The Constructs

The questionnaires used in this study were adopted from Chan et al. (2021), MUNIANDY (2021), and Cha et al. (2021). Table below showed all the questions will be asked in each variable:

Table 3.2: Questionnaire Reference

SECTION	VARIABLES	ITEMS	AUTHORS
A	Demographic Profile	7	(Chan et al., 2021) (MUNIANDY, 2021)
B	Perceived ease of use	6	(MUNIANDY, 2021
	Perceived usefulness	6	(MUNIANDY, 2021
	Perceived security	6	(MUNIANDY, 2021
	Perceived trust	6	(MUNIANDY, 2021
	The intention to use E-wallet Payment System	6	(Cha et al., 2021)

3.7 PROCEDURE FOR DATA ANALYSIS

Data analysis involves looking closely at, purifying, transforming, and modelling data to find relevant information, support inferences, and strategic decision. In data analysis, IBM SPSS Statistics 26 software will be used in the process of data analysis, which there are two main requirements: the process of editing and coding. This analysis will allow the researcher to investigate the dependent variable (intention of use e-wallet payment system among Gen Z) and independent variables (ease of use, usefulness, trust, and security). A statistical diagram and table will present the data

.

3.7.1 Descriptive Analysis

The most fundamental data analysis for each research endeavour is described as "descriptive analysis." It condenses and deconstructs voluminous data, making it more approachable using straightforward graphical analysis (Miksza et al., 2018). It also allows us to simplify a considerable amount of data and create a basic explanation of the data we are studying (William M.K, 2022). In other words, descriptive analysis displays the core quantitative data analysis together with graphics such as histograms or pie charts. It is used to deliver quantitative data analysis on a specific data set (Sharma, 2019). In contrast, The descriptive analysis also includes the creation of statistics for variables which include the standard deviation, variance, minimum and maximum variables, kurtosis, and skewness as well as central tendency metrics such as the mean, median, and mode (Adam, 2022). Additionally, pie charts are made to organize and summarize gathered from Section A.

3.7.2 Reliability Test

The reliability test is in charge of evaluating and determining the validity and reliability of the scale. Researchers can examine the characteristics of the measurement scales and the components that make up the scales using reliability analysis (IBM SPSS Statistics, 2021). The researchers employed Cronbach's Alpha reliability test to demonstrate the suitability of the test and scale. Additionally, it may be used to check the inter-correlation of each variable element in questionnaires (Statistics Solutions, 2022b). The internal reliability of a test or scale is also measured by Cronbach's alpha, which has a scale from 0 to 1. Rankings are not suitable or unacceptable when the value of Cronbach's alpha is lower than 0.59. When the alpha is less than 0.6, the dependability will be poor. Then, fair scale dependability occurs when Cronbach's alpha is more than or equal to 0.6 but less than 0.7. However, the scale shows strong reliability from 0.7 to less than 0.8. Moreover, an unprecedented dependability scale is more significant

than or equivalent to 0.89 or even more than 0.9. As a result, the alpha value rises as the pieces are joined. It is advised that reliability should reach at least 0.60 for an experimental or pilot test. The figure below shows the range of reliability and its coefficient of Cronbach's alpha.

No	Coefficient of Cronbach's Alpha	Reliability Level
1	More than 0.90	Excellent
2	0.80-0.89	Good
3	0.70-0.79	Acceptable
4	0.6-.69	Questionable
5	0.5-0.59	Poor
6	Less than 0.59	Unacceptable

Source: (Mohd Arof et al., 2018)

Figure 3.2: Range of reliability level and its coefficient of Cronbach's alpha

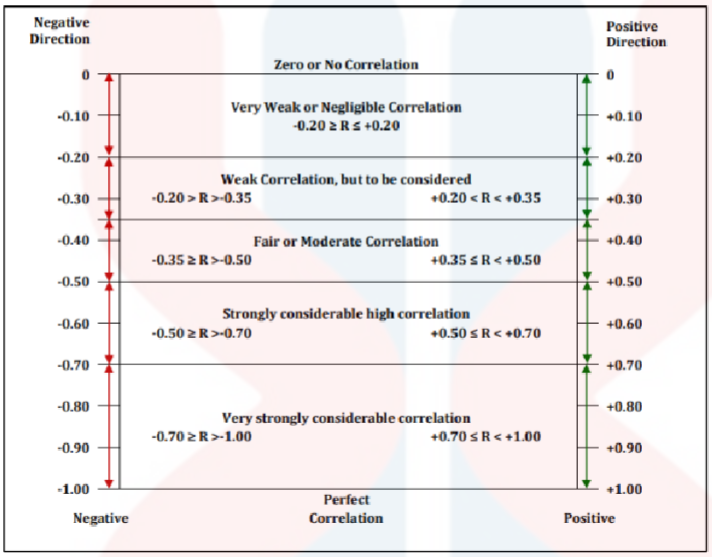
3.8 INFERENTIAL ANALYSIS

Inferential statistics is the process of drawing conclusions from investigations and observations of a sample from a group of people. SPSS suggests performing the relevant analysis in this research either Spearman's rank correlation coefficient or Pearson's Correlation Analysis.

3.8.1 Pearson Correlation Coefficient

The Pearson correlation coefficient (r) often used metric for determining a linear relationship. It is a number ranging from -1 to 1 that indicates the direction and strength of a link between two variables (Turney, 2022a). Correlation analysis is extremely effective in determining the functional relationship among two variables. The relationship can often be classified as positive, negative, or zero. When two variables have a positive correlation, it means they are moving in the same direction; when they have a negative correlation, they are travelling in the opposite direction. A zero correlation suggests that two variables have no

relationship, which is uncommon. The rule of thumb for correlation coefficient is shown in figure below.



Source: (Senthilnathan, 2019)

Figure 3.3: Usefulness of Correlation Analysis

3.8.2 Spearman's Rank Correlation Coefficient

Spearman Correlation is used to test information from two factors and test whether there is direct relationship between them or not. Spearman Correlation Analysis is used to test whether there is linier relationship between dependent variable and independent variable (Laerd Statistics, 2022). Figure below shows Spearman Correlation values and level of significance.

Spearman (p)	Correlation
≥0.70	Very strong relationship
0.40 until 0.69	Strong relationship
0.30 until 0.29	Moderate relationship
0.20 until 0.29	Weak relationship
0.01 until 0.19	No or negligible relationship

Source: (Laerd Statistics, 2022)

Figure 3.4: Spearman's Correlation Coefficient

1.9 NORMALITY TEST ANALYSIS

The results of a normality test show whether the sample data actually came out of a normal distribution. For numerous statistical tests, for instance the student's t-test and one-way and two-way ANOVA, a time with the people with a regular distribution is necessary (Mishra et al., 2019). Studies frequently involve tests of a null hypothesis, particularly a goodness-of-fit test to determine whether the data were likely drawn from a normal population (Glossary, 2022). According to Mishra et al. (2019), In these tests, several measures, notably the very well-known p-value, are utilized to examine the data and determine if its distribution deviates considerably from the normal distribution. If the p-value is much less than 0.05, the distribution varies substantially from the normal distribution. The most prominent methods for testing continuous data's normality include nine tests. First is the Shapiro-Wilk test while second is the Kolmogorov-Smirnov test. The third test is the skewness, followed by the kurtosis, and the fifth and sixth tests are histograms and box plots. Finally, the seventh test is P-P Plot, and the eighth test is Q-Q Plot, following the ninth trial, which is mean with Standard Deviation. The statistical program "SPSS" may be used to perform normality tests (Mishra et al., 2019).

3.10 SUMMARY

This chapter explains the methodological method used throughout the review. A quantitative approach is used when numerical data in the distributed questionnaire will be reported and evaluated in chapters 4 and 5. Every factor was analysed to test hypotheses with an estimation of builds as per past investigations, topic to the completion of pre-test obligation. The questionnaire concept is devised based on primary and secondary data from other sources obtained by another study. Data is handled once questionnaires are gathered. The data is analysed for descriptive and inferential analysis. The findings are presented in detail in Chapter 4.

CHAPTER 4: DATA ANALYSIS AND FINDINGS

4.1 INTRODUCTION

This chapter explains the data analysis and findings. This chapter also analyses and interpret the result gained through the distributed questionnaires. This study adopted an online survey and questionnaire to study the "factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia." There are 384 sets of data from questionnaires were gained. All the data will be analyzed and interpreted by using the SPSS 26 (Statistical Package for Social Science) software, and the final result analysis statistical was viewed in this chapter. This chapter would be discussed preliminary analysis, the demographic profile of respondents, descriptive analysis, validity and reliability test, normality test, and Hypotheses Testing. The results obtained will be presented in charts and tables. Lastly, this chapter concludes with a summary of the hypothesis findings.

4.2. Preliminary Analysis

The data collected will be analyzed and collected data will be run through the IBM SPSS 26 version software. The pilot study is done completely when the details are collected from the 30 respondents of this study. The pilot study is then done by using the reliability analysis, which can test the reliability of the questions of this study. The main of using reliability analysis is that it is the first step to analyzing the data and will ensure that the data from the survey is correct and reliable for the study. The reliability analysis then clearly shows Cronbach's Alpha value which measures the data in SPSS. There is various range of internal consistency to each Cronbach's alpha value mentioned in figure 4.1.

No	Coefficient of Cronbach's Alpha	Reliability Level
1	More than 0.90	Excellent
2	0.80-0.89	Good
3	0.70-0.79	Acceptable
4	0.6-.69	Questionable
5	0.5-0.59	Poor
6	Less than 0.59	Unacceptable

Source: (Mohd Arof et al., 2018).

Figure 4.1: Selection of coefficient of alpha to observe the extent of reliability of Instrument

Table 4.1: Pilot study test of each variable

Variable	**Content**	**Cronbach's Alpha**	**Sum Of Items**	**N (Sample Size)**
Independent Variable	Perceived ease of use	0.869	6	30
Independent Variable	Perceived usefulness	0.903	6	30
Independent Variable	Perceived security	0.908	6	30
Independent Variable	Perceived trust	0.910	6	30
Dependent Variable	The intention to use e-wallet payment system among Gen Z	0.882	6	30

According to table 4.1, the dependent variable of this study which is the intention to use e-wallet payment system among gen Z is having 0.882 as the Cronbach's Alpha which stands as good reliability. The independent variable which is Perceived ease of use is having Cronbach's Alpha of 0.869 which stands as good reliability. However, followed by perceived usefulness, which is 0.903, perceived security which is 0.908 and perceived trust is 0.910. These three independent variables are excellent reliability in this study according to Table 4.1.

4.3 Demographic Profile of Respondents

Table 4.2: Data of respondents by age group

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
18-21 years old	167	43.5	43.5
22-25 years old	217	56.5	100.0
Total	384	100.0	

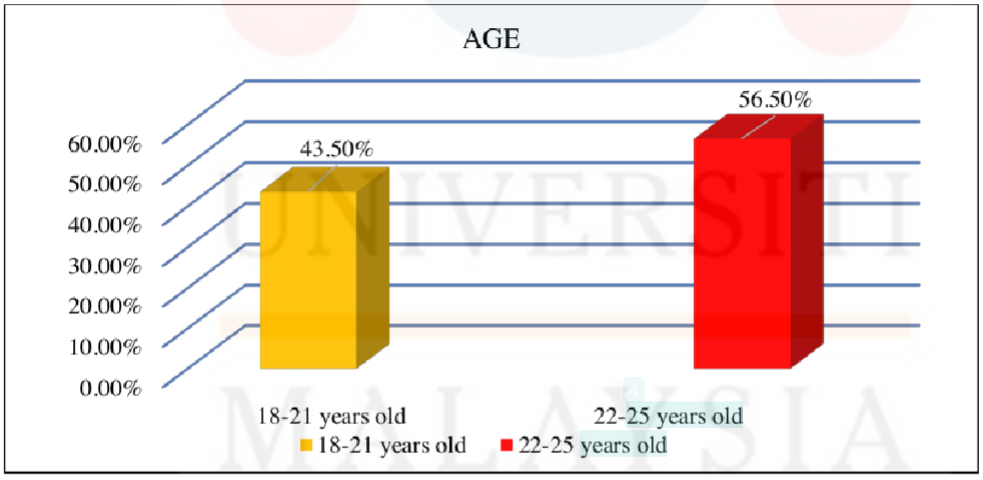


Figure 4.2: Percentage of respondents by age

Figure 4.2 and Table 4.2 are indicating the number of respondents which depending on the range of age. There are 384 respondents who answered this question. Majority age range group is 22-25 age which is 56.5% (217 respondents). However, minority age range group is 18-21 age with 167 respondents which is 43.5%.

Table 4.3: Data of respondents by gender

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
Male	197	51.3	51.3
Female	187	48.7	100.0
Total	384	100.0	

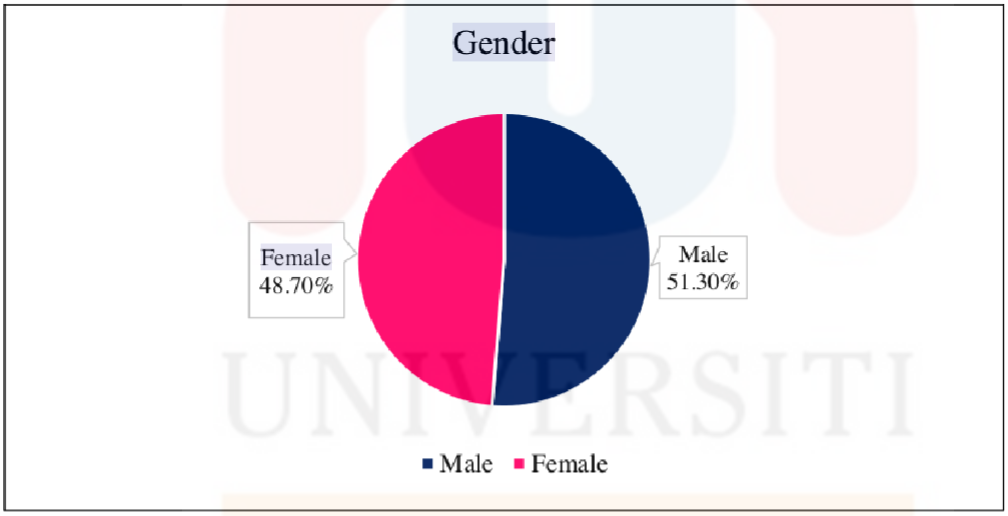


Figure 4.3: Percentage of respondents by gender

Figure 4.3 and Table 4.3 are showing the number of respondents which depending on the range of gender. There are 384 respondents who answered this question. Majority group is

male with 197 respondents of 51.3%. Minority is female group which is contribute 187 respondents with 48.7%.

Table 4.4: Data of respondents by race

	Frequency (N)	**Percentage (%)**	**Cumulative percentage (%)**
Malay	154	40.1	40.1
Indian	95	24.7	64.8
Chinese	120	31.3	96.1
Others	15	3.9	100.0
Total	384	100.0	

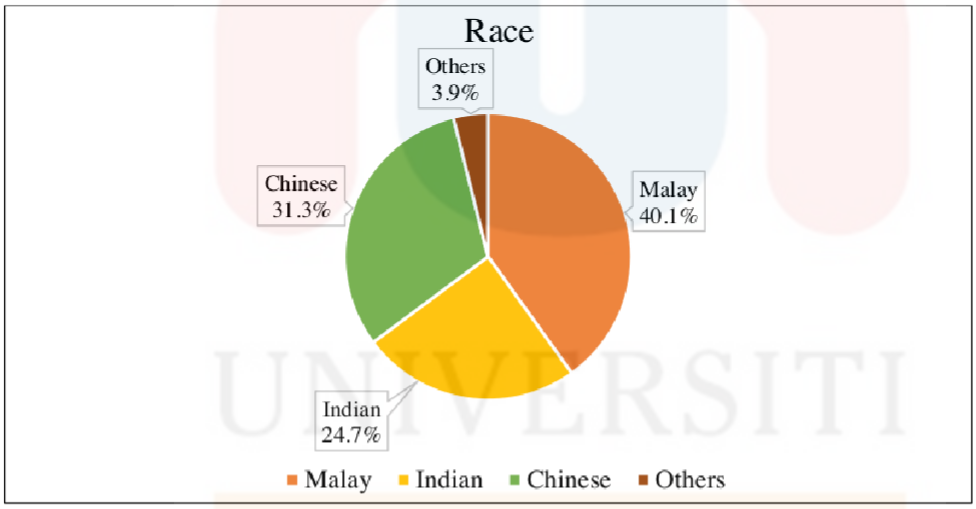


Figure 4.4: Percentage of respondents by race

Figure 4.4 and Table 4.4 are indicating the number of respondents which depending on the range of race. There are 384 respondents who answered this question. Malay is majority group with 154 respondents of 40.1%. Minority group is others with 15 respondents which is

3.9%. Middle is Chinese race group contribute I 20 respondents with 31.3% and Indian race come up with 95 respondents with 24.7%.

Table 4.5: Data of respondents by How do you know about E-wallet?

	Frequency (N)	**Percentage** (%)	**Cumulative percentage** (%)
Internet	160	41.7	41.7
Social Media	111	28.9	70.6
Recommendations by Friends/Family Members/Colleague	62	16.1	86.7
Magazine	17	4.4	91.1
Television	20	5.2	96.4
Others	14	3.6	100.0
Total	384	100.0	

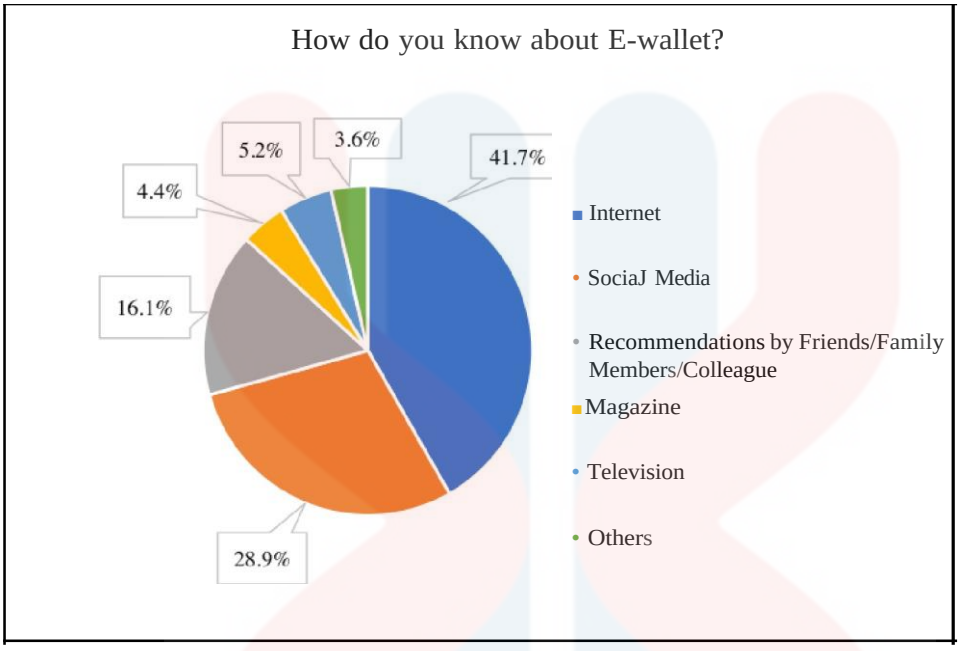


Figure 4.5: Percentage of respondents by How do you know about E-wallet?

Figure 4.5 and Table 4.5 are indicating the number of respondents which depending on How do you know about E-wallet. There are 384 respondents who answered this question. Internet is the majority group with 160 respondents of 41.7%. The second highest was chosen is social media with **111** respondents (28.9%). Next, followed up by Recommendations by Friends/Family Members/Colleague with 62 respondents of 16.1%. Then, Television contributes 20 respondents (5.2%) and, Magazine are 17 respondents with 4.4%. Minority group is others with only 14 respondents which is 3.6%.

Table 4.6: Data of respondents by Frequency of using E-wallet in One Month?

	Frequency (N)	Percentage (%)	Cumulative percentage (%)
Never use	17	4.4	4.4
Seldom	95	24.7	29.2
Frequently	108	28.1	57.3
Very Frequently	164	42.7	100.0
Total	384	100.0	

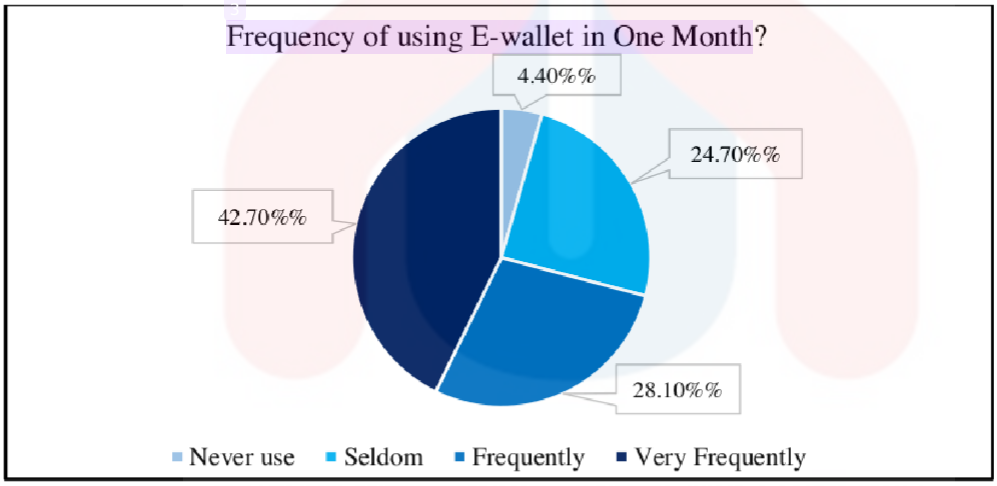


Figure 4.6: Percentage of respondents by Frequency of using E-wallet in One Month?

Figure 4.6 and Table 4.6 are indicating the number of respondents which depending on the range of Frequency of using E-wallet in One Month. There are 384 respondents who answered this question. Very Frequently is majority group with 164 respondents of 42.7% which illustrates the frequency of using e-wallets in one month. Next, followed up by Frequently with 108 respondents with 28.1 and seldom contributes 95 respondents (24.7%). The minority group is Never use with 17 respondents which are 4.4%.

Table 4.7: Data of respondents by How much do you top up for E-wallet monthly?

	Frequency (N)	Percentage (%)	Cumulative percentage (%)
Never top up	22	5.7	5.7
RM1 – RM100	176	45.8	51.6
RM101 – RM200	82	21.4	72.9
RM201 – RM300	64	16.7	89.6
Above RM300	40	10.4	100.0
Total	384	100.0	

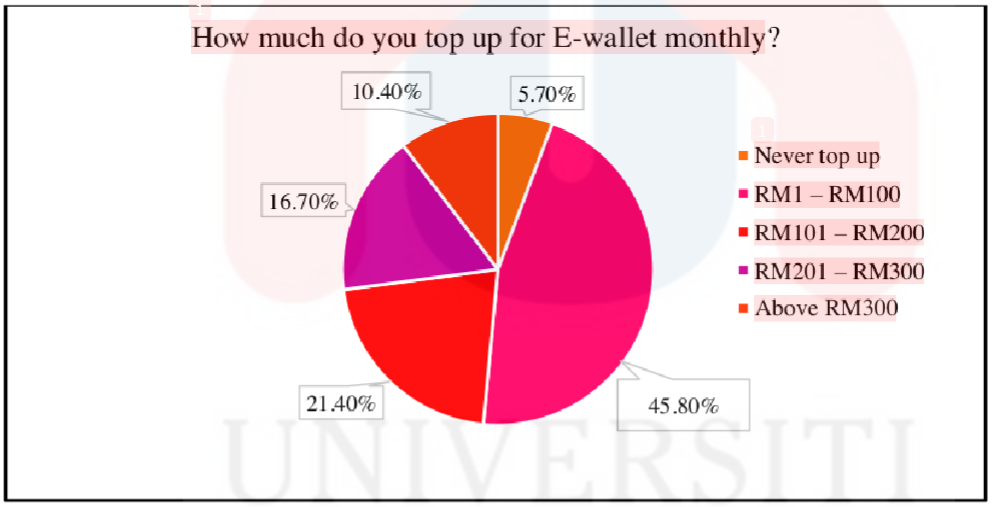


Figure 4.7: Percentage of respondents by How much do you top up for E-wallet monthly?

Figure 4.7 and Table 4.7 are indicating the number of respondents which depending on How much do you top up for E-wallet monthly. There are 384 respondents who answered this question. RM1-RM100 is the majority group with 176 respondents of 45.8%. The second highest is RM101– RM200 with 82 respondents (21.4%). Next, followed up by RM201–

RM300 with 64 respondents of 16.7% and Above RM300 are 40 respondents (10.4%). Minority group is ever Use with only 22 respondents which is 5.7%.

Table 4.8: Data of respondents by Which E-wallet do you usually use?

	Frequency (N)	**Percentage(%)**	**Cumulative percentage** (%)
Boost	94	24.5	24.5
Touch 'n Go	162	42.2	66.7
WeChatPay	53	13.8	80.5
Grab pay	43	11.2	91.7
Others	32	8.3	100.0
Total	384	100.0	

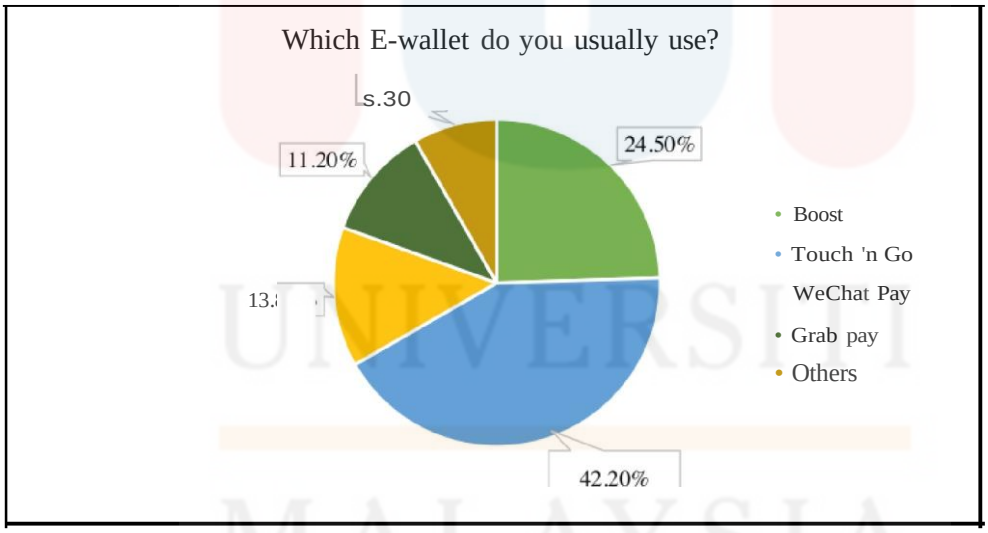


Figure 4.8: Percentage of respondents by Which E-wallet do you usually use?

Figure 4.8 and Table 4.8 are indicating the number of respondents which depending on Which E-wallet do you usually use. There are 384 respondents who answered this question. Touch 'n Go is the majority group of usage with 162 respondents of 42.2%. The second highest is Boost e-wallet with 94 respondents (24.5%). Next, followed up by WeChat Pay with 53 respondents of 13.8% and Grab pay e-wallet with 43 respondents (11.2%). Minority group is others with only 32 respondents which is 8.3%.

4.4 Descriptive Statistics

A descriptive analysis is used to summarize and analyze statistics in terms of explaining a huge volume of data (Chung & Al-Khaled, 2021). The central tendency is prominent feature of a single variable used by a researcher in research for purpose to evaluate the data. The mean was used to define the central tendency where all the value is summed up and divided by value's number. Same goes to this study, descriptive statistical evaluation was used to calculate that variable's average. 384 respondents' data have been used in this research. The result showed the mean value and standard deviation of each variable. For descriptive analysis, the researcher had come out with this analysis in order to find the mean for every section of the dependent variable and independent variables. The table below shows how to determine the level of mean.

Table 4.9: Level of Mean

Level	Mean
Strongly Agree	4.51 - 5.00
Agree	3.51 - 4.50
Neutral	2.51 - 3.50
Disagree	1.51 - 2.50
Strongly Disagree	0.00 - 1.50

Source: (Mangaba, 2019)

Table 4.10: Descriptive analysis of Perceived ease of use

	N	Minimum	Maximum	Mean	Std. Deviation
It is simple for me to learn how to use an e-wallet service.	384	1	5	4.39	0.743
My interaction with e-wallet service is clear and understandable.	384	1	5	4.25	0.837
I rarely get frustrated when I use e-wallet.	384	1	5	4.28	0.808
I rarely get confused when I use e-wallet.	384	1	5	4.23	0.821
I find it simple to use e-wallet services.	384	1	5	4.35	0.793
I rarely make errors when using the e-wallet.	384	1	5	4.23	0.869
Valid N (listwise)	384				

Table 4.10 shows the means and standard deviation of independent variable for Perceived ease of use. The highest mean score for this independent variable is 4.39, which indicates it is simple to learn how to use e-wallet service. On the other side, the lowest mean score for this independent variable is 4.23, which presumed that I rarely get confused when I use e-wallet and I rarely make errors when using the e-wallet. The standard deviation of I

rarely make errors when using the e-wallet is highest standard deviation (0.869) and the lowest standard deviation indicates it is simple for me to learn how to use an e-wallet service (0.743).

Table 4.11: Descriptive analysis of Perceived usefulness

	N	Minimum	Maximum	Mean	Std. Deviation
Using e-wallet services saves my time.	384	1	5	4.37	0.771
Using e-wallet helps me buy easily.	384	1	5	4.35	0.796
E-wallet services have improved my productivity.	384	1	5	4.24	0.882
E-wallet has improved quality of my job performance.	384	1	5	4.18	0.892
I find E-wallet useful in the buying process.	384	1	5	4.27	0.869
E-wallet services increase my effectiveness.	384	1	5	4.27	0.837
Valid N (listwise)	384				

Table 4.11 shows the means and standard deviation of independent variable for Perceived usefulness. The highest mean score for this independent variable is 4.37, which indicates using e-wallet services saves my time. On the other side, the lowest mean score for this independent variable is 4.18, which presumed that E-wallet has improved quality of my

job performance. The standard deviation of E-wallet has improved quality of my job performance is highest standard deviation (0.892) and the lowest standard deviation indicates Using e-wallet services saves my time (0.771).

Table 4.12: Descriptive analysis of Perceived security

	N	Minimum	Maximum	Mean	Std. Deviation
I am confident in making payments through my E-wallet.	384	1	5	4.32	0.826
I believe that transactions conducted through E-wallets are secure.	384	1	5	4.26	0.882
I believe the service has the potential to be safer than traditional payment options such as credit cards and cash.	384	1	5	4.22	0.888
I believe the chances of losing money stored in E-wallet are low.	384	1	5	4.17	0.836
E-wallets ensure protection against risk.	384	1	5	4.23	0.864

I believe the technology used in E-wallets is very secure.	384	1	5	4.24	0.832
Valid N (listwise)	384				

Table 4.12 shows the means and standard deviation of independent variable for Perceived security. The highest mean score for this independent variable is 4.32, which indicates I am confident in making payments through my E- wallet. On the other side, the lowest mean score for this independent variable is 4.17, which presumed that I believe the chances of losing money stored in e-wallet are low. The standard deviation of I believe the service has the potential to be safer than traditional payment options such as credit cards and cash is highest standard deviation (0.888), and the lowest standard deviation indicates I am confident in making payments through my E- wallet (0.826).

Table 4.13: Descriptive analysis of Perceived trust

	N	Minimum	Maximum	Mean	Std. Deviation
I feel safe providing personal privacy information over the E-wallet app that I use.	384	1	5	4.27	0.842
I believe that e-wallet service provider will act ethically when capturing,	384	1	5	4.20	0.911

retaining, processing, and managing my personal data.					
I trust on the ability of an e-wallet system to protect my privacy.	384	1	5	4.23	0.870
I believe that legal frameworks for e-wallet provision are sufficiently robust to protect consumers.	384	1	5	4.22	0.794
I feel the risk associated with e-wallet system is low.	384	1	5	4.24	0.875
I can trust on my e-wallet to reliably complete my transactions.	384	1	5	4.23	0.858
Valid N (listwise)	384				

Table 4.13 shows the means and standard deviation of the independent variable for Perceived trust. The highest mean score for this independent variable is 4.27, which indicates I feel safe providing personal privacy information over the E-wallet app that I use. On the other side, the lowest mean score for this independent variable is 4.20, which presumed that I believe that the e-wallet service providers will act ethically when capturing, retaining, processing, and managing my personal data. The standard deviation of I believe that e-wallet service provider will act ethically when capturing, retaining, processing, and managing my personal data is the highest standard deviation (0.911) and the lowest standard deviation

indicates I believe that legal frameworks for e-wallet provision are sufficiently robust to protect consumers (0.794).

Table 4.14: Descriptive analysis of Intention to Use E-Wallet Payment System

	N	Minimum	Maximum	Mean	Std. Deviation
I use e-wallet more frequently than traditional (cash) payment.	384	1	5	4.21	0.947
I have the intention to purchase using E-wallet	384	1	5	4.28	0.763
I am willing to use an e-wallet all the time.	384	1	5	4.30	0.810
I am willing to continue using e-wallet services in the near future rather than not use them.	384	1	5	4.29	0.772
I believe e-wallet is better than cash payment.	384	1	5	4.25	0.843
I will use the E-wallet when the shops are available with the E-wallet code.	384	1	5	4.29	0.796
Valid N (listwise)	384				

Table 4.14 shows the means and standard deviation of the dependent variable for the intention to use e-wallet payment system among gen z. The highest mean score for this dependent variable is 4.30, which indicates I am willing to use an e-wallet all the time. On the other side, the lowest mean score for this dependent variable is 4.21, which presumed that I use e-wallet more frequently than traditional (cash) payments. The standard deviation of I use e-wallet more frequently than traditional (cash) payment is the highest standard deviation (0.947) and the lowest standard deviation indicates I have the intention to purchase using e-wallet (0.763).

Table 4.15: Overall Descriptive analysis

Category	N	Std. Deviation	Mean
Perceived ease of use	384	0.63144	4.2904
Perceived usefulness	384	0.69134	4.2795
Perceived security	384	0.70755	4.2405
Perceived trust	384	0.71390	4.2313
Intention to Use E-Wallet Payment System among gen z	384	0.65398	4.2691

Based on the table 4.15, it shows the overall of descriptive analysis. The table shows the mean and standard deviation for the dependent variable and independent variables. There are a few questions in every section of these dependent variable and independent variables. The highest mean score shows Perceived ease of use which is 4.2904 and the highest standard deviation is 0.71390 on Perceived trust. On other hand, the lowest mean is 4.2103 on Perceived trust and the lowest standard deviation is Perceived ease of use which is 0.63144.

4.5 Validity and Reliability test

The purpose of the reliability study is to see if the researchers' data collecting techniques and analysis techniques might be duplicated or recreated by some other researcher. A validity test determines the extent to which a tool is valid or invalid. It demonstrates the relationship between a scale and a measure for an independent variable. In order to be exact in a study, the data must be both dependable and valid (Chung & Al-Khaled, 2021). The Cronbach's alpha value from the reliability test would be used to determine this study's reliability test.

Table 4.16 Reliability Test for Perceived ease of use

Reliability Statistics	
Cronbach's Alpha	N of Items
0.869	6

In this research, there are six questions that act as items in this test were used to measure the Perceived ease of use as the independent variable. Table 4.16 indicates that Cronbach's Alpha coefficient of Perceived ease of use is 0.869 which resulted in good strength of internal consistency. Due to the coefficient obtained for the questions of Perceived ease of use having a good consistency and strength, consequently, all questions utilized for this variable are valid and reliable.

Table 4.17 Reliability Test for Perceived usefulness

Reliability Statistics	
Cronbach's Alpha	N of Items
0.903	6

In this research, there are six questions that act as items in this test were used to measure the Perceived usefulness as the independent variable. Table 4.17 indicates that Cronbach's Alpha coefficient of Perceived usefulness is 0.903 which resulted in excellent strength of internal consistency. Due to the coefficient obtained for the questions of Perceived usefulness having excellent consistency and strength, consequently, all questions utilized for this variable are valid and reliable.

Table 4.18 Reliability Test for Perceived security

Reliability Statistics	
Cronbach's Alpha	N of Items
0.908	6

In this research, there are six questions that act as items in this test were used to measure Perceived security as an independent variable. Table 4.18 indicates that Cronbach's Alpha coefficient of Perceived security is 0.908 which resulted in excellent strength of internal consistency. Due to the coefficient obtained for the questions of Perceived security having excellent consistency and strength, consequently, all questions utilized for this variable are valid and reliable.

Table 4.19 Reliability Test for Perceived trust

Reliability Statistics	
Cronbach's Alpha	N of Items
0.910	6

In this research, there are six questions that act as items in this test were used to measure Perceived trust as an independent variable. Table 4.19 indicates that Cronbach's Alpha coefficient of Perceived trust is 0.910 which resulted in excellent strength of internal consistency. Due to the coefficient obtained for the questions of Perceived trust having excellent consistency and strength, consequently, all questions utilized for this variable are valid and reliable.

Table 4.20 Reliability Test for intention to use e-wallet payment system among gen z

Reliability Statistics	
Cronbach's Alpha	N of Items
0.882	6

In this research, there are six questions that act as items in this test were used to measure the intention to use e-wallet payment system as the dependent variable. Table 4.20 indicates that Cronbach's Alpha coefficient of intention to use e-wallet payment system is 0.882 which resulted as good strength of internal consistency. Due to the coefficient obtained for the questions of intention to use e-wallet payment system have a good consistency and strength, consequently all questions utilized for this variable is valid and reliable.

Table 4.21 Summary of the Reliability

Variable	Content	Cronbach's Alpha	Sum Of Items	N (Sample Size)
Independent Variable	Perceived ease of use	0.869	6	384
Independent Variable	Perceived usefulness	0.903	6	384
Independent Variable	Perceived security	0.908	6	384
Independent Variable	Perceived trust	0.910	6	384
Dependent Variable	Intention to Use E-Wallet Payment System among gen	0.882	6	384

Table 4.21 shows reliability analysis for dependent variable and independent variables. The test of reliability analysis indicates intention to use e-wallet payment system which is dependent variable is 0.882 which stands for good reliability. Then, this table also shows a test of reliability analysis for four independent variables. Cronbach's Alpha of Perceived ease of use is 0.869 which stands for good reliability. However, Perceived usefulness Cronbach's alpha is 0.903, Perceived security is 0.908 and Perceived trust Cronbach's alpha is 0.910. These three independent variables Cronbach Alpha stands for excellent reliability. It indicates the questions of variables in the survey is reliable.

4.6 Normality Test

Table 4.22 Summary of the Normality test of each variable

Variables	N	Skewness		Kurtosis	
	Statistics	Statistics	Std.Error	Statistics	Std.Error
Perceived ease of use (IV1)	384	-1.098	0.125	1.623	0.248
Perceived usefulness (IV2)	384	-1.005	0.125	0.901	0.248
Perceived security (IV3)	384	-0.933	0.125	0.821	0.248
Perceived trust (IV4)	384	-0.822	0.125	0.357	0.248
Intention to Use E-Wallet Payment System (DV)	384	-0.947	0.125	1.171	0.248

Table 4.22 indicates the normality test of dependent variable and independent variables of factors influencing the intention to use e-wallet payment system among gen Z In Penang, Malaysia. According to Cha et al. (2021), normal distribution will occur when the skewness coefficient falls between negative two to positive two, and the kurtosis coefficient falls between negative seven to positive seven if the sample size is larger than 300. Both of which have an

associated standard error. Based on Table 4.22, every skewness and kurtosis coefficient fall between negative two to positive two and negative seven to positive seven. The largest skewness coefficient goes to Perceived trust (-0.822), while the lowest skewness coefficient goes to Perceived ease of use (-1.098). However, the largest kurtosis coefficient goes to Perceived ease of use, which is 1.623, while the lowest kurtosis coefficient goes to Perceived trust (0.357). As a result, it is normally distributed as all the skewness coefficient falls between negative two to positive two, and the kurtosis value falls between negative seven to positive seven. Therefore, all are variables are acceptable and considered normal.

4.7. Regression Analysis

In order to investigate the influence of all independent variables which are Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust on the intention to use e-wallet payment system, multiple linear regression analysis was applied in this research.

Table 4.23: Modal Summaries

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.844[a]	.713	.710	.35235

a. Predictors: (Constant), MEAN_PT, MEAN_PEU, MEAN_PU, MEAN_PS

b. Dependent Variable: MEAN_D

As can be seen from the model summary, it was found that the R2 value is 0.713 which implies 71.3 % of the variance in the intention to use e-wallet payment system. It can be concluded that factors influence had slightly higher claims in intention to use e-wallet payment system, thereby confirming the strong of the models.

4.7.1 Anova

Table 4.24: ANOVA test

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	116.752	4	29.188	235.106	.000[b]
	Residual	47.052	379	.124		
	Total	163.804	383			

a. Dependent Variable: MEAN_D

b. Predictors: (Constant), MEAN_PT, MEAN_PEU, MEAN_PU, MEAN_PS

According to ANOVA analysis, P-values for each t-statistics are smaller than 0.05. Table 4.24 shows the F is 235.106. It is a significant relationship was established between factors that influence Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust and the intention to use e-wallet payment system with P= 0.000. This also implies that factors influencing which is Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust had a positive and significant relationship with the intention to use e-wallet payment system.

4.7.2 Coefficients

Table 4.25: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.579	0.128		4.512	0.000
	MEAN_PEU	0.211	0.046	0.204	4.588	0.000
	MEAN_PU	0.070	0.050	0.074	1.406	0.161
	MEAN_PS	0.143	0.056	0.155	2.563	0.011
	MEAN_PT	0.444	0.050	0.485	8.902	0.000
a. Dependent Variable: MEAN_D						

In terms of each predictive variable's contribution, beta values are used to compare their influence on the two constructs (The Pennsylvania State University, 2018). All the variables were shown to have a positive and statistically significant influence on factors influence and the intention to use e-wallet payment system. In the case of testing, there are four independent variables which are Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust, and one dependent variable which is the intention to use e-wallet payment system. Specifically, Perceived trust (B = .485) had a strong effect on the intention to use e-wallet payment system followed by Perceived ease of use (B = .204). Whereas Perceived security (B=.155) and Perceived usefulness showed a very weak effect which is (B = .074) on the intention to use e-wallet payment system among gen Z in Penang, Malaysia.

This can be taken Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust are good predictors of the intention to use e-wallet payment system among gen

Z in Penang, Malaysia. Therefore, in this study, the researcher found that the overall influence of Perceived ease of use, Perceived usefulness, Perceived security, and Perceived trust had more effect on the Intention to Use E-wallet Payment System.

4.8 Hypotheses testing (Pearson Correlation Analysis)

Hypothesis testing is a method used to determine whether a hypothesis is plausible by utilizing the sample data (Majaski, 2021). Pearson's correlation coefficient is to examine the strength of the mixture and the significant relationship between the independent variable and dependent variable. A table of the Pearson correlation coefficient is shown in Table 4.26.

Table 4.26: Table of Pearson Correlation Coefficient

Size of correlation	Interpretation
0.9 to 1.0 / -0.9 to -1.0	Very high
0.7 to 0.9 / -0.7 to -0.9	High
0.5 to 0.7 / -0.5 to -0.7	Moderate
0.3 to 0.5 / -0.3 to -0.5	Low
0.0 to 0.3 / -0.0 to -0.3	Negligible

Source: (Jaadi, 2019)

Table 4.25 show the result of the correlation coefficient among independent variables and dependent variables by using Pearson's Correlation Coefficient. It is a number ranging from -1 to 1 that indicates the direction and strength of a link between two variables (Turney, 2022b). A p-value less than 0.05 (typically ≤ 0.05) is statistically significant (McLeod, 2019).

4.8.1 Perceived ease of use

H0: There is no significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen z.

H1: There is a significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen z.

Table 4.27 The Pearson Correlations between perceive ease of use and intention to use e-wallet payment system among gen Z.

Correlations			
		MEAN_D	MEAN_PEU
MEAN_D	Pearson Correlation	1	.709**
	Sig. (2-tailed)		.000
	N	384	384
MEAN_PEU	Pearson Correlation	.709**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

From table 4.27, there is a significant and strong correlation between the intention to use e-wallet payment system and Perceived ease of use among gen Z in Penang, Malaysia because the P value is 0.000 where $P < 0.005$. The relationship between the variables is 0.709 which is a relatively high relationship between the independent variable and dependent variable.

Therefore, Hypothesis 1 is accepted.

4.8.2 Perceived usefulness

H0: There is no significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z.

H2: There is a significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z.

Table 4.28 The Pearson Correlations between perceive usefulness and intention to use e-wallet payment system among gen Z

Correlations			
		MEAN_D	MEAN_PU
MEAN_D	Pearson Correlation	1	.725**
	Sig. (2-tailed)		.000
	N	384	384
MEAN_PU	Pearson Correlation	.725**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

From the table 4.28, The P value is 0.000 which is P < 0.005. There is a significant and strong correlation between the intention to use e-wallet payment system and Perceived usefulness among Gen Z in Penang, Malaysia. The relationship between the variables is 0.725 which is a relatively high relationship between the independent variable and dependent variable.

Therefore, Hypothesis 2 is accepted.

4.8.3 Perceived security

H0: There is no significant relationship between perceived security and intention to use e-wallet payment system among gen Z.

H3: There is a significant relationship between perceived security and intention to use e-wallet payment system among gen Z.

Table 4.29 The Pearson Correlations between perceived security and intention to use e-wallet payment system among gen Z.

Correlations			
		MEAN_D	MEAN_PS
MEAN_D	Pearson Correlation	1	.775**
	Sig. (2-tailed)		.000
	N	384	384
MEAN_PS	Pearson Correlation	.775**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

From the table 4.29, There is a significant and strong correlation between the intention to use e-wallet payment system and perceived security among gen Z in Penang, Malaysia because the P value is 0.000 where $P < 0.005$. The relationship between the variables is 0.775 which is a relatively high relationship between the independent variable and dependent variable.

Therefore, Hypothesis 3 is accepted.

4.8.4 Perceived trust

H0: There is no significant relationship between perceived trust and intention to use e-wallet payment system among gen Z.

H4: There is a significant relationship between perceived trust and intention to use e-wallet payment system among gen Z.

Table 4.30 The Pearson Correlations between perceived trust and intention to use e-wallet payment system among gen Z.

Correlations			
		MEAN_D	MEAN_PT
MEAN_D	Pearson Correlation	1	.815**
	Sig. (2-tailed)		.000
	N	384	384
MEAN_PT	Pearson Correlation	.815**	1
	Sig. (2-tailed)	.000	
	N	384	384
**. Correlation is significant at the 0.01 level (2-tailed).			

Lastly, From the table 4.30 the P value is 0.000 which is P < 0.005. There is a significant and strong correlation between the intention to use e-wallet payment system and perceived trust among gen Z in Penang, Malaysia. The relationship between the variables is 0.815 which is a relatively high relationship between the independent variable and dependent variable.

Therefore, Hypothesis 4 is accepted.

Table 4.31: Summary of Hypothesis

Code	Hypothesis	Status
H1	There is a relationship between Perceived ease of use and the intention to use e-wallet payment system among gen Z In Penang, Malaysia	Accepted
H2	There is a relationship between perceived usefulness and the intention to use e-wallet payment system among gen Z In Penang, Malaysia	Accepted
H3	There is a relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia	Accepted
H4	There is a relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia	Accepted

Based on the results analysed above, all four proposed hypotheses H1, H2, and H3, H4 are supported. A summary of the hypotheses is presented in Table 4.31.

4.9 Summary

In conclusion, chapter 4 is about describing the overall results of a few testing's have been done in IBM SPSS 26 version software. There is the result of frequency analysis, descriptive analysis, and reliability test. The normality test result shows all variables are acceptable, considered normal, and well-modelled by a normal distribution. The Pearson correlation coefficient and regression analysis is all about the discussion based on the research which is mentioned the relationship between independent variables and dependent variable.

CHAPTER 5: DISCUSSION AND CONCLUSION

5.1 Introduction

This chapter will discuss the key findings that have been mentioned briefly in this previous chapter, and it is about the demographic profile and independent variables and dependent variable. Then, follow up with a discussion that will explain the hypotheses of this study. The outcome of this research is an implication of the study which describes the importance of this research and who is essential. The limitation of the study is to explain the problem faced during the ongoing research. Lastly, the recommendation is provided for use by future researchers.

5.2 Key Findings

This research examines the relationship between independent variables (Perceived ease of use, perceived usefulness, perceived security, and perceived trust) and dependent variable (The intention of e-wallet payment system) among gen Z in Penang, Malaysia. The data is analyzed after the survey was collected from 384 respondents which is the sample size of this study. A quantitative method has been used in the research which data was collected from the questionnaire distributed to Gen Z in Penang, Malaysia.

The key findings are about the findings that have been analyzed from the data of the questionnaire which was distributed. The data from the questionnaire showed the result of respondents' demographic profiles. Firstly, the demographic profile starts with age 18 - 21 with 43.5%, and the age group 22 - 25 with 56.5% of respondents shows higher than others. Next, it followed up with gender which is female with 48.7 %, and male with 51.3% respondents which showed more male respondents than females.

Then, the race of the respondents shows that Malay respondents are high as Malay (40.1%), Chinese (31.3%), Indian (24.7%), and Others (3.9%). The percentage of respondents by How do you know about E-wallet shows Internet was the majority group of respondents as the results show Internet (41.7%), social media (28.9%), Recommendations by Friends/Family Members/Colleagues (16.1%), Television (5.2%), Magazine (4.4%) and Others (3.6%). Followed by the range of Frequency of using E-wallet in One Month respondents showed that Very Frequent is higher than other ranges which Very frequently (42.7%), frequently (28.1%), seldom (24.7%), and never use (4.4%).

Moreover, the percentage of respondents who depend on how much do you top up for E-wallet monthly are illustrated RM1-RM100 top-up was the majority group of respondents which is RM1-RM100 (45.8%), RM101-RM200 (21.4%), RM201-RM300 (16.7%), Above RM300 (10.4%) and never top up (5.7%). Lastly, the percentage of respondents depending on Which E-wallet usually use showed Touch 'n Go is the most used e-wallet which is Touch 'n Go (42.2%), Boost (24.5%), WeChat Pay (13.8%), Grab pay (11.2%) and others (8.3%).

It is essential to use Cronbach's alpha to measure the reliability test of this study. Cronbach's alpha value is considered good when it is $0.7 \leq a \geq 0.9$, the Cronbach's alpha value for the dependent variable which is the intention of e-wallet payment system among Gen Z in Penang, Malaysia is 0.882. Cronbach's alpha value for independent variables is Perceived ease of use is 0.869, for perceived usefulness is 0.903, for perceived security 0.908, and for perceived trust is 0.910.

In this research, Pearson Correlation Coefficient analysis is used to identify the relationship between the independent variable and dependent variable. From the Perceived ease of use correlation analysis, r is 0.709, which is a strong positive correlation relationship between Perceived ease of use and the intention to use of e-wallet payment system among Gen

Z in Penang because of P < 0.005. Moreover, the observation correlation coefficient, r is 0.725, which recommends a high positive correlation relationship between perceived usefulness and the intention to use e-wallet payment system among Gen Z in Penang as P < 0.005. The observed correlation coefficient, r is 0.775, which recommends a high positive correlation relationship between perceived security and the intention to use e-wallet payment system among Gen Z in Penang as P < 0.005. Lastly, the observed correlation coefficient, r is 0.815, which recommends high positive correlation relationship between perceived trust and the intention to use e-wallet payment system among Gen Z in Penang, Malaysia as P < 0.005.

In this study, to examine the factor (independent variables) that influence the most on the intention to use e-wallet payment system (dependent variable), multiple linear regression is used. From the beta value, which is from the coefficient, perceived trust has the highest beta value which is 0.485 and it indicates has significance influence on online the intention to use e-wallet payment system with P value is 0.000. Next, it followed up with Perceived ease of use which has the second highest beta value (0.204), and it has a significance influence on the intention to use e-wallet payment system with P value is 0.000. Moreover, Perceived security has the 0.155 beta value, and it has a significance in an influence on the intention to use e-wallet payment system with a P value is 0.011 and perceived usefulness has the lowest beta value which is 0.074 and it has less significance in influence the intention to use e-wallet payment system with P value is 0.161.

Table 5.1: Summary of Findings

Research Question and Objective	Hypothesis Result	Finding
RQ 1: What is the relationship between perceived ease of use and intention to use e-wallet payment system among gen Z In Penang, Malaysia? RO 1: To examine the relationship between Perceived ease of use and intention to use e-wallet payment system among gen Z In Penang, Malaysia	P=0.000 (p<0.005) R=0.709	There is a relationship between perceived ease of use and the intention to use e-wallet payment system among gen Z In Penang, Malaysia
RQ 2: What is the relationship between the perceived usefulness and intention to use e-wallet payment system among gen Z In Penang, Malaysia? RO 2: To examine the relationship between perceived usefulness and intention to use e-wallet payment system among gen Z In Penang, Malaysia	P=0.000 (p<0.005) R=0.725	There is a relationship between perceived usefulness and the intention to use e-wallet payment system among gen Z In Penang, Malaysia
RQ 3: What is the relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia? RO 3: To examine the relationship between perceived security and intention to use e-wallet payment system among gen Z In Penang, Malaysia	P=0.000 (p<0.005) R=0.775	There is a relationship between perceived security and the intention to use e-wallet payment system among gen Z In Penang, Malaysia
RQ 4: What is the relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia? RO 4: To examine the relationship between perceived trust and intention to use e-wallet payment system among gen Z In Penang, Malaysia.	P=0.000 (p<0.005) R=0.815	There is a relationship between perceived trust and the intention to use e-wallet payment system among gen Z In Penang, Malaysia

5.3 Discussion

This section summarizes the result in Chapter 4, which focuses on the research objective, research question, and hypothesis for this analysis.

5.3.1 Hypothesis 1: (There is a significant relationship between Perceived ease of use and intention to use e-wallet payment system among gen Z)

From the previous chapter, the first objective of this research is to examine the relationship between Perceived ease of use and intention to use e-wallet payment system among gen z in Penang, Malaysia. The first research question is the relationship between Perceived ease of use and intention to use e-wallet payment system among gen z in Penang, Malaysia? The hypothesis of this variable is that Perceived ease of use significantly influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This study's findings showed a high positive relationship between Perceived ease of use and the intention to use e-wallet payment system among gen z in Penang, Malaysia with a correlation coefficient of 0.709 and a P value is 0.000 which is a $P < 0.005$. Based on the beta value from coefficient regression analysis, Perceived ease of use has the second highest beta value which is 0.204. So, Perceived ease of use positively influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This discussion indicates that this research objective was achieved, and hypothesis 1 (H1) is accepted.

According to findings from earlier studies, consumers have a greater propensity to accept a product or technology if they believe it to have a high level of ease of use (Alyoussef, 2021). Moreover, several other research also states that ease of use is the most significant factor determining whether people would use electronic wallets (Kumar et al., 2018). The significance of usability has been emphasized in other papers as well. Based on this, Chen (2018) found that a positive intention to use E-wallet was significantly connected with ease of use. This has been

reinforced by the findings of Mustafa et al. (2022) who observed that the perceived ease of use was a favorable, principal, or crucial element in the willingness to use e-wallet services. This is because users can communicate with the new scheme in a plain and acceptable manner. It influences consumer acceptability of the new system and its ease of implementation. As a result, many individuals are eager to learn about and embrace the new system, which will hasten consumer adoption of e-wallets. This indicates how consumers will be motivated to use it if Perceived ease of use is high. Therefore, perceived ease of use should be considered as one of the factors influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia

5.3.2 Hypothesis 2: (There is a significant relationship between perceived usefulness and intention to use e-wallet payment system among gen Z)

Based on the previous chapter, the second objective of this research is to identify examine the relationship between perceived usefulness and intention to use e-wallet payment system among gen z in Penang, Malaysia. The second research question is what is the relationship between perceived usefulness and intention to use e-wallet payment system among gen z in Penang, Malaysia? The hypothesis of this variable is that perceived usefulness significantly influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This study's findings showed a high positive relationship between perceived usefulness and intention to use e-wallet payment system among gen z in Penang with a correlation coefficient of 0.725 and a P value of 0.000 which is $P < 0.005$. Based on the beta value from coefficient regression analysis, perceived usefulness has the last highest beta value which is 0.074. So perceived usefulness positively influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This discussion indicates that this research objective is achieved hypothesis 2 (H2) is accepted.

According to previous studies, when consumers believe they are using a digital wallet, they gain access to advantages like ease and payment ease. The ease of payment may make users believe it is unnecessary for someone always to carry cash to feel comfortable using the system (Li et al., 2020). This study has been supported by Chan et al. (2021); one's perception of usefulness reflects how comfortable one is using technology to advance their career. According to the research findings, customers utilize the applications because they are committed to achieving their goals. Respondents indicated that they could rapidly complete a transaction involving mobile payments. Moreover, the benefits of earning awards and digital receipts increase the use of mobile phones. Consequently, the popularity of e-wallets by generation Z is attributable to the interoperability, flexibility, and accessibility of smart devices (Karim et al., 2020). This is because the desire to utilise an e-wallet payment system will be impacted by the usefulness of mobile devices, including personalisation, accessibility, localisation, timeliness, and network reliability. Users can easily accept if these functions benefit them due to the utility of mobile devices. Even though the user found the item challenging to operate, they continued to do so because it was valuable and may increase their productivity. Therefore, perceived usefulness should be considered as one of the factors influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia.

5.3.3 Hypothesis 3: (There is a significant relationship between perceived security and intention to use e-wallet payment system among gen Z)

Based on the previous chapter, the third objective of this research is to identify examine the relationship between perceived security and intention to use e-wallet payment system among gen z in Penang, Malaysia. The third research question is what is the relationship between perceived security and intention to use e-wallet payment system among gen z in Penang, Malaysia? The hypothesis of this variable is that perceived security significantly influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This

study's findings showed a high positive relationship between perceived security and intention to use e-wallet payment system among gen z in Penang with a correlation coefficient of 0.775 and a P value of 0.000 which is $P < 0.005$. Based on the beta value from coefficient regression analysis, perceived security has the third highest beta value which is 0.155. So perceived security positively influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This discussion indicates that this research objective is achieved hypothesis 3 (H3) is accepted.

Based on the previous studies, Karim et al. (2020) reported an association between perceived security and the intention to use e-wallets in research on young Malaysian adults. Moreover, most researchers such as Rahmadhani et al. (2022) also agreed that perceived security has a significant influence on consumers' intentions to use E-wallet payment systems. This study had been supported by Sunny and George (2018), came to the same conclusion: perceived security affects people's intentions to use the e-wallet payment system. This finding also supported by Andrew and Tan (2019), which determined that security has a high relationship with the intent to use the E-wallet payment system. This is because merchants may reassure customers believe their website is a safer and more reliable place to create and sustain long term relationships, while also giving the impression of a trustworthy organisation. This could be accomplished by teaching generation Z consumers about the safety and security features available in their payment gateways, as well as which websites are fully secure to browse using digital certificates and secure servers. As a result, improved levels of perceived security will encourage generation Z users to use or embrace systems that contain the e-wallet system. This study adds to the evidence that perceived security should be given more attention because it is crucial to the effective intention of e-wallets by generation Z consumers in Penang, Malaysia.

5.3.4 Hypothesis 4: (There is a significant relationship between perceived trust and intention to use e-wallet payment system among gen Z)

Based on the previous chapter, the fourth objective of this research is to identify examine the relationship between perceived trust and intention to use e-wallet payment system among gen z in Penang, Malaysia. The fourth research question is what is the relationship between perceived trust and intention to use e-wallet payment system among gen z in Penang, Malaysia? The hypothesis of this variable is that perceived trust significantly influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This study's findings showed a high positive relationship between perceived trust and intention to use e-wallet payment system among gen z in Penang, Malaysia with a correlation coefficient of 0.815 and a P value of 0.000 which is $P < 0.005$. Based on the beta value from coefficient regression analysis, perceived security has the highest beta value which is 0.485. So perceived trust positively influences the intention to use e-wallet payment system among gen z in Penang, Malaysia. This discussion indicates that this research objective is achieved hypothesis 4 (H4) is accepted.

According to the previous studies, trust is a strong predictor of the usage of technology and gadgets (Mondego, 2018). Researchers have shown that people's level of trust substantially affects whether or not they plan to use technologies like electronic wallets (Mustafa et al., 2022). According to Chao (2019), trust is a factor that motivates users to utilize and accept new technologies. This study has been supported by Cha et al. (2021), stating that if an e-wallet system is not entirely trustworthy, then users will not adopt it. Mondego (2018) notes that it is vital to create user trust to understand consumers' demands so that people can trust the e-wallet system and utilize it. This is because Generation Z consumers will not adopt the e- wallet system if it is less trustworthy. Therefore, the higher the level of trust is in people, the higher will be the adoption and chances of Generation Z consumers to use any e-wallet system for

online shopping and transactions. It illustrates Generation Z users in Penang will be more likely to accept and utilise any e-wallet system to perform online interactions the higher their degree of confidence in individuals.

5.4 Implications of the Study

The implications of a study describe what the results of the research indicate for researchers or for specific subgroups or populations in addition to the fundamental facts and interpretation of the results (Kevin, 2022). Despite Malaysia's ongoing interest in e-wallets and their potential for fast expansion, there is a dearth of knowledge about their features and the consequences for consumer marketing. This is mostly because e-wallets are still relatively new in Malaysia and are only now starting to supplant other payment methods used by consumers to purchase products and services. As a result, the study's results aided e-wallet firms and developers by offering insight into the elements that influence consumers' propensity to embrace e-wallets, helping them to improve their apps and better satisfy their customers' demands. The present research may assist e-wallet companies in understanding customer preferences and developing marketing tactics to help them sell their items and create a solid reputation.

Second, it was discovered that perceived usefulness and Perceived ease of use were significant factors affecting Gen Z's desire to utilize an e-wallet payment system in Penang, Malaysia. According to this study's findings, people are more inclined to use an electronic wallet if they believe it to be convenient and beneficial. In order to improve customers' perspectives, e-wallet application developers may thus concentrate on other innovation and convenience elements, such as the speed of payment transactions, the time and effort required to set up and learn to use, or even merchant accessibility.

Thirdly, factors of perceived security and perceived trust was also important in influencing the intention to use e-wallet payment system among gen z in Penang, Malaysia.

However, consumers have been reluctant to embark on this journey owing to misunderstandings regarding the security of e-wallets. By educating and raising awareness about cyber security, e-wallet fraud statistics, and the steps taken to combat e-wallet fraud incidents, relevant authorities such as retailers and businesses, financial institutions, and the government can positively and accurately deliver information about e-wallet security features to their users. This will assist to dispel this myth and boost customers' trust in e-wallets.

Furthermore, governance would be the party who gets advantages from this study. Governments can be aware of the key factors influencing consumer choices to embrace e-wallets. A few tactics may be used by the government to encourage customers to use e-wallets. The government may, for instance, provide new customers an RM30 incentive. To access the funds, customers will download an e-wallet application. From this research, government may learn more about how to encourage users to keep using e-wallets after utilizing the provided funds rather than discontinued.

Finally, this study might be useful to future researchers who are interested in acceptability and the many aspects that influence the desire to use an e-wallet. It may use the factors from this study as a guide for a later investigation. Our study's findings indicate that important factors are Perceived ease of use, perceived usefulness, perceived security, and perceived trust. When doing their future research on various target respondents throughout various time periods, the future researchers might either delete irrelevant characteristics or take other considerations into account. Only a few academics have studied the issue of e-wallets since it is a relatively new one in Malaysian financial technology. As a consequence, this study may be used as a guide for future research and to help researchers and facility development teams work together.

5.5 Limitations of the study

The restrictions in design, techniques, or even the researchers' own limits that have an impact on and influence how a research's final results are interpreted are known as research limitations (Abbadia, 2022). Finding a limitation might be a crucial chance to spot fresh literature gaps and highlight the need for more study. There are some limitations to this study that can lead to suggestions for future studies.

Firstly, self-administered survey forms were used in this study's data collection, along with a single way of collection. The questionnaire that is impacted by the time frame may get careless responses from the participants. They could get to choose the response without carefully going through the question. It will present inaccurate statements and have an impact on the study's outcome. Additionally, some of the questionnaire's questions can be sensitive to the respondents. Respondents can find it unpleasant to reply. They may not respond in accordance with their own opinions, which will impact the study's findings.

Additionally, the demographic range of this study is somewhat constrained. We only target Generation Z customers in Penang. The study's conclusions are only applicable to generation Z customers in Penang, and people from other generations are not affected. E-wallets are used by members of generation Z, as well as those in generations X, Y, and the Baby Boomers. Consumers of different ages will view the e-wallet payment system differently. For instance, a lot of people from generations X and Y are amenable to the concept of an electronic wallet payment system. Even among Baby Boomers who can use technology, few will accept the e-wallet payment option. Therefore, it can have an impact on the study's accuracy.

Finally, we employed a quantitative approach in the form of an online questionnaire survey. This is because filling out surveys is more straightforward and less time-consuming. The

questionnaire is organized using closed-ended questions. The answer provided by the respondents is only one of several possible ones. There are just five answer options: "strongly agree, agree, neutral, disagree and strongly disagree". The lack of a qualitative technique prevented participants from contributing their suggestions and thoughts. Therefore, our inquiry will only provide modest findings.

5.6 Recommendations/ Suggestion for Future Research

Future researchers should utilize **both qualitative and mix methods** to gather data. In this research, the researchers used the quantitative method to gather data regarding factors that influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia, and other elements. The qualitative method is also an effective way to gather quality information. When a researcher is able to utilize both methods, they may gain a deeper understanding of the relationship between the factors that influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia. Interviews with respondents enable the researcher to know the respondent's perspective in various dimensions, and with the implementation of this action, future researchers also have the possibility of revealing new factors that influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia.

In addition, the future researcher should **increase the sample size and population** and cover other districts and states to achieve a more reliable and representative study result. This study was conducted among people of generation Z in Penang, using only 384 questionnaires and in a short period of time. It is recommended to future researchers that it is necessary to lengthen the period and examine probabilistic sampling techniques to obtain more information or outcomes.

Other than that, future researchers are urged to focus on **survey participants from a variety of age groups**, including members of generations other than generation Z, such as generation X, generation Y, and baby boomers. Through the introduction of e-wallets, customer segments of different generations have varied viewpoints. By complying with the opinions of a tremendous number of respondents, future researchers would contribute better research and lead to a different outcome.

Furthermore, in selecting respondents, it is recommended that the researchers **selected other state gen Z peoples** in Malaysia. So, it enables future researchers to see the differences of results studying the determinants of "intention to use" e-wallet among other state gen Z peoples. It is used to test the determinants again whether significant to the intention to use e-wallet among gen z. Hence, it is recommended to run a research thesis with the collaboration of other states researches among the generation Z peoples. It enables us to explore more, and the results will be more quality which helps the development of the economy in Malaysia.

Moreover, we urge that future academics do research on **merchandiser perspectives**. This is due to the fact that merchants are an essential component in the decision to adopt an e-wallet payment method. Further research should be conducted to determine why just a few merchants intend to use an e-wallet in their payment system. It will provide more information and more accurate findings about e-wallet intention from many different people's points of view.

Lastly, researchers in the future should **devote more time to their studies** and read more papers, books, and other sources that may be relevant to the subject. Future researchers should use other internet platforms to improve their study results and gain useful information from other countries' research papers and related articles, as the intention to use e-wallet

payment system among Gen Z is not limited to Malaysia and may be a problem in other countries as well.

5.7 Conclusion

Throughout this chapter, this piece sums up the whole of this review. This study focused on an in-depth investigation of factors influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia. The objectives of this study were to identify the independent variables of Gen Z's intention to use e-wallet payment system, which are Perceived ease of use, perceived usefulness, perceived security, and perceived trust, and to identify the relationship between factors and the intention to use e-wallet payment. Meanwhile, the findings from the Pearson correlation coefficient analysis show that Perceived ease of use, perceived usefulness, perceived security, and perceived trust have a significant positive relationship with the intention to use e-wallet payment. Multiple linear regression analysis shows that Perceived ease of use, perceived usefulness, perceived security, and perceived trust have significant influence on the intention to use e-wallet payment system among Gen Z in Penang, Malaysia. This is because the beta value of four independent variables is positive and the P value is also less than 0.005, which is significant.

Furthermore, the perceived trust variable has more influence on the intention to use e-wallet payment system among Gen Z in Penang, Malaysia, than other variables, whose beta value is the highest among others at 0.485. For the users to deposit money into the system, perceived trust is essential, whereby the users believe that the safety of the e-wallet is sufficient, and their money is safe. When the integrity of the service provider is perceived to be sufficient, the user will develop trust. It may indicate that perceived trust is not an issue among consumers, but it is important for the service provider to increase the security of their transactions and

network from any potential cybercriminal risk and hazard. So, it will increase consumer intention and the idea of using e-wallets in their daily purchases compared to cash.

With the results and finding of this research, e-wallet firms and developers by offering insight into the elements that influence consumers' propensity to embrace e-wallets, helping them to improve their apps and better satisfy their customers' demands. Moreover, e-wallet application developers may thus concentrate on other innovation and convenience elements, such as the speed of payment transactions, the time and effort required to set up and learn to use, or even merchant accessibility. Furthermore, by educating and raising awareness about cyber security, e-wallet fraud statistics, and the steps taken to combat e-wallet fraud incidents, relevant authorities such as retailers and businesses, financial institutions, and the government can positively and accurately deliver information about e-wallet security features to their users. From this research, future studies can use this research as a reference to carry out their future research.

However, there are some limitations in this research. In this research self-administered survey forms were used in this study's data collection, along with a single way of collection. The questionnaire that is impacted by the time frame may get careless responses from the participants. Secondly, the demographic range of this study is somewhat constrained. The study's conclusions are only applicable to generation Z customers in Penang, and people from other generations are not affected. Thirdly, we employed a quantitative approach in the form of an online questionnaire survey. This is because filling out surveys is more straightforward and less time-consuming.

Some of recommendations have been discussed since there are existences of limitation. In the future study, researchers should utilize both qualitative and mix methods to gather data. When a researcher is able to utilize both methods, they may gain a deeper understanding of the

relationship between the independent and dependent variable. In addition, the future researcher should increase the sample size and population and cover other districts and states to achieve a more reliable and representative study result. Moreover, we urge that future academics do research on merchandiser perspectives and researchers in the future should devote more time to their studies and read more papers, books, and other sources that may be relevant to the subject. Lastly, in selecting respondents, it is recommended that the researchers selected other state gen Z peoples in Malaysia. So, it enables future researchers to see the differences of results studying the determinants of "intention to use" e-wallet among other state gen Z peoples.

As a conclusion, the outcome of this research indicated that perceived trust is the most important factor influencing the intention to use e-wallet payment system among Gen Z in Penang, Malaysia. This is because, without our realizing the purpose and benefits of e-wallets, there will be a lack of appreciation among e-wallet consumers for their contribution towards their strong belief in this cashless society. In summary, this research can help the service provider gain a competitive advantage and researchers from other countries can also use the data for their usage.

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ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)

Student's Name: ESWARAN A/L MORGAN, NANCY KONG KAH MENG, NOR NASIHAH BINTI ZAINI, NURFARAHIN HANANI BINTI MOHD ASRI
Matric No. A19A0126, A19A0396, A19A0460, A19A0669
Name of Supervisor: DR. NUR IZZATI BINTI MOHAMMAD ANUAR
Name of Programme: BACHELOR OF ENTREPRENEURSHIP (COMMERCE) WITH HONOURS (SAK)
Research Topic: FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z IN PENANG, MALAYSIA

NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)		
1.	**Content (10 MARKS)** (Research objective and Research Methodology in accordance to comprehensive literature review) Content of report is systematic and scientific (Systematic includes Background of study, Problem Statement, Research Objective, Research Question) (Scientific refers to researchable topic)	Poorly clarified and not focused on Research objective and Research Methodology in accordance to comprehensive literature review.	Fairly defined and fairly focused on Research objective and Research Methodology in accordance to comprehensive literature review.	Good and clear of Research objective and Research Methodology in accordance to comprehensive literature review with good facts.	Strong and very clear of Research objective and Research Methodology in accordance to comprehensive literature review with very good facts.	____ x 1.25 (Max: 5)	
		Content of report is written unsystematic that not include Background of study, Problem Statement, Research Objective, Research Question and unscientific with unsearchable topic.	Content of report is written less systematic with include fairly Background of study, Problem Statement, Research Objective, Research Question and less scientific with fairly researchable topic.	Content of report is written systematic with include good Background of study, Problem Statement, Research Objective, Research Question and scientific with good researchable topic.	Content of report is written very systematic with excellent Background of study, Problem Statement, Research Objective, Research Question and scientific with very good researchable topic.	____ x 1.25 (Max: 5)	

ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)

2.	**Overall report format (5 MARKS)**	***Submit according to acquired format***	The report is not produced according to the specified time and/ or according to the format	The report is produced according to the specified time but fails to adhere to the format.	The report is produced on time, adheres to the format but with few weaknesses.	The report is produced on time, adheres to the format without any weaknesses.	____ x 0.25 (Max: 1)	
		Writing styles (clarity, expression of ideas and coherence)	The report is poorly written and difficult to read. Many points are not explained well. Flow of ideas is incoherent.	The report is adequately written; Some points lack clarity. Flow of ideas is less coherent.	The report is well written and easy to read; Majority of the points is well explained, and flow of ideas is coherent.	The report is written in an excellent manner and easy to read. All of the points made are crystal clear with coherent argument.	____ x 0.25 (Max: 1)	
		Technicality (Grammar, theory, logic and reasoning)	The report is grammatically, theoretically, technically and logically incorrect.	There are many errors in the report, grammatically, theoretically, technically and logically.	The report is grammatically, theoretically, technically and logically correct in most of the chapters with few weaknesses.	The report is grammatically, theoretically, technically, and logically perfect in all chapters without any weaknesses.	____ x 0.25 (Max: 1)	
		Reference list (APA Format)	No or incomplete reference list.	Incomplete reference list and/ or is not according to the format.	Complete reference list with few mistakes in format adherence.	Complete reference list according to format.	____ x 0.25 (Max: 1)	
		Format organizing (cover page, spacing, alignment, format structure, etc.)	Writing is disorganized and underdeveloped with no transitions or closure.	Writing is confused and loosely organized. Transitions are weak and closure is ineffective.	Uses correct writing format. Incorporates a coherent closure.	Writing include a strong beginning, middle, and end with clear transitions and a focused closure.	____ x 0.25 (Max: 1)	

ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT: RESEARCH REPORT (Weight 50%)
(COMPLETED BY SUPERVISOR AND EXAMINER)

3.	**Research Findings and Discussion (20 MARKS)**	Data is not adequate and irrelevant.	Data is fairly adequate and irrelevant.	Data is adequate and relevant.	Data is adequate and very relevant.	____ x 1 (Max: 4)	
		Measurement is wrong and irrelevant	Measurement is suitable and relevant but need major adjustment.	Measurement is suitable and relevant but need minor adjustment.	Measurement is excellent and very relevant.	____ x 1 (Max: 4)	
		Data analysis is inaccurate	Data analysis is fairly done but needs major modification.	Data analysis is satisfactory but needs minor modification.	Data analysis is correct and accurate.	____ x 1 (Max: 4)	
		Data analysis is not supported with relevant output/figures/tables and etc.	Data analysis is fairly supported with relevant output/figures/tables and etc.	Data analysis is adequately supported with relevant output/figures/table and etc.	Data analysis is strongly supported with relevant output/figures/table and etc.	____ x 1 (Max: 4)	
		Interpretation on analyzed data is wrong.	Interpretation on analyzed data is weak.	Interpretation on analyzed data is satisfactory.	Interpretation on analyzed data is excellent	____ x 1 (Max: 4)	
4.	**Conclusion and Recommendations (15 MARKS)**	Implication of study is not stated.	Implication of study is weak.	Implication of study is good.	Implication of study is excellent	____ x 1.25 (Max: 5)	
		Conclusion is not stated	Conclusion is weakly explained.	Conclusion is satisfactorily explained.	Conclusion is well explained.	____ x 1.25 (Max:5)	
		Recommendation is not adequate and irrelevant.	Recommendation is fairly adequate and irrelevant.	Recommendation is adequate and relevant.	Recommendation is adequate and very relevant.	____ x 1.25 (Max:5)	
						TOTAL (50 MARKS)	

Student's Name: ESWARAN A/L MORGAN
Matric No.: A19A0126
Name of Supervisor: DR. NUR IZZATI BINTI MOHAMMAD ANUAR
Name of Programme: BACHELOR OF ENTREPRENEURSHIP (COMMERCE) WITH HONOURS (SAK)
Research Topic: FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z IN PENANG, MALAYSIA

NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)		
1.	Determination	Is not determined and does not put in any effort in completing the research report	Is determined but puts in little effort in completing the research report	Is determined and puts in reasonable effort in completing the research report	Is very determined and puts in maximum effort in completing the research report	____ x 1 (Max: 4)	
2.	Commitment	Is not committed and does not aim to complete on time and/ or according to the requirements	Is committed but makes little effort to complete according to the requirements	Is committed and makes reasonable effort in fulfilling some of the requirements	Is very committed and makes very good effort in fulfilling all the requirements, without fail.	____ x 1 (Max: 4)	
3.	Frequency in meeting supervisor	Has not met the supervisor at all.	Has met the supervisor but less than five times.	Has met the supervisor for at least five times.	Has met the supervisor for more than five times.	____ x 1 (Max: 4)	
4.	Take corrective measures according to supervisor's advice	Has not taken any corrective action according to supervisor's advice.	Has taken some corrective actions but not according to supervisor's advice, or with many mistakes.	Has taken some corrective actions and most are according to supervisor's advice, with some mistakes.	Has taken corrective actions all according to supervisor's advice with few mistakes.	____ x 1 (Max: 4)	
5.	Initiative	Does not make any initiative to do the research.	Make the initiative to work but requires consistent monitoring.	Make the initiative to do the research with minimal monitoring required.	Makes very good initiative to do the research with very little monitoring required.	____ x 1 (Max: 4)	
	TOTAL (20 MARKS)						/20

Student's Name: NANCY KONG KAH MENG
Matric No.: A19A0396
Name of Supervisor: DR. NUR IZZATI BINTI MOHAMMAD ANUAR
Name of Programme: BACHELOR OF ENTREPRENEURSHIP (COMMERCE) WITH HONOURS (SAK)
Research Topic: FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z IN PENANG, MALAYSIA

NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)		
1.	Determination	Is not determined and does not put in any effort in completing the research report	Is determined but puts in little effort in completing the research report	Is determined and puts in reasonable effort in completing the research report	Is very determined and puts in maximum effort in completing the research report	____ x 1 (Max: 4)	
2.	Commitment	Is not committed and does not aim to complete on time and/ or according to the requirements	Is committed but makes little effort to complete according to the requirements	Is committed and makes reasonable effort in fulfilling some of the requirements	Is very committed and makes very good effort in fulfilling all the requirements, without fail.	____ x 1 (Max: 4)	
3.	Frequency in meeting supervisor	Has not met the supervisor at all.	Has met the supervisor but less than five times.	Has met the supervisor for at least five times.	Has met the supervisor for more than five times.	____ x 1 (Max: 4)	
4.	Take corrective measures according to supervisor's advice	Has not taken any corrective action according to supervisor's advice.	Has taken some corrective actions but not according to supervisor's advice, or with many mistakes.	Has taken some corrective actions and most are according to supervisor's advice, with some mistakes.	Has taken corrective actions all according to supervisor's advice with few mistakes.	____ x 1 (Max: 4)	
5.	Initiative	Does not make any initiative to do the research.	Make the initiative to work but requires consistent monitoring.	Make the initiative to do the research with minimal monitoring required.	Makes very good initiative to do the research with very little monitoring required.	____ x 1 (Max: 4)	
	TOTAL (20 MARKS)						/20

Student's Name: NOR NASIHAH BINTI ZAINI
Matric No.: A19A0460
Name of Supervisor: DR. NUR IZZATI BINTI MOHAMMAD ANUAR
Name of Programme: BACHELOR OF ENTREPRENEURSHIP (COMMERCE) WITH HONOURS (SAK)
Research Topic: FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z IN PENANG, MALAYSIA

NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)		
1.	Determination	Is not determined and does not put in any effort in completing the research report	Is determined but puts in little effort in completing the research report	Is determined and puts in reasonable effort in completing the research report	Is very determined and puts in maximum effort in completing the research report	____ x 1 (Max: 4)	
2.	Commitment	Is not committed and does not aim to complete on time and/ or according to the requirements	Is committed but makes little effort to complete according to the requirements	Is committed and makes reasonable effort in fulfilling some of the requirements	Is very committed and makes very good effort in fulfilling all the requirements, without fail.	____ x 1 (Max: 4)	
3.	Frequency in meeting supervisor	Has not met the supervisor at all.	Has met the supervisor but less than five times.	Has met the supervisor for at least five times.	Has met the supervisor for more than five times.	____ x 1 (Max: 4)	
4.	Take corrective measures according to supervisor's advice	Has not taken any corrective action according to supervisor's advice.	Has taken some corrective actions but not according to supervisor's advice, or with many mistakes.	Has taken some corrective actions and most are according to supervisor's advice, with some mistakes.	Has taken corrective actions all according to supervisor's advice with few mistakes.	____ x 1 (Max: 4)	
5.	Initiative	Does not make any initiative to do the research.	Make the initiative to work but requires consistent monitoring.	Make the initiative to do the research with minimal monitoring required.	Makes very good initiative to do the research with very little monitoring required.	____ x 1 (Max: 4)	
	TOTAL (20 MARKS)						/20

Student's Name: NURFARAHIN HANANI BINTI MOHD ASRI
Matric No.: A19A0669
Name of Supervisor: DR. NUR IZZATI BINTI MOHAMMAD ANUAR
Name of Programme: BACHELOR OF ENTREPRENEURSHIP (COMMERCE) WITH HONOURS (SAK)
Research Topic: FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z IN PENANG, MALAYSIA

NO.	CRITERIA	PERFORMANCE LEVEL				WEIGHT	TOTAL
		POOR (1 MARK)	FAIR (2 MARKS)	GOOD (3 MARKS)	EXCELLENT (4 MARKS)		
1.	Determination	Is not determined and does not put in any effort in completing the research report	Is determined but puts in little effort in completing the research report	Is determined and puts in reasonable effort in completing the research report	Is very determined and puts in maximum effort in completing the research report	____ x 1 (Max: 4)	
2.	Commitment	Is not committed and does not aim to complete on time and/ or according to the requirements	Is committed but makes little effort to complete according to the requirements	Is committed and makes reasonable effort in fulfilling some of the requirements	Is very committed and makes very good effort in fulfilling all the requirements, without fail.	____ x 1 (Max: 4)	
3.	Frequency in meeting supervisor	Has not met the supervisor at all.	Has met the supervisor but less than five times.	Has met the supervisor for at least five times.	Has met the supervisor for more than five times.	____ x 1 (Max: 4)	
4.	Take corrective measures according to supervisor's advice	Has not taken any corrective action according to supervisor's advice.	Has taken some corrective actions but not according to supervisor's advice, or with many mistakes.	Has taken some corrective actions and most are according to supervisor's advice, with some mistakes.	Has taken corrective actions all according to supervisor's advice with few mistakes.	____ x 1 (Max: 4)	
5.	Initiative	Does not make any initiative to do the research.	Make the initiative to work but requires consistent monitoring.	Make the initiative to do the research with minimal monitoring required.	Makes very good initiative to do the research with very little monitoring required.	____ x 1 (Max: 4)	
	TOTAL (20 MARKS)						/20

ASSESSMENT FORM FOR FINAL YEAR RESEARCH PROJECT (PPTAII): TOTAL MARKING SCHEME
(COMPLETED BY SUPERVISOR & EXAMINER)

Research Topic: FACTORS INFLUENCING THE INTENTION TO USE E-WALLET PAYMENT SYSTEM AMONG GEN Z IN PENANG, MALAYSIA

Student's Name: ESWARAN A/L MORGAN, NANCY KONG KAH MENG, NOR NASIHAH BINTI ZAINI, NURFARAHIN HANANI BINTI MOHD ASRI

Matric No.: A19A0126, A19A0396, A19A0460, A19A0669

Assessment	Marks Given By Supervisor	Marks Given By Examiner	Total
Effort (20%) - *Reflective Note*		[redacted]	
Presentation (20%)			/ 2 =
Research Paper (10%)			/ 2 =
Research Report (50%)			/ 2 =
GRAND TOTAL (100%)			

Name of Supervisor: DR. NUR IZZATI BINTI MOHAMMAD ANUAR **Signature:** _____ **Date:** _____

Name of Examiner: DR WAN FARHA BINTI WAN ZULKIFFLI **Signature:** _____ **Date:** _____