FACTORS INFLUENCING UNIVERSITY STUDENTS' EXPENDITURE TO USE E-MONEY IN MALAYSIA.

HOH SEK LII

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

DECLARATION OF ORIGINAL WORK

I hereby declare that all the work of this thesis entitled “FACTORS INFLUENCING UNIVERSITY STUDENTS' EXPENDITURE TO USE E-MONEY IN MALAYSIA.” is original done by myself and no portion of the work encompassed in this research project proposal has been submitted in support of any application for any other degree or qualification of this or any other institute or university of learning.

SIGNATURE : *HOH*

NAME : HOH SEK LII

DATE : 4 FEBRUARY 2024

APPROVAL

I hereby declare that I had read through this thesis entitled "FACTORS INFLUENCING UNIVERSITY STUDENTS' EXPENDITURE TO USE E-MONEY IN MALAYSIA." and in my opinion that this thesis is adequate in term of scope and quality which fulfil the requirements for the award of Bachelor of Technology Management (High Technology Marketing) with Honours.

SIGNATURE :

NAME OF SUPERVISOR : PROF. MADYA TS. DR. MOHAMMED HARIRI BIN BAKRI

DATE : 4/2/2024

SIGNATURE :

NAME OF PANEL : DR.NUR ATIKA BINTI ATAN

DATE : 4/2/2024

FACTORS INFLUENCING UNIVERSITY STUDENTS' EXPENDITURE TO USE E-MONEY IN MALAYSIA.

HOH SEK LII

This thesis is submitted in partial fulfilment of the requirements for the award of

Bachelor of Technology Management (High Technology Marketing) with Honours

Faculty of Technology Management and Technopreneurship

Universiti Teknikal Malaysia Melaka

4 FEBRUARY 2024

DEDICATION

I would like to thank my beloved family for their dedication, they educated me and motivated me to keep studying until I reached the degree level especially my father Mr Hoh Lit Son and my beloved mother Mrs Chew Kim Lian. And also, I express a deep sense of gratitude to my lecturer whom also my supervisor for my final year project, Prof. Madya Ts. Dr. Mohammed Hariri bin Bakri and my fellow friends. They have provided me fully support and advice throughout this research. This research is impossible to complete within short period of time without their blessing and encouragement.

ACKNOWLEDGEMENT

First and foremost, I would like to express my gratitude to God for giving me good health, strength, and the opportunity to gain my knowledge successfully to complete this Final Year Project (FYP) within a given time. I would like to thanks my parents for their support and patient in waiting for me to finish my degree. I also express my sincere thanks to my friends for giving timely pieces of advice to this research project. They are sharing a lot of knowledge related to proceed this research project. It helps me to complete this research project more efficiently.

Secondly, I am expressing my sincere appreciation and thanks to my beloved supervisor Prof. Madya Ts. Dr. Mohammed Hariri bin Bakri for his knowledge, expertise, conscientiousness, suggestions and useful comments as well as valuable feedback given have help me to work on completing this research projects. Also, I sincerely appreciate and thank Dr. Nur Atika binti Atan as my panel for sharing her knowledge and experience in my research. Her suggestions have been useful for me to proceed well this research project.

Last but not least, I would like to thank all the people interviewed for taking the time to help fill out the questionnaire related to this research project. Without their participation, it would be impossible for me to successfully complete my research project. Once again, I am grateful and honestly thankful to all.

ABSTRACT

This research aimed to study the factors that influenced university students' expenditure to use e-money in Malaysia. Technological advancement had impacted on nearly every aspect of life, including changes to the present payment system. However, there were still people who preferred to use cash daily because they are lack of knowledge and information about the benefits of e-money, lacking internet knowledge leading to less confidence in e-money and insufficient infrastructure. Therefore, the purpose of this study was to examine the willingness of university students to use e-money as a payment tool for transactions in purchasing products or services. This study had three objectives: to identify the factors that influenced university students' expenditure to use e-money in Malaysia, to analyse the relationship between the identified factors and university students' expenditure to use e-money in Malaysia, and to determine the most influencing factor that influenced university students' expenditure to use e-money in Malaysia. This study extended the UTAUT theory with trustworthiness for assessing the attitude among university students' expenditure to use e-money in Malaysia. The research design was a quantitative method that distributed questionnaires to 384 university students in Malaysia. The findings of the study showed that all factors positively influenced university students' expenditure on e-money in Malaysia, with facilitating conditions having the highest impact. The research could be done in more specific geographical regions, conducted qualitative research and mixed-methods as well as applied other theories and models. In conclusion, the adoption of e-money of university students promoted a cashless environment and reduced the potential risks of carrying physical currency.

Keyword: Electronic money, payment system, university students, UTAUT theory, trustworthiness.

ABSTRAK

BAHASA MALAYSIA VERSION

Penyelidikan ini adalah untuk mengkaji faktor-faktor yang mempengaruhi perbelanjaan pelajar universiti untuk menggunakan e-wang di Malaysia. Kemajuan teknologi telah memberi kesan kepada hampir setiap aspek kehidupan, termasuk perubahan kepada sistem pembayaran semasa. Namun begitu, masih terdapat masyarakat yang lebih gemar menggunakan wang tunai setiap hari kerana mereka kurang pengetahuan dan maklumat tentang kebaikan e-wang, kekurangan pengetahuan internet yang akan menyebabkan tidak keyakinan terhadap e-wang dan infrastruktur yang tidak mencukupi. Oleh itu, tujuan kajian ini adalah untuk mengkaji kesudian pelajar universiti menggunakan e-wang sebagai alat pembayaran untuk transaksi pembelian produk atau perkhidmatan. Kajian ini mempunyai tiga objektif: untuk mengenal pasti faktor yang mempengaruhi perbelanjaan pelajar universiti untuk menggunakan e-wang di Malaysia, untuk menganalisis hubungan antara faktor yang dikenal pasti dengan perbelanjaan pelajar universiti untuk menggunakan e-wang di Malaysia, dan untuk menentukan factor yang paling banyak mempengaruhi perbelanjaan pelajar universiti untuk menggunakan e-wang di Malaysia. Kajian ini mengembangkan teori UTAUT dengan kebolehpercayaan untuk menilai perangai dalam kalangan perbelanjaan pelajar universiti untuk menggunakan e-wang di Malaysia. Reka bentuk kajian adalah kaedah kuantitatif yang mengedarkan borang soal selidik kepada 384 pelajar universiti di Malaysia. Dapatan kajian menunjukkan bahawa semua faktor mempengaruhi secara positif perbelanjaan pelajar universiti untuk menggunakan e-wang di Malaysia, dengan Keadaan Kemudahan mempunyai kesan yang paling tinggi. Penyelidikan boleh dilakukan di kawasan geografi yang lebih spesifik, menjalankan penyelidikan kualitatif dan kaedah gabungan serta menggunakan teori dan model lain. Kesimpulannya, penggunaan e-wang dalam kalangan pelajar universiti menggalakkan persekitaran tanpa tunai dan mengurangkan potensi risiko membawa mata wang fizikal.

Kata kunci: Wang elektronik, sistem pembayaran, pelajar universiti, teori UTAUT, kebolehpercayaan.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVATION

E-money	Electronic-money
BNM	Bank Negara Malaysia
UTAUT	Unified Theory of acceptability and Use of technological
PE	Performance Expectancy
EE	Effort Expectancy
SI	Social Influence
FC	Facilitating Conditions
TW	Trustworthiness
HEIs	Higher Education Institutions
KMO	Kaiser-Meyer-Olkin
SPSS	Statistical Package for Social Sciences

LIST OF APPENDICES

CHAPTER 1

INTRODUCTION

1.1 Background of the Research

In recent years, due to changes in market conditions and purchase patterns, the use of electronic money or "e-money" has increased quickly in many countries. It has become increasingly widely accepted in developing countries (Susanto et al., 2020). Cashless transactions are now the predominant form of retail business because it provides a more efficient and safer payment method. It is a payment method using mobile devices. In this case, whether there is a middleman or not, the money will be transferred to the payee (Aji & Adawiyah, 2021). E-money is the stored value of money, in which the fund record is kept on electronic devices, and it is a form of currency that can be exchanged directly without the need for a third party's intervention (Aji et al., 2020).

In an effort to contribute to the desire for a cashless culture and technological improvement, businesses may convince customers to use electronic or digital payment methods. Under the background of e-money, the continuous innovation of products and services requires customers to adopt, innovate and able to receive new information and share a positive word of mouth (Hoque et al., 2023). In 2022, e-money transactions in Malaysia totaled nearly RM 70 billion, marking an increase of approximately RM 20 billion from the previous year. Electronic wallets typically store e-money, and Touch n' Go and Grab Pay represent two of the most well-known e-wallets in Malaysia. The rise in transaction volume observed indicates that e-wallets are increasingly used as cashless payment methods nationwide (Statista Research Department, 2023).

E-Money virtual currency is stored in the bank computer system. It does not have a physical form like ordinary paper money. Electronic money is favoured over physical cash because of its flexibility and security (Mantri, 2021). The present tendency compels Malaysia's government to enforce stricter rules. By the conclusion of 2022, the Central Bank of Malaysia released a policy document with the objective of enhancing the security and governance of cashless payment systems (Statista Research Department, 2023). Based on the latest development related to the Internet and various e-commerce opportunities provided by the World Wide Web, it seems inevitable to digitise money. The future of e-commerce depends significantly on the development and spread of appropriate electronic money (Ramasamy et al., 2006). The E-Money In consideration for the issued e-money, guidelines also require issuers of large-scale e-money programmes to deposit all collected money into the trust accounts of Malaysian licenced institutions. This trust account must be established under the Trustee Act of 1949, and BNM needs to obtain a copy of the trust deed. The trust account funds will only be used to compensate consumers and pay merchants (Hsian, 2019).

E-money can be transmitted electronically from buyer to seller. If consumers think mobile payment is beneficial to an activity, they think it is compatible. As a result, compatibility can increase the tendency for using technology (Widiyati & Hasanah, 2020). E-money is a kind of payment instrument, whereas an e-wallet is an electronic service which can store payment instrument data and be used for processing e-money payments (Gaffar, 2020). In 1999, Malaysia attempted to implement e-money when MEPS cash was introduced to Klang Valley. Utilising Touch and Go card provided by the private company Rangkaian Segar is an additional attempt to implement e-money in Malaysia. Touch and Go card was initially used for toll payment on Malaysian highways (Ramasamy et al., 2006). More than 40 electronic money issuers in the market offer various incentives, discounts and cashback promotions, which dazzle Malaysian consumers. The BNM's reforms and measures are intended to encourage the use of electronic payment methods and will help to move towards an electronic payment and cashless society. (Hsian, 2019).

Nowadays, majority of Malaysian e-money issuers battle for user access by using their e-wallets to provide various incentives such as cashback or discount services in transportation, bill payment, and e-commerce (Han & Roy, 2019). A theory determining the degree of technological adoption and utilisation can be used to determine personal interest in employing electronic money (Widiyati & Hasanah, 2020). Based to the BNM, electronic money payment has grown by double digits over the last five years, moving away from traditional stored-value cards, there has been a shift towards network-based alternatives such as online accounts and e-wallets (Ikram, 2021).

The second-largest country in Southeast Asia is Malaysia and has the greatest cashless payment usage rate. One of the measures taken by the government to help the country shift to a digital economy by 2030 includes the blueprint- MyDigital, which provides electronic payment options in all government ministries and agencies. By 2021, Malaysia's per capita electronic money transaction volume will increase by more than 68 per cent (Statista Research Department, 2023). The more businesses are willing to accept electronic money, and the more likely consumers are to use electronic money. Therefore, if electronic money is more widely used and accepted in the market, the transaction and operation costs will also be reduced (Lee, 2018). The crucial function of electronic money in moving the country in the direction of a cashless society is growing for promoting higher economic efficiency (Ming, 2021).

The expenses of students at universities consist of accommodation, food, housekeeping, clothing, public transportation, mobile phone expenses, utilities, books, materials for reading, stationery, medical insurance and hospitalisation, as well as personal expenditures (StudyMalaysia.com, 2020). University life is a transition from childhood to adulthood, which makes students' life more challenging because they have to make their own decisions. It views how students manage the educational funds they get from scholarships, loans or parents (Sukmajaya, 2017).

University students who are receiving higher education are over seventeen years old. As more young people own smartphones and integrate them into their daily lives, electronic payment, such as mobile payment, will also increase. (Goh, 2017). Students' spending habits can be affected by the use of electronic money, which enhances transaction effectiveness and makes it easier to spend money on economic activities. Students have a high level of consumption (Fatmasari et al., 2019). Club activities, reference materials and entertainment with friends all cost money that will burdens students' daily expenditures (Ming, 2022). The rate to which students report intentionally borrowing and spending money can be referred to as spending money intelligently (Huizenga et al., 2019). With the raising expense of education, it is critical to plan prior to ensure the students' educational journey is not affected by financial obstacles (StudyMalaysia.com, 2015). Malaysia has over 590 higher educational institutions, with more than 1,270,000 students enrolled in institutions of higher learning (easyuni, 2023). Students who plan to pursue higher education after completing secondary school must have the necessary abilities in academia and financial resources (StudyMalaysia.com, 2022). Due to their numerous responsibilities such as paying off their student loans, younger generations require effective financial management (Sukmajaya, 2017).

1.2 Problem Statement

With the improvement of the living standards of adults, young people have more money, and their spending power is getting stronger (Hamsa et al., 2021). The spending habits of the younger generation in Malaysia, particularly in universities, have become a social issue. This unwise financial situation is usually related to their need for knowledge of budget and financial management (Bakhtiar et al., 2020). The usage of e-money is becoming popular because it keeps a digital history of every transaction. It helps to trace back and create detailed expense reports and budgets (CFI Team, 2022). According to the most recent data from the Bank Negara Malaysia (BNM), Covid-19 outbreak has increased the usage of Malaysian e-money payments,

with the value of transactions reaching RM 20 billion between January and September (Yunus, 2020).

Technological advancement has impacted on nearly every aspect of life, including changes to the present payment system. E-money is a new trend that changes people's lifestyles with the convenience of shopping, so the payment system for cash transactions has rapidly shifted to non-cash or called cashless. However, people prefer using cash daily since e-money implementation is still tricky (Mulyana et al., 2021).

Due to the lack of knowledge and information about the benefits of electronic money, customers refuse to use electronic money (Xuan et al., 2020). The 2022 Digital Payments Insights Study also emphasises the continuous dominance of cash, with 78% of Malaysians saying that they prefer cash to other payment methods and 48% saying that they use cash daily. Lack of user acceptance is the biggest obstacle, because some people still don't want to turn to electronic money because of payment habits or perceived security considerations (Qu et al., 2022). As a result, e-money providers have an incentive to avoid risks that may deliver their products uncomfortable to users or harm their brand and profitability (Dehghan & Haghighi, 2015).

Many studies also showed that lacking internet knowledge will lead to less confidence in e-money. Customers' knowledge and skills may affect the acceptance of cashless transactions related to their technical capability. The shortage of Internet connection in rural locations is a significant barrier to developing digital payment systems (Wong, 2022). In addition, customers are often reluctant to share personal information with others (Wulandari et al., 2016). As an outcome, risk may be a key problem when clients accept or use any new digital payment method, such as the anxiety of losing money through electronic money transfers or the possibility of losing smartphone passwords, anxiety of payment failures, and so on (Susanto et al., 2020).

Customers may face the risk of not being able to pay due to insufficient infrastructure. As a result, customers have frequently applied e-money in

transactions (Widayat et al., 2020). This will be inconvenient for those who already employ e-money daily for transactions (Alam et al., 2021). Carrying cash can avoid the possibility that credit and debit card payments may not be available (Santander, 2023). Cash is accepted almost everywhere and provides anonymity (Chakravorti, 2014). Cash is incredibly simple to use and may be paid without any payment infrastructure, as opposed to credit cards and debit cards, which require point-of-sale terminals and payment platforms for handling consumer and merchant payments (Aliyev, 2016).

Moreover, this research evaluates factors influencing e-money usage in university students with spending power. Malaysian marketers would target university students as they have the financial ability to meet their wants and desires. Additionally, this study hopes to find out university students' willingness to utilize e-money as a transaction payment method in purchasing products or services. Furthermore, this study will help the financial and banking sectors or providers understand the demands and concerns of their customers while utilizing e-money.

1.3 Research Questions

According to the provided research background and problem statement, this study seeks to address three (3) questions concerning the relationship between the factors that influence university students' expenditure to use e-money in Malaysia.

Research Question 1: What are the factors that influence university students' expenditure to use e-money in Malaysia?

Research Question 2: Do these identified factors have positive influence of university students' expenditure to use e-money in Malaysia?

Research Question 3: What are the most influencing factor that influence university students' expenditure to use e-money in Malaysia?

1.4 Research Objectives

The following research objectives have been formulated to guide the purpose and direction of this study.

Research Objective 1: To identify the factors that influence university students' expenditure to use e-money in Malaysia.

Research Objective 2: To analyse the relationship between the identified factors and university students' expenditure to use e-money in Malaysia.

Research Objective 3: To determine the most influencing factor that influence university students' expenditure to use e-money in Malaysia.

1.5 Significance of the Study

As mentioned above, because of the utilisation rate of electronic money, the payment method for university students' expenses is significant when assessing the outcome (success or failure) of these projects. In addition, parents think it is safer for university students to use e-money because they can avoid being targeted by robbers. Therefore, this study expects and hopes there is evidence to support how electronic money can help and provide university students with a better quality of life. E-money can also help university students plan their expenses to stay within the budget.

By identifying these factors that significantly influence the expenditure of university students to use e-money in Malaysia, this study will meaningfully enrich the existing theoretical literature. Finally, this study will be helpful as a reference for e-money issuers and play an essential role in explaining the usage of electronic money to university students in daily life.

1.6 Research Scope

This study will examine factors of e-money that may influence expenditure of university students in the Malaysian sector. Thus, this study will target university students as main respondents. This study will be conducted in

key areas of East Malaysia and Peninsular Malaysia (geographical representation for 4 region which are Northern Region, East Coast Region, Central Region and Southern Region). The reason researcher select Malaysia state as research location because its population is roughly 33.2 million in first quarter 2023. Malaysia has more than 590 higher education institutes. As of September 30, 2019, there were 1 325 699 students enrolled in higher education. This is made up 574 202 students from public universities, including 49.7%, and 666 617 students from private higher education institutions, making up 50.3%.

Research tools include a set of questionnaires. Unit of analysis have age, gender, race, and so on. These groups are critical to this research as they give more input to the study and make the study work well. As a result, the findings of this study will focus on the factors that influence university students' expenditure using e-money in Malaysia.

1.7 Conceptual and operational definition

i. University students

Conceptual definition: University students are a social class between the ages of 17 and 25 who receive higher education and are regarded as future decision makers (Tetik & Albulut, 2022).

Operational definition: In this research, university students is referring to students who are studying degrees, diplomas or certificates provided by universities. University students refer to individuals who are officially registered as students in universities or higher education institutions. In addition, they also issue official student ID cards or can use special resources, facilities or services provided by universities for students, such as libraries and laboratories.

ii. Expenditure

Conceptual definition: An expenditure refers to the payment for purchasing goods or services with cash or credit (CFI Team, 2019). Expenditure means that the total amount of money spent by someone (Cambridge Dictionary, 2023). Everyone will involvements expenditures in their daily activities, such as buying groceries (Girardin, 2023).

Operational definition: In this research, expenditure is referring to it can be measured in a specific time period, such as daily, monthly, quarterly or yearly. Tracking expenditure over time can analysis, budgeting, and compare spending patterns. Expenditure involves monetary transactions where money or financial resources are transferred or used to purchase goods and services.

iii. Use

Conceptual definition: Use usually refers to "the act of utilizing something (Gina, 2022). It also means using machine, tool, skill and methods to complete work or achieve results (Macmillan Dictionary, 2023).

Operational definition: In this research, use is referring to it can be observed or measured through visible actions or behaviors that include physically manipulating an object, employing a tool or technology, applying knowledge or skills, or utilizing a system.

iv. E-money

Conceptual definition:

"E-money," short for electronic money, constitutes a digital usage of cash, with its monetary value stored in electronic form and linked to a national currency (Laney, 2022). Electronic money is an electronic substitute for cash (Moorwand, 2021).

Operational definition: In this research, e-money is referring to it is widely accepted and can be used for transactions with participating merchants. It can be used to buy goods and services online or at physical point of sale, transfer funds between individuals or enterprises, and conduct other financial transactions electronically. Electronic money system adopts security measures

such as identity authentication to protect digital value and ensure transaction integrity.

1.8 Structure of the Thesis

The research structure includes a total of five chapters to present the learning conception.

Chapter 1 (Introduction) will provide a brief overview of the research topic, emphasising background on e-money and the expenditure of university students in Malaysia. This chapter included the problem statement, research questions, research objectives, and significance of the study. Additionally, it outlined the study's purpose.

Chapter 2 (Literature Review) begins to review the latest literature and articles to confirm the purpose of the study and to look for other possibilities within the suggested conceptual framework. In addition, this chapter will include an examination of developed hypotheses and an analysis of all research variables.

Chapter 3 (Research Methodology) includes a methodology that emphasises the data collection technique, research design, sample size, measurement scales, and approaches to data analysis.

Chapter 4 (Data Analysis and Discussion) consists of the questionnaire collected and the results obtained. The Statistical Package for the Social Sciences (SPSS) software will be used to analyse the valuable data collected to determine research questions and achieve research objectives.

Lastly, Chapter 5 (Conclusion and Recommendation) includes this research's overall conclusion. This chapter will mention and conclude the main findings and suggestions for future reference and research. Additionally, this chapter will cover and discuss inherent limitations.

1.9 Chapter summary

This chapter provides a brief introduction on the background on e-money and the expenditure of university students in Malaysia, problem statement, research questions, research objectives, significance of the study, research scope, conceptual and operational definition, as well as structure of the thesis. Chapter 2 will focus on the literature review on specific research objectives in the scope of this study.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The previous chapter outlines background research on the factors that influence university students' expenditure to use e-money in Malaysia. In this chapter, a literacy-based analysis will be conducted to understand the concepts of determining the research questions described earlier. In this research, the first is to evaluate the content of each specific research goal and discuss the selected independent and dependent variables. The final component of this chapter focuses on the research framework and hypotheses.

2.2 Definition of money

Money is any commodity or medium of exchange recognized as payment for goods and the repayment of loans. The economy relies on money to stimulate transactions and promote financial growth (The Investopedia Team, 2022). If someone has something to sell and wants something else in return, money will avoid finding someone who is able and willing to exchange what they need (Friedman & Meltzer, 2023). The influential theory of money demand emphasizes the trading role played by money (Karpetis et al., 2019).

Money is very crucial in our lives. This emphasis that individuals place on money influences their investing decisions and risk tolerance, altering their financial condition (Sahi, 2023). Many desires and services may be satisfied with money. Numerous individuals trust that besides meeting the physiological needs of life, money is only the medium of comfort and security and happiness of life (Daud et al., 2018). Money can be traded without dual will. When an agent (buyer) wants goods or services produced by another person (seller), the buyer can transfer money to the seller in exchange for the goods (Brunnermeier

et al., 2019). Money distributes wealth between class and wealth percentile (Koddenbrock, 2019).

2.3 E-Money issuers in Malaysia

Given the increasingly prominent importance of electronic money in the financial field, it is necessary to revise the regulatory framework of electronic money to boost the security and trustworthiness of electronic money issued by electronic money issuers (EMI) and maintain public confidence when using or receiving electronic money (Leng et al., 2023). In exchange for electronic money, an EMI is required to deposit all money received in a separate trust account, such as a licenced custodian. Furthermore, EMI is recommended to deposit a large amount of money in several bank accounts to limit downside threat exposure from a single bank organisation. An EMI that wants to outsource to a service provider must ensure that it can monitor the performance of a third party and retrieve data in the case of a breakdown (caused by the third party). An EMI must also ensure that the regulator has access to the EMI system outside of Malaysia (Zakaria, 2021). According to the Financial Services Act 2013, electronic money refers to any tangible or intangible transaction tool that electronically stores funds, serving as a substitute for payments made to the e-money issuer (EMI). It used for making payments to individuals other than the EMI recipients. Examples of EMI vendors include ShopeePay Malaysia Sdn Bhd, TNG Digital Sdn Bhd, and Alipay Malaysia Sdn Bhd (Ping & Ong, 2021).

2.3.1 GPay Network (M) Sdn Bhd

Gpay Network (M) Sdn Bhd was incorporated in Malaysia on February 27th, 2017, and its business includes undertaking e-payment business. Customers use GrabPay Wallet, which is a licensed electronic money wallet that contains a stored value with the function of a top-up balance feature. Grab's payment network is constructed on a unique risk and fraud detection technology that is strengthened by powerful AI machine learning that relies on previous information (Alviere, 2023). GrabPay is a popular e-wallet in

Malaysia and Southeast Asia. A huge number of online retailers accept it as a payment option, with over 700 merchants listed in the GrabPay directory (Ausmees, 2022).

Malaysians Anthony Tan and Tan Hooi Ling founded Grab. As a part of the Grab ecosystem, it can be used for ordering food, shopping, paying bus fares and transferring GrabPay credits (CompareHero.my Team, 2022). In addition, GrabPay can be used to pay for transportation services, mobile payments, and physical store purchases. In recent years, the development of GrabPay application has brought positive changes to Malaysia (Awang et al., 2021). At the 2019 Malaysian e-Payment Excellence Awards, Payments Network Malaysia named GrabPay the best e-wallet application (Gupta, 2022).

Additionally, GrabPay Malaysia stated that usage of the GrabPay e-wallet has risen by 1.7 times since the Malaysia movement control order (MCO) in 2020 (Bee & Ying, 2021). In this epidemic, the rapid popularisation of contactless payment has become a significant lifestyle adjustment. The COVID-19 pandemic may spread among people with close contact within one meter (Edeh et al., 2021).

2.3.2 Alipay Malaysia Sdn Bhd (formerly known as helloPay Malaysia Sdn Bhd)

HelloPay is now known as Alipay Singapore, Alipay Malaysia, Alipay Indonesia, and Alipay Philippines, and the company intends to continue marketing payment services in Lazada's four nations (Yu, 2017). Alipay Malaysia Sdn. Bhd. operates Lazada Wallet, which is available on Lazada Malaysia's websites or mobile applications (Lazada, 2018). The Lazada Wallet is an e-money tool based on a network, designed for making payments when engaging in transactions through either the Lazada Malaysia e-commerce platform or the Lazada mobile app (BNM, 2021).

When using Lazada Wallet, customers can get many promotions and rebates. For example, some special events offer a lot of cashback and

promotions. However, some are only available when customers use Lazada Wallet as the payment method (Ginee, 2022). The upgraded Lazada wallet was launched to integrate the wallet into the Tmall app (also known as Taobao application). Once linked, customers can use Lazada wallet as a payment option for Lazada and Tmall shopping, thus increasing the balance and expenditure limit. In addition to increasing the transaction limit, the upgraded Lazada wallet also provides a withdrawal function, allowing customers to transfer the available balance in the wallet to a bank account (Yin, 2021).

2.3.3 TNG Digital Sdn Bhd

The Touch 'n Go eWallet functions as an electronic wallet, storing electronic money (e-money), with TNG Digital Sdn. Bhd. serving as the service provider. (TNGD) using a mobile application to allow users to top up, pay, and transfer money through their mobile devices from anywhere in Malaysia (TNG, 2021). It cleared the way for customers to perform rapid and smooth transactions using QR codes at over 280,000 contact points, such as toll payment, street parking, e-hailing, car-sharing, or taxi services by RFID or PayDirect. This demonstrates that the TnG e-wallet may be used when making payments at over 280,000 merchant locations. It is useful for a wide range of enterprises. TnG e-wallet is recognised for the following types of businesses: F&B outlets, supermarkets, grocery stores, convenience stores, professional services and beauty businesses (eWhallet Team, 2023).

TNG Digital Sdn. Bhd. provides financial services. The Company provides a secure, fast and convenient digital platform for cashless payment in Malaysia. Touch'n Go e-wallet is mainly issued to facilitate payment. This is one of the easiest ways to pay tolls in Malaysia. TNG has announced that it has one million users and has a competitive advantage in advertising and availability in public transportation scenarios, including aspects like pricing, parking, and bus transactions, and so on (Hassan et al., 2021). In addition to the Chinese mainland, Because Alipay+QR code is supplied, Touch 'n Go e-wallet customers may pay everywhere, including Japan, South Korea,

Singapore, the United Kingdom, Italy, France, and Germany (Fintech News Malaysia, 2022).

2.3.4 ShopeePay Malaysia Sdn Bhd

ShopeePay is licensed by Bank Negara Malaysia as an e-money issuer, meaning it must follow the same security measures and regulations as other registered digital wallets (Ausmees, 2023). ShopeePay was initially introduced to users to give them a simpler payment method when shopping on the platform. It was also listed as an official e-wallet participant in this year's ePemula programme (Kamelia, 2022). ShopeePay works to assisting small and medium-sized companies in turning digital by enrolling micro merchants who are used to conducting their businesses in conventional or offline ways. Besides helping SMEs to go online, ShopeePay additionally promotes e-wallet acceptance offline through its partnership with DuitNow QR. ShopeePay Near Me is a web-to-offline feature that takes advantage of GPS technology to help customers discover ShopeePay vouchers at nearby businesses such as bazaar stalls, coffee shops, restaurants, and services (Amirul, 2022).

The main reason people want to use ShopeePay is to use the vouchers of the Shopee platform. This may include offering shoppers discount vouchers or cashback coupons for Shopee Coins. Shopee is famous for its cashback program that rewards shoppers with Shopee Coins, a currency that has monetary value and can be used to offset future purchases (thefrugalstudent, 2022). The introduction of ShopeePay makes sense, especially how e-commerce platforms like as Shopee and Lazada have launched midnight sales campaigns giving additional discounts and coupons from 12 a.m. to 2 a.m. to start a sales event. This is due to the fact that certain banks have maintenance time during this period. Shoppers who pre-load their ShopeePay e-wallets with money may take full benefit without having to worry about bank maintenance hours (Yau, 2019).

2.3.5 Axiata Digital E-code Sdn Bhd

Axiata Digital E-code, a subsidiary of Axiata Digital Services (ADS), established the cashless payment platform brand name Boost e-wallet. Boost e-wallet reportedly has over 7.5 million users as of 2020, reflecting rising e-wallet usage among Malaysians with more than 170,000 contact points including both online and offline, such as food courts, online shopping, night markets, and branded merchants (JEBLIN et al., 2021). With the Axiata group's worldwide businesses as shareholders, primarily Khazanah Nasional, Boost is able to include 48 non-bank e-money issuers licenced by Bank Negara Malaysia (Md Noor & Jusoh Yusoff, 2022). Boost e-wallet is an electronic money software that allows users to make purchases and transfer money (Ausmees, 2022).

By understanding consumer needs and using advanced technology, Boost makes transactions more accessible, faster, safer, and valuable (Pillai, 2020). According to Boost, BoostUP will improve on the e-wallet's the beginning Shake Rewards programme. Users may now earn more money, smartphones, household items, or a coveted Golden ticket with the new Shake incentives. Coins may also be utilised for exchanging prizes from the Boost rewards catalogue, such as luxury electronics, entertainment, gaming content, and vouchers (Tan, 2019). Boost is an innovative application-based wallet which provides a simple and convenient way for Malaysians to pay, send, request, and keep money on their mobile devices in a simple and easy manner. Boost can also be used at certain night markets, food stalls, and restaurants, as well as in industries such as food and drinks, recreation, and travel (Lokman, 2018).

2.4 Aspects of university students' expenditure

Students at universities spend money on needs like food, books, and other personal costs. The rising cost of living and book prices, as well as the need to buy laptops, will affect their ability to maintain cash flow (Sani, 2019). Nowadays, students' spending habits are becoming more common for

purchasing design brands in clothing, accessories and entertainment (D'Silva, 2012).

2.4.1 Food and beverage

Malaysia's population is classified into three major ethnic groups: Malay, Chinese, and Indians. Because of its cultural variety and historical mobility, Malaysian food has blended several different cooking styles (Renée, 2023). Following the expected growth of 22% to RM 35.2 billion in 2022, the income of food and beverage (F&B) industry is expected to increase by 8% in 2023 (Moh, 2023). Malaysian food and beverage trends are evolving at a rapid rate, related to the country's strong catering culture. Wholesalers and retailers must adjust swiftly or possibility of missing out on opportunities to fulfil demand through supply (Zailan, 2022).

Local consumers both pursue value for money and pay attention to quality. Increased varieties, more organic and healthier choices will contribute to the maximum growth of these sectors (Mersol, 2021). Malaysia's F&B industry is diversified, with a variety of foods suitable for Asian tastes, dietary preferences and many western recipes. Small and medium-sized enterprises dominate this industry (Husin et al., 2021). One of the most critical variables in the development of the F&B industry is to maintain high standards of food preparation and customer service (Lye, 2020). Customer satisfaction is the food and beverage industry's primary aim since it guarantees that satisfied consumers remain loyal and lowers the amount of complaints about their brand of choice (Demong et al., 2016).

Many university students are staying away from home for the first time, thus monitoring their food requirements has become a new and difficult task. Taste, value, convenience, and cost stand as the primary factors influencing decisions when purchasing food (Tam et al., 2017). For the food purchased in the university cafeteria, students need to choose from the cafeteria-style food queue (Racine et al., 2022). Colleges and universities have unique advantages, which can have a positive impact on students' diet through environmental

changes, thus making healthy food and drinks available, affordable and appetizing (Pelletier & Laska, 2013). Studying the eating habits of university students is helpful to design and implement specific measures to minimize the negative impact of unhealthy diet on health (Martínez Álvarez et al., 2015). The transition to university life is significant because it represents a shift in lifestyle, which typically implies the appearance of an imbalanced diet or insufficient physical activity (Romero-Blanco et al., 2022).

2.4.2 Entertainment

Entertainment can be defined as the time or form of entertainment, or making someone feel happy through some pleasant activities. Entertainment is usually something joyful or interesting provided to someone by a third party or sometimes by the same person. It helps to relieve the pressure of the entertained or distract them from the stressful things in life (Upendra, 2017). Entertaining activities can help students refresh themselves and keep mental health. Entertainment is always very important in students' lives, and it will bring happiness to their lives. Some of these activities may bring them closer to friends and family (Divineyouwellness, 2023). Compared with previous generations, the younger generation now spends more on online purchasing, travel, socialising, and online games than on housing and vehicles (Kumar et al., 2022).

When shopping online, entertainment is a related hedonic benefit. The entertainment experience of online shopping is relaxed, interesting, exciting and imaginative. Entertainment has a significant relationship with the attitude and willingness to buy and use (Wu et al., 2019). Entertainment is the main factor affecting customer satisfaction and loyalty in shopping malls (Elmashhara & Soares, 2019). Entertainment forms such as online video games and sports events can promote social interaction and encourage teamwork. Entertainment can help individuals relax and concentrate on their studies better (Thompson, 2021). Social media provides excellent entertainment opportunities for university students (Ahmed et al., 2020). Entertainment is

very important for relaxing and maintaining people's physical and mental health, and university undergraduates are no exception. Therefore, the place where students have the opportunity to rest in complex learning will have a great impact on students' satisfaction (Weerasinghe & Fernando, 2018).

2.4.3 Transportation

Transportation is convenient for daily activities, such as going to work, school and health care facilities (LOH & SIMLER, 2018). Millions of people use public transportation (buses, trams, railways and subways) every day. They often carry passengers beyond their capacity, especially during the morning and evening rush hours (Musselwhite et al., 2020). The transport authorities assigned buses to different routes. In addition, the bus have stoppages for students to take. This means that they don't have to arrive in advance and spend time waiting for the bus (M, 2019). Considering university students are known for their high level of mobility, paying attention to the method of transportation that they choose is crucial. Students at universities are adaptable and utilise a variety of modes of transportation (Bagdatli & Ipek, 2022). Students in rural areas face different transportation obstacles (West, 2021). Inconvenient transportation will cause students to be late or absent for many times. This will lead to a decline in their grades (tenner, 2016). Considering the transportation needs of students, university can cooperate with local officials to provide students with free or special transportation services (Bray, 2017). Aside from affecting students' academic performance, high transportation costs will force them to convert from full-time study to part-time study so they can work (Craig, 2019).

2.4.4 Accommodation

With the increased number of students, the demand for accommodation for students has greatly outstripped the availability. Collaboration with private sector developers and commercial suppliers is required to guarantee adequate housing for the expanding student population (Reynolds, 2020). Besides, accommodation for students in off-campus higher education has become a

common way for students to stay in cities around the world during their studies (Źróbek-Różańska, 2022). No matter from the perspective of university infrastructure or social/student facilities, student accommodation is an important part of universities. Traditionally, universities provide student accommodation on or near campus, and usually use professional student accommodation providers (Newell & Marzuki, 2018). The student accommodation is a purpose-built place, which aims to create an environment that supports students to gain life and study experience while further studying (Simpeh & Shakantu, 2020). The major benefit of student accommodation is that students who live there do better academically and have higher GPAs on average. Student accommodation is particularly appealing to students since it allows them to live independently in terms of location and cost, because housing generally covers all costs, such as gas, electricity and Internet (McCann et al., 2020). The satisfaction of students with their accommodation is derived from high-quality facilities, positive relationships with roommates, durable floor community and noiseless learning atmosphere (Babatunde & Perera, 2017).

2.5 Features of e-money

2.5.1 Convenience

Convenience is a situation in which individuals feel comfortable when using technology. If the person who uses the new technology is happy, he and she will feel satisfied and create a sense of comfort for this technology. If the user's comfort is improved, their behavior of using it will improves (Wardana et al., 2022). Convenience is described as the ability to save time and energy when using products or services. Furthermore, it reflects the availability of time, place, acquisition, and implementation. Convenience may have a substantial influence on customer buying intent and decision-making (Do et al., 2020).

Customers are able to utilise digital payments through their mobile devices anywhere and access the transaction record at any moment to monitor and control their expenses (Susanto et al., 2020). Most customers choose credit

cards and debit cards because they only carry a small amount of cash in their wallets (Myers, 2021). The media described various advantages and facilities to encourage customers to use electronic money platforms (Widayat et al., 2020). Compared with traditional cash, consumers prefer digital currency or electronic money, which is really driven by the convenience of e-money (Conventus Law, 2022).

Introduce electronic money as cost-effective alternative for small transaction cash and as a convenient medium to pay over the internet. In the early stage of its development, electronic money is not only a simpler payment medium, but will eventually replace cash (Papadopoulos, 2007). Users who believe the technology is simple to use and functionality are going to accept and use the system because they have experienced the technology's convenience (Kiew et al., 2022).

2.5.2 Data security

Data security involves ensure the security of digital information involves implementing measures to protect it from unauthorized access, careless loss, disclosure, alteration, manipulation, or corruption across its entire lifecycle, from the initial creation phase to its eventual destruction (Shea, 2022). The core elements of data security include availability, confidentiality, and integrity (Taylor, 2023). Effective data security applies a set of controls, applications, and techniques that identify the significance of different datasets and implement the most appropriate security controls. Multiple factors make data security essential to public and private sector organisations (Harrington, 2022). Safeguarding your organisation's data from corruption and unauthorised access can help you avoid potential financial repercussions from decreased consumer confidence (The Upwork Team, 2021).

With the increasing significance of e-money issuers, it is essential to have a comprehensive, robust framework for regulating and protecting consumer money (Garrido & Nolte, 2021). A robust and comprehensive framework having restrictive rules is the best possible remedy. Establishing

operational systems for risk management and governance on the framework would protect consumer data, handle disclosure fees, and deal with customer complaints (Chatterjee, 2022).

Despite the increased usage of electronic transactions and E-money transaction systems, the majority of consumers are concerned about their security. The expansion of online commerce has increased the requirement for rapid and precise user identification and authentication (Islam, 2015). The central axis of electronic money transactions is technology, which includes all aspects of electronic money, including information security and privacy (Pradigdya & Ginardi, 2019). Providers of e-money services need to strategize measures to reduce the perceived risk associated with e-money and educate clients about security and policies (Susanto et al., 2020).

2.5.3 Transaction speed

Transaction speed refers to the rate at which data is moved from one account to another (Strelenko, 2018). Transaction speed refers to the time it takes for a transaction to be processed and recorded on the blockchain network. It measures the speed of transaction completion, from the sender initiating the transaction to the network verifying the transaction (lalav, 2023). Electronic money transactions are quite fast (Widiyati & Hasanah, 2020). Compared with the traditional cash system, electronic money has many advantages, which makes it as popular as fast transactions. Obviously, today's consumers can choose to use different payment mechanisms to pay transactions (Mensah & Jumah, 2021). Electronic money transactions at the point of sale or online store are instantaneous. Online transfer between payer and payee accounts is much faster than wire transfer (Laurer, 2020). Electronic money will only speed up the transaction, and will not increase the price (Payset.io, 2022). Electronic money transactions do not need intermediaries, because the money expressed in units (called bits) is transferred from the buyer to the seller electronically. Compared with other payment methods, using electronic money to pay can reduce transaction costs and shorten the time (Boshkov, 2019).

2.5.4 Contactless payment

Contactless payment is securely making payments using a debit or credit card, smart card, or another payment device equipped with RFID. and near-field communication (Kagan, 2020). Because contactless payment is made through mobile devices, this technology can make transactions faster and easier (SQUARE, 2023). It is a simple process for ordinary users to make use of payment methods that are contactless (Crail, 2023). The COVID-19 pandemic and consumers' desire to avoid people-to-people contact when shopping in stores have accelerated the adoption of contactless payment (Tech Target Contributor, 2021). Customers can use contactless payment at participating retailers. Enterprises that use contactless payment can enhance customer loyalty and increase their competitive advantage (Beaver, 2021). The use of contactless systems can speed up the transaction between buyers and sellers (Karjaluoto et al., 2019).

RFID is a fast and convenient payment solution, which uses contactless smart cards as the medium of electronic money (Dewanto et al., 2021). Electronic money and other digital payment methods contribute in preventing the spread of the Covid-19 virus because they minimise physical contact (Putri Pertiwi et al., 2021). E-money's success in the Japanese market can be attributed in large part to the technology platform on which it is issued and accessed: a contactless radio-frequency identification (RFID) card (Halpin & Moore, 2009). In addition, the increasing demand for convenience and speed has led to the increasing use of contactless and fast payment (Glowka et al., 2023).

2.6 Challenges facing e-money

2.6.1 Technological dependency

E-money relies on electricity and the Internet access to use. To use electronic money, user need the availability of some infrastructure. It includes a computer, a notebook computer, a smart phone and a stable Internet

connection (CFI Team, 2022). Network money, another variant of electronic money, relates to software that facilitates the transfer of value within computer networks, specifically on the Internet. E-money products employ cryptography to authenticate transactions and safeguard confidentiality as well as data integrity (Mohammadi, 2022). E-money is one of the most significant technological advancements, as well as the first electronic payment mechanism to be developedE-money is made up of a plastic card that is fitted behind a tiny computer with an electronic memory, allowing information and purchasing power to be stored in an electronic unit appropriate for repaying low-value loans (Khalaf, 2018).

2.6.2 Limited acceptance

Electronic money may not be accepted everywhere, especially in rural areas or underdeveloped areas (Specialist, 2023). Cash is accepted everywhere. Despite recent developments, digital payment still involves more steps than cash exchange (Kothari, 2018). In addition, e-money operators need to expand the coverage of e-wallet users through compatibility with different devices to provide better security and greater merchant penetration, thus attracting e-wallet users. With various choices, many electronic money operators offer incentives such as cashback and rebate to attract users to use the platform (Han, 2019).

2.7 Theory utilized

Venkatesh and his research team examined eight technology acceptance theories in 2003: Theory of Reasoned Action (TRA), Theory of Planned Behavior (TPB), Technology Acceptance Model (TAM), the combination form of TAM and TPB (C-TAM-TPB), Model of PC Utilization (MPCU), Innovation Diffusion Theory (IDT), Motivational Model (MM), and the Social Cognitive Theory (SCT). Consequently, they recommended a new theory called the unified theory of acceptance and use of technology (UTAUT), which is a combined form that benefits from all of the old theories and models discussed (Momani, 2020).

The Unified Theory of acceptability and Use of technological (UTAUT) evaluates technological acceptability as a function of performance expectancy, effort expectancy, social influence, and facilitating conditions (Marikyan & Papagiannidis, 2023). The application of UTAUT as a way for researchers to accept and apply technology has been extended to integrate for various settings such as include user differences, organisations, technology kinds, tasks, time and geographical differences (Siswanto et al., 2018).

2.8 UTAUT constructs

2.8.1 Performance expectancy

Performance expectancy is defined as the extent to which an individual perceives that utilizing the system will assist them in achieving the benefits associated with work performance (Venkatesh et al., 2003). Performance expectancy is based on the constructs from TAM, TAM2, Combined TAM and CTAMTPB, MM, MPCU, IDT and SCT such as perceived usefulness, extrinsic motivation, job-fit, relative advantage and outcome expectations. It is a strong predictor of use intention, and it is important in both voluntary and mandatory settings (Zhou et al., 2010). According to previous research, performance expectation and related structure are regarded as the most potent predictors of behaviour intention (Duyck et al., 2008).

2.8.2 Effort expectancy

Effort expectancy is defined as "the degree of ease associated with the use of the system" (Venkatesh et al., 2003). The perceived ease of use and complexity of TAM, MPCU, and IDT are used to generate effort expectancy, which are identical in concept and scale. With the widespread adoption of technology, the influence of this structure becomes insignificant (Chauhan & Jaiswal, 2016).

2.8.3 Social influence

"Social influence" is the concept that pertains to the extent to which an individual believes that significant others consider it important for them to adopt the new system. Social influence is linked to subjective norms, social factors, and image constructs found in TRA, TAM2, TPB, CTAMTPB, MPCU, and IDT, suggesting that individual behavior aligns with others' perceptions of them. When the use of technology is forced, the effect of social influence is strong (Venkatesh et al., 2003). Individuals may use technology for compliance rather than personal preference in an essential job (Venkatesh & Davis, 2000). This might explain the construction's incompatible effect in later verification model experiments (Zhou et al., 2010; Chauhan & Jaiswal, 2016)

2.8.4 Facilitating conditions

Facilitating conditions are described as the extent to which an individual perceives that both the organization's and technical infrastructure are in place to support the utilization of the system (Venkatesh et al., 2003). Compatibility, perceived behavioural control, and constructs related to facilitating conditions in TPB, CTAMTPB, MPCU, and IDT together form the facilitating conditions concept. Initially, facilitating conditions positively impact usage intention, but this effect diminishes after the initial use. Consequently, the model indicates that facilitating conditions directly and significantly influence usage behaviour (Venkatesh et al., 2003).

2.8.5 Trustworthiness

In this study, trustworthiness is introduced as the fifth construct to be measured. This is because the government manages electronic money issuers (EMI) through BNM, trust is said to be a major driving element in determining college students' electronic money expenditure. Belanger et al. (2002) define trustworthiness as "confidence in the credibility and integrity of electronic marketers."

2.9 Research framework

As demonstrated in Figure 2.1, a research framework is established by incorporating elements from the UTAUT model, including Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), and Facilitating Conditions (FC). Additionally, trustworthiness is introduced as an additional construct in this study.

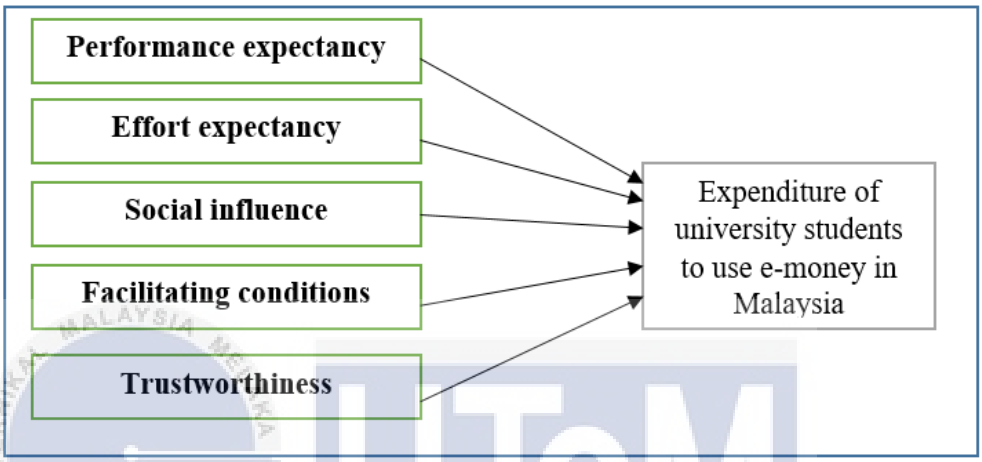


Figure 2.1: Research framework

2.10 Summary

This chapter discussed the literature review on specific research objectives in the scope of this study. From the literature, there are four constructs of UTAUT in addition to the trustworthiness construct used as the independent variables, while the expenditure of university students to use e-money in Malaysia is the dependent variable. This chapter puts five hypotheses to accomplish the research objectives. Chapter 3 will focus on the research methodology.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

The research methodology is a systematic method for data collecting and analysis. This chapter is intended to guarantee that proper research processes are followed. Methods used to conduct the study include research design, research hypotheses, operationalisation of constructs, population and sampling, and data analysis technique. With the purpose of meet the study's objectives, the information and data gathered will be examined and interpreted.

3.2 Research design

The research design of the methodology is an important guideline for planning research objectives, which considers the influence of quantitative and qualitative data (Silva, 2017). A research design is a collection of techniques and processes for collecting and explaining the change indicators represented in the research problems. This study employs a research design to understand the factors influencing university students' expenditure to use e-money in Malaysia. In addition, research design can serve as a bridge between the actual implementation of the research objective set, the implementation of research, and the achievement of this objective.

This study utilized descriptive research methodology to acquire relevant details about the current state of phenomena related to situational variables or conditions. Descriptive research is a kind of conclusive research, whose main goal is to describe something-usually the characteristics of functional market (Malhotra & Peterson, 2006). Descriptive research focuses on the elements of the target population, such as who, what, where, when, and how. To meet the study's research aims, quantitative research was conducted

in order to extend the results of a large number of samples to relevant individuals. Quantitative research is utilized because of the survey conducted based on the respondents' characteristics. Data will be collected in a structured form and analysed statistically. Furthermore, causal research, called explanatory research, is used to understand the cause and effect of a phenomenon. There is no doubt about the importance of causal research in determining the cause and effect of variables cannot be overstated. Causal research is also utilised to determine the link between cause and effect factors (SurveyMonkey, 2023). Consequently, the objective of this study is to investigate how independent factors impact dependent variables. The descriptive, causal, and quantitative research designs chosen for this study have been approved as acceptable for achieving the study's goals and objectives.

3.3 Research hypotheses

In alignment with research design, hypotheses was undertaken to investigate and analyze the potential relationships between the independent variables and the dependent variable in the study. As shown in Figure 3.1, PE, EE, SI, FC, and trustworthiness are the independent variables in this study.

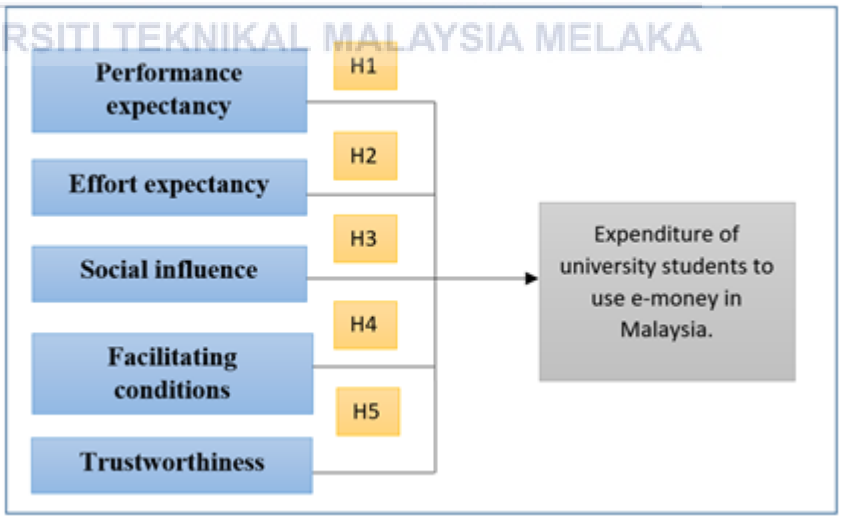


Figure 3.1: Research hypotheses

3.3.1 Performance expectancy and expenditure of university students to use e-money in Malaysia.

The PE construct demonstrates a positive correlation with behavioral intention (Venkatesh et al., 2003). Researchers claim that if a person uses technology, it will help them perform better, which is called performance expectation. According to the findings of Dzulhaida and Giri (2017), consumer intensity will be driven by performance expectations when consumers believe that electronic money performance expectations can boost productivity, ease, and comfort. Compared with traditional payment methods, customers who believe that electronic money is helpful to complete the payment process may strongly want to use this technology (Meuthia et al., 2020).

H1: Performance expectancy has a positive effect on expenditure of university students to use e-money in Malaysia.

3.3.2 Effort expectancy and expenditure of university students to use e-money in Malaysia.

Effort expectancy (EE) positively affects behavioural intention (Venkatesh et al., 2003). The perceived ease of utilising electronic money services and the simplicity of learning how to utilise these services are used to measure the convenience associated with the usage of electronic money payment systems. Expectancy is the ease level of the system use, which will reduce the personal effort (effort and time) in the work. With regards to e-money, it describes the efforts that must be made to easily interact and use electronic payment systems. Consumers who think that electronic money is easy to use will have a strong desire to use electronic money in their daily lives (Meuthia et al., 2020).

H2: Effort expectancy has a positive effect on expenditure of university students to use e-money in Malaysia.

3.3.3 Social influence and expenditure of university students to use e-money in Malaysia.

Peers' attitudes towards the system, whether favourable or negative, are assessed by their perspectives on how peers influence consumers' adoption of electronic money (Widayat et al., 2020). Social impact, in the context of young consumers, mostly refers to the influence and inspiration provided by peer opinions. As a result, social influence is critical for young customers to adopt new technology such as electronic money. A social construct is made up of two essential components. The first is users' beliefs in peers that they perceive as references, and the second is users' motivate to act in accordance with the reference's desires (Salmones et al., 2005).

H3: Social influence has a positive effect on expenditure of university students to use e-money in Malaysia.

3.3.4 Facilitating conditions and expenditure of university students to use e-money in Malaysia.

The perception of having the capability to access necessary resources and obtain the required information and support to utilise electronic money is used to measure the degree to which consumers perceive there is a technological infrastructure to enable the usage of electronic money payment (Widayat et al., 2020). The impact of facilitating conditions on the usage of information technology is satisfactory. When there are adequate facilitating conditions, customers are more likely to accept new technology or services.

H4: Facilitating conditions has a positive effect on expenditure of university students to use e-money in Malaysia.

3.3.5 Trustworthiness and expenditure of university students to use e-money in Malaysia.

Trust is an essential element for both online and offline environments that needs to be considered when making a transaction. Technology requirements that fulfil the commitment and are reliable and stable would

benefit the acceptance of e-money (Kalinic et al., 2019). Trust is considered to be one of the main factors to be studied, because a high level of trust helps to improve customers' acceptance of this new payment technology.

H5: Trustworthiness has a positive effect on expenditure of university students to use e-money in Malaysia.

3.4 Operationalisation of constructs

This study uses quantitative method to obtain the information of respondents through a survey. For testing the structural research, the questionnaire is an appropriate data gathering technique. According to Sekaran and Bougie (2010), questionnaires can be given to respondents in person, emailed to them, or distributed online. Quantitative research is an orderly approach to gathering and analysing data from many sources. John Bacon-Shone (2015) pointed out quantitative data is used to answer questions regarding measuring variables and aims to explain, predict and control phenomena. Besides that, quantitative method is the standard method in the process of data collection.

The benefits of implementing a questionnaire as a survey instrument include raised anonymity, no prejudice in interviews, and the capability to encompass a broader range of areas. This is because responses are collected according to the convenience of the respondents, which allows flexibility in data collection and accepts their schedules and preferences. The respondents will receive the questionnaire for providing their responses related to the topic to determine the research objective. Quantitative research methods will help researchers achieve research goals and solve problems by generating measurable data. Quantitative methods are usually based on data collected from the beginning or assumptions of the theory and descriptive statistics or inference. The goal of quantitative research is to recognize the factors that influence university students' expenditure to use e-money in Malaysia.

In this study, the questionnaire responses for PE, EE, SI, FC, and trustworthiness are analyzed using a five-point Likert scale. The scale ranges

from 1 to 5, where 1 represents "Strongly Disagree" and 5 represents "Strongly Agree." The survey was broken into three components and had 39 questions. Section A included demographic questions designed for gathering background information about the respondents. Section B, on the other hand, featured questions about identifying factors while Section C included questions about university students' expenditure to use e-money.

3.4.1 Section A: Background of the respondents

Table 3.1: Background of the respondents

Demographic profile of respondents

No.	Items	Sources
1	Gender	(Goh, 2017)
2	Age	
3	Race	
4	How much is your monthly allowance?	
5	Which states are you from?	
6	Year of study	
7	E-Money Application Used	(Indrawan et al., 2021)
8	Frequency of E-Money Used per month	
Total		8

3.4.2 Section B: UTAUT Factors

Table 3.2: UTAUT Factors

No.	Items	Sources
Performance Expectancy		
1	I use E-money because it allows me to conveniently access payment services from anywhere.	(HA & NGUYEN, 2022)
2	I use E-money because I can simply and clearly understand the connection of payment services.	
3	I feel that using E-money has an expected effect in payment transactions.	
4	Using E-money will help me finish financial transactions more quickly.	

5	The use of E-money is consistent with all areas of my occupation and life style.	
6	Using E-money will make payment transactions less stressful for me.	
7	It will be faster for me to use E-money since I would be able to access payment transactions 24 hours.	
Effort Expectancy		
1	The use of E-money can help me speed up payment transactions.	(HA & NGUYEN, 2022)
2	The use of E-money can significantly improve the quality of payment transaction results because it does not take much time.	
3	The use of E-money can help me make payment transactions more secure.	
4	The use of E-money makes it easy for me to find out payment information.	
5	The use of E-money helps me always have full payment information.	
6	E-money was practical and it helps me increase efficiency in the payment transactions.	
Social Influence		
1	Many people encouraged me to utilise E-money for payment transactions.	(HA & NGUYEN, 2022)
2	People who influence me think that I should use E-money in the payment transactions.	
3	People who are familiar with me think that I should use E-money in the payment transactions.	
4	Because most of my classmates use it, I utilise E-money while making payments.	
5	My family encourages me to utilise E-money for financial transactions.	
Facilitating Conditions		

1	I have control over the use of E-money in the payment transactions.	(HA & NGUYEN, 2022)
2	The usage of E-money in payment transactions boosts my productivity since it allows me to do numerous payment transactions from any location.	
3	The presence of evidence on each payment transaction that is finished with the payment time is solid evidence of E-money payment.	
4	When I utilise E-money in my payment transactions, I am certain that the transaction conditions are guaranteed.	
5	I am certain that the payment transactions is safe when I use E-money in the payment transactions.	
6	I have a smartphone and have received approval from payment service providers to utilise E-money in payment transactions.	
Trustworthiness		
1	The e-money application can be trusted in protecting my money.	(Indrawan et al., 2021)
2	I believe the e-money application is safe to use.	
3	The e-money application was reliable when I needed it.	
4	I'm sure I can use my money in the e-money app whenever I want.	
Total		28

3.4.3 Section C: Intention of university students' expenditure to use e-money

Table 3.3: Intention of university students' expenditure to use e-money

No.	Items	Sources
1	I intend to continue to use E-money in the payment transactions in the future.	

2	I will use E-money in the payment transactions if I need to do payments.	(HA & NGUYEN, 2022)
3	I will recommend E-money in the payment transactions to other people.	
Total		3

3.5 Population and sampling

A population is characterized as the specific community or group of individuals who participate or are chosen by the researcher for the study. The type of analysis required in this study was the population of Malaysian university students. In 2019, Malaysia has more than 1330000 university students enrolled in Higher Education Institutions (HEIs). The sample size necessary for a population of 1330000 is 384 respondents, along with the table of Krejcie and Morgan (1970).

In this study, the researcher employs a quantitative method for gathering data from respondents and the questionnaire is distributed using Google Forms as the survey instrument. Besides, convenience sampling is utilised to select sampling elements depending on the researcher's convenience. Both public and private university students in Malaysia are suitable to fill the questionnaire. The data collection engaged students from more than 10 universities. Some of the public universities that participated in the research included UTeM, UKM, UPM, UMP, UMS, UNIMAS and so on. Additionally, private universities such as UTAR, SEGi, MMU, Xiamen University Malaysia, and INTI were also involved in the study. The researchers interacted with and selected potential respondents who were in the appropriate location at the suitable moment to participate in the research. This sample approach is used because it is less expensive, takes less time, and is easier to manage. It happens when researchers are unable to contact a larger audience owing to time and financial restrictions. Convenience sampling is also known as Haphazard Sampling or Accidental Sampling (Dornyei, 2007).

Uma Sekaran (2006) emphasised that the need for applying a sample rather than gathering data from the whole population is obvious. It is challenging to collect data, test, or check from each piece in a research survey with hundreds or thousands of objects. Even if it were possible, it would be prohibitively expensive in terms of time, money, and other human resources. In addition, research on samples rather than the entire population could produce more trustworthy results.

3.6 Data analysis procedure

The sample size is determined first in the data analysis process. In the past few decades, Roscoe's (1975) set of criteria for sample size has gained popularity. Roscoe suggests that for most behavioral investigations, a sample size exceeding 30 but less than 500 is recommended. The model's data reliability and validity are next examined. The analysis of data involves computing the correlation between independent and dependent variables. Furthermore, it provides insights into the direction, strength, and significance of all variables within the bivariate relationship examined in this study. The concluding step in data analysis encompasses regression analysis, which assesses the significance of the predicted variables.

3.6.1 Reliability and validity of research instruments

The principles of reliability and validity are used to assess the quality of research. In the development of a research design, arranging techniques and presenting results is critical to consider reliability and validity, particularly within quantitative research (Middleton, 2023). The term "validity" refers to a method for determining the correctness of what is being measured. If a study has high validity, the results will correlate to real qualities, traits, and changes in the physical or social environment. Validation is a procedure that includes gathering and assessing data to determine the correctness of instruments. Evaluate the comprehensive design of the study in terms of internal and

external validity. Internal validity is achieved when the design appropriately examines the hypotheses, whereas external validity pertains to the extent to which the results can be generalized.

Reliability is defined as the degree of agreement between two or more assessments obtained using comparable techniques. It refers to the reliability of an instrument in consistently measuring what it is intended to measure (Heale & Twycross, 2015). The four most often used reliability measurement procedures, according to Sekaran and Bougie (2010), are test-retest, alternative forms, split halves, and Cronbach's Alpha. Cronbach's alpha is the most suitable method and serves as a completely acceptable indicator of internal reliability, with the ideal outcome being greater than 0.70. Cronbach's alpha reliability coefficient reflects the amount of variance in a scale (Cronbach, 1970). The Cronbach's alpha scale ranges from 0 to 1, with higher values signifying increased reliability (Bagozzi, 1994). Data analysis was conducted using the Statistical Package for the Social Sciences (SPSS).

3.6.2 Factor analysis

To assess the pilot test's response, an exploratory factor analysis (EFA) was performed. A pilot study is a research experiment that allows researchers to examine the research technique with a small group of test participants before performing a more comprehensive study. EFA has two goals: to identify and understand basic ideas, and to decrease the amount of variables in the analysis when there are too many, some of which overlap because they have similar meanings and behaviour. During exploratory factor analysis, the researcher does not assume any prior correlations between components. This approach allows any variable to be associated with any factor, facilitating the identification of complicated correlations between variables and their grouping based on common criteria.

In the process of conducting Exploratory Factor Analysis (EFA), two key stages must be undertaken: extraction and rotation. The extraction stage is employed to examine the underlying factors of the variables. Principal

component analysis (PCA) is commonly used by researchers because it provides an accurate assessment of variables with no mistakes (Luck & Rubin, 1987). Researchers then rotate their newly extracted loadings, which allows them to simplify the structure as much as possible by creating the greatest loadings and deleting lower ones. In this study, the researcher employed Principal Component Analysis (PCA) and an orthogonal model with Varimax rotation to conduct Exploratory Factor Analysis (EFA). When compared to oblique rotation, orthogonal rotation produces more generalisation and replication capacity. Furthermore, it is less difficult because these components are unrelated (Tabachnick et al., 2001).

3.6.3 Correlation analysis

In this study, the analysis of the relationship between the dependent variable and the independent variables involved the use of Pearson's Correlation Coefficient to identify significant factors that contribute toward the expenditure of university students to use e-money in Malaysia.

In this study, Pearson's Correlation Analysis will be employed to assess the strength of the linear relationships between the dependent and independent variables. The coefficient findings of this test might have values ranging from -1 to 1. The number represents the strength of the connections, while the symbol (+ or -) represents the orientations. A positive sign shows a positive relationship between the dependent and independent variables. It also gives evaluations of the closeness of a link between two variables. Meanwhile, the value of 0 represents no association correlation (Saunders et al., 2016).

Correlation Coefficient Value (*r*)	Direction and Strength of Correlation
-1	Perfectly negative
-0.8	Strongly negative
-0.5	Moderately negative
-0.2	Weakly negative
0	No association
0.2	Weakly positive
0.5	Moderately positive
0.8	Strongly positive
1	Perfectly positive

Table 3.4: Value of the correlation coefficient

Sources: Saunders et al. (2016)

3.6.4 Multiple regression analysis

Multiple regression analysis (Saunders et al., 2016) is a statistical method that enables researchers to evaluate the strength of the cause-and-effect relationship existing among multiple independent variables and a single dependent variable. The researcher must comprehend the link between the independent factors and the dependent variable in this study.

The utilization of multiple regression analysis assists the researcher in identifying the independent variables that exert the most significant influence on the dependent variables under investigation. The findings were utilised to put to the test the hypothesised causal relationship generated in this study.

3.7 Summary

This chapter described the approach that was used for the current study. The quantitative technique was used in this study to identify the causes and assess the degree of their effects on university students' expenditure on e-money in Malaysia. Each variable used in this study to design the research instruments was also operationalized. Finally, this chapter discussed the present study's analysis, which comprised reliability analysis, multiple regressions, and correlation analysis. The following chapter will look at the survey results to determine the outcome of this research project.

CHAPTER 4

RESULT AND DISCUSSION

4.1 Introduction

This chapter used statistical techniques, specifically the Statistical Package for Social Sciences (SPSS), to examine the data and generate precise calculations. SPSS is a widely used for statistical analysis in the social sciences. The results from the data collection were generated using reliability analysis, descriptive analysis, factor analysis, Pearson correlation, and multiple regression analysis. The survey was distributed to 384 university students that utilize electronic money in Malaysia. The findings of the research were analyzed, presented, and interpreted in this chapter and the following information is the output of SPSS as the results of the analysis.

4.2 Rate of response

The data was collected by conducting a questionnaire among university students in Malaysia, with a total of 384 individuals responding to the survey. Throughout the data collection phase, the questionnaires were distributed via an online platform. This was done to speed up the collection of data in the way that was more straightforward than manual or face-to-face distribution. There were a total of 384 data obtained by the time the process of data collection ended. The researcher was successful in gathering all of the necessary information because according to the sample and population table constructed by Krejcie and Morgan (1970), the sample size required for a population of 1330000 was 384.

4.3 Pilot test and Reliability analysis result

Pilot test

In the pilot test, the researchers selected 70 respondents from university students in Malaysia to give some feedback on the questionnaire. Following the collection of 70 responses during the pilot test, the questionnaires' reliability was assessed using the SPSS software. Table 4.1 and Table 4.2 shows the reliability analysis of the independent variables and dependent variable. The outcomes of the reliability analysis indicate that the Cronbach alpha for independent variables has been shown out as 0.839, indicating it has high reliability. Besides that, the Cronbach alpha for dependent variable has showed that 0.726, also has high reliability. This proved that the questions can be conduct and reliable for this research.

Table 4.1: Reliability statistics for independent variables

Cronbach's Alpha	N of Items
.839	28

Table 4.2: Reliability statistics for dependent variable

Cronbach's Alpha	N of Items
.719	3

Reliability analysis result

The primary goal of evaluating reliability is to assess the internal consistency of the scale, as highlighted by (Pallant, 2011). This refers to the degree to which each component of the construct is interdependent. Cronbach's alpha is the main metric used to assess reliability, and Pallant (2011) suggests that a coefficient higher than 0.7 is required for the scale to be considered acceptable. Consequently, all the reliability

values calculated in this study exceeded 0.7, surpassing the generally accepted standard for reliability. Table 4.3 shows in detail the Cronbach's Alpha for all components.

Table 4.3: Reliability result

Variable	Cronbach's Alpha	Number of Items
Performance expectancy	.928	7
Effort expectancy	.916	6
Social influence	.901	5
Facilitating conditions	.910	6
Trustworthiness	.880	4

4.4 Normality test

After examining all variables in the proposed model, a test for normality was carried out to evaluate whether the data satisfied the assumption of normal distribution. The skewness and kurtosis scores were key indicators for this assessment. Generally, normal data exhibit skewness between -2 and +2, and kurtosis between -7 and +7 (Hair et al., 2010; Kline, 1998). As depicted in Table 4.4, skewness and kurtosis values for all variables (PE, EE, SI, FC, trustworthiness, and intention) are within an acceptable range. Specifically, skewness values range from -1.633 to -1.878, while kurtosis values range from 1.578 to 2.729. These findings indicate that all of the variable items match the study's sample. In conclusion, the findings indicate a normal distribution among the items.

Table 4.4: Normality of data

	N	**Skewness**		**Kurtosis**	
	Statistic	**Statistic**	**Std. Error**	**Statistic**	**Std. Error**
PE	384	-1.741	.125	1.628	.248

EE	384	-1.694	.125	1.578	.248
SI	384	-1.800	.125	2.225	.248
FC	384	-1.708	.125	1.648	.248
TW	384	-1.878	.125	2.729	.248
INTENTION	384	-1.633	.125	1.745	.248

4.5 Frequency analysis

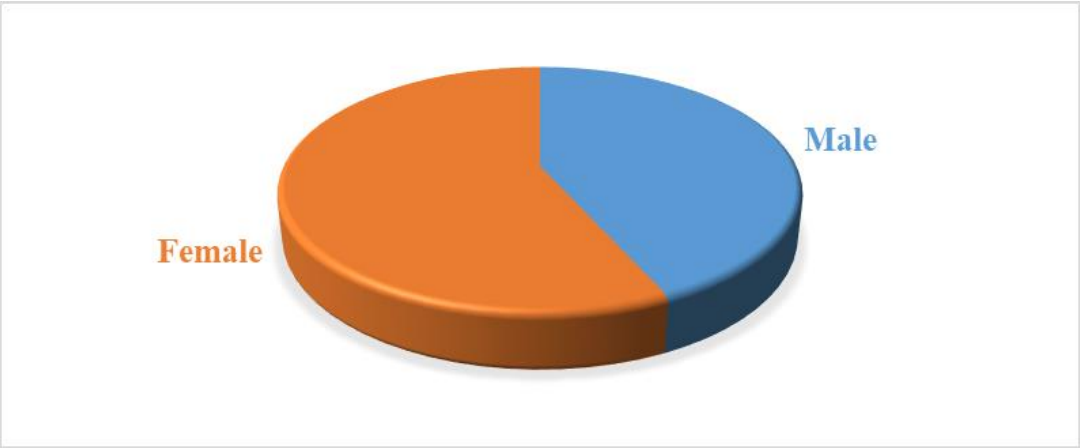
This part will provide the demographic information of the respondents. This will include all respondents' gender, age, race, monthly allowance, states, and year of study. Other details included the e-money application used and frequency of e-money used per month. The number of respondents is 384 (N = 384).

a) Gender

The gender of the respondents is shown in Table 4.5, with more female respondents compared to male respondents. According to the data, 56.8% (or 218) of the respondents were female, while 43.2% (or 166) were male.

Table 4.5: Gender analysis

Gender	Frequency	Percent
Male	166	43.2
Female	218	56.8
Total	**384**	**100.0**

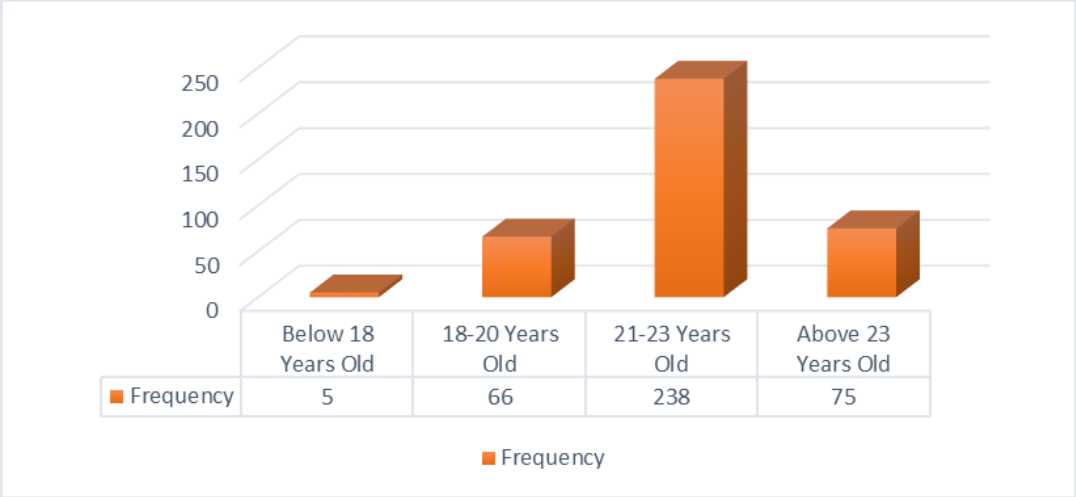


b) Age

The age range of the 384 respondents answered the questionnaires are shown in Table 4.6. According to the table, respondents were divided into four age groups ranging from under 18 to over 23 years old. The age group of "21 to 23 years old" has the highest age group frequency in this research, comprising 62.0% of the respondents, totalling 238 individuals. Following this, the group classified as "above 23 years old" comes in second, representing 19.5% and consisting of 75 respondents. Next, the group classified as "18-20 Years Old" representing 17.2% and consisting of 66 respondents. Lastly, the "below 18 years old" group has the lowest count, making up only 1.3% and comprising just five respondents.

Table 4.6: Age of respondents

Age	Frequency	Percent
Below 18 Years Old	5	1.3
18-20 Years Old	66	17.2
21-23 Years Old	238	62.0
Above 23 Years Old	75	19.5
Total	**384**	**100.0**

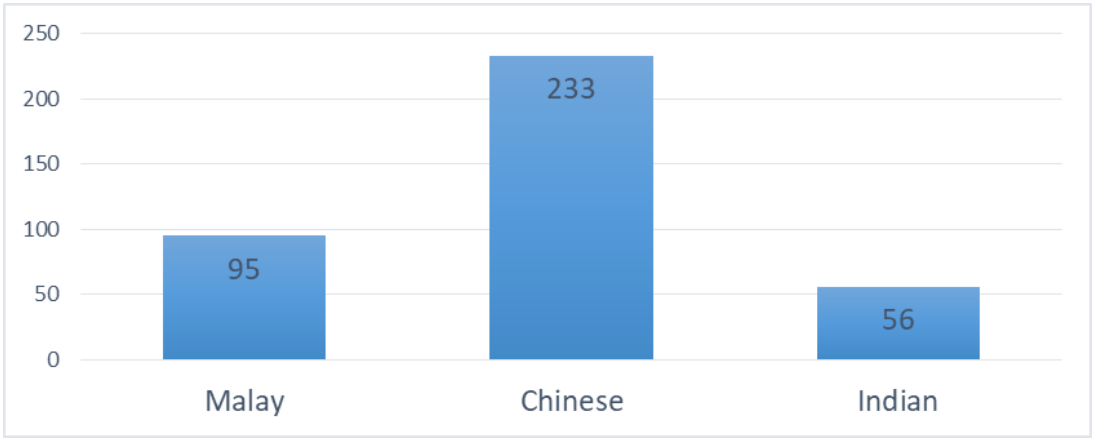


c) Race

In Malaysia, the race of respondents is divided into Malay, Chinese, and Indian, as shown in Table 4.7. The Chinese recorded the greatest proportion with 233 replies, accounting for 60.7 percent of all respondents. The survey includes a total of 95 respondents of Malay ethnicity, constituting 24.7% of the overall participants followed by Indian is make up 56 individuals, representing 14.6% of total respondents.

Table 4.7: Race of respondents

Race	Frequency	Percent
Malay	95	24.7
Chinese	233	60.7
Indian	56	14.6
Total	**384**	**100.0**

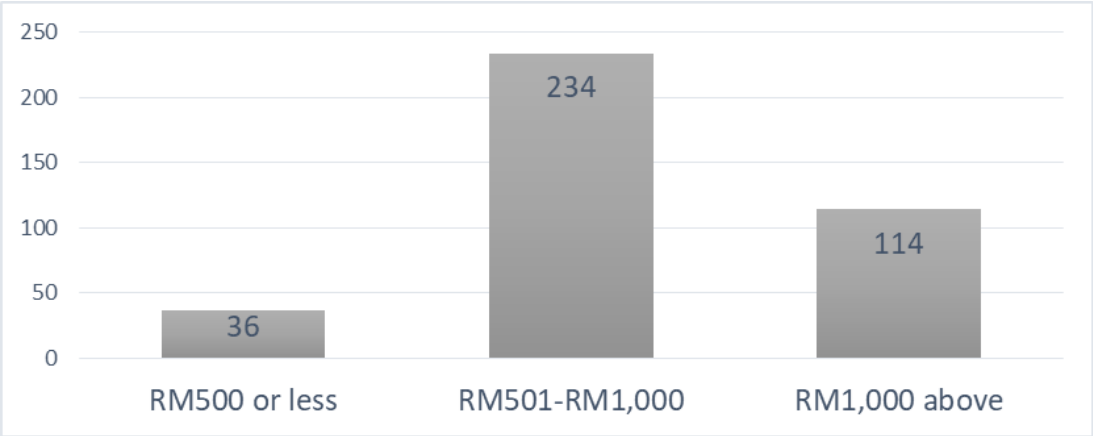


d) Monthly allowance

The monthly allowance of 384 respondents is shown in Table 4.8. The table displayed a variety of ages ranging from RM500 or below to above RM1000. The greatest respondent range is between RM501 and RM1000, with 234 respondents contributing to 60.9 percent of the total respondents. For the RM1000 and above price segment, 114 respondents answered in this questionnaire, which represents 29.7 percent of all respondents. For the price range of RM500 or less, a total of 36 respondents answered in this questionnaire, resulting in 9.4 percent of all respondents.

Table 4.8: Monthly allowance of respondents

Monthly allowance	Frequency	Percent
RM500 or less	36	9.4
RM501-RM1,000	234	60.9
RM1,000 above	114	29.7
Total	**384**	**100.0**

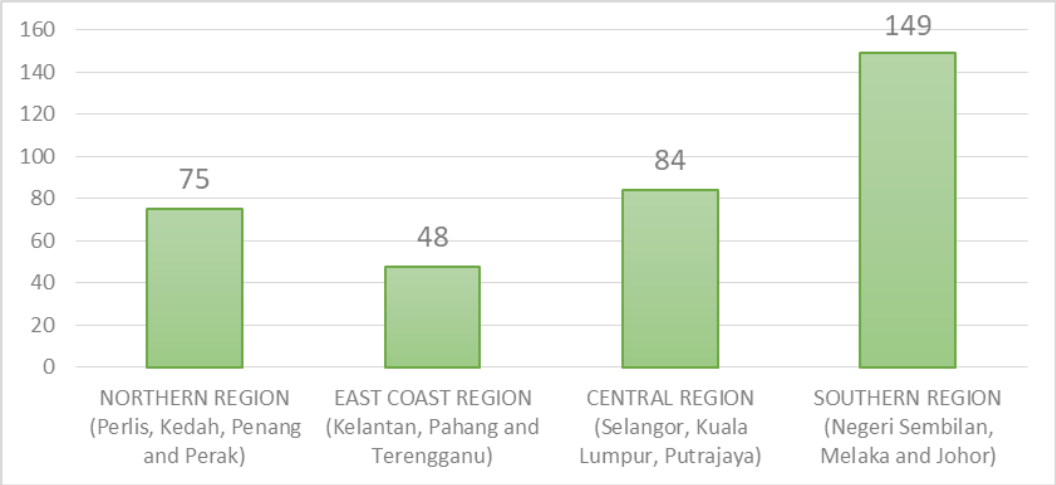


e) States

Table 4.9 shows the percentage of university students in Malaysia's Northern region (Perlis, Kedah, Penang, and Perak), East Coast region (Kelantan, Pahang, and Terengganu), Central region (Selangor, Kuala Lumpur, and Putrajaya), Southern region (Melaka, Johor, and Negeri Sembilan), and East Malaysia (Sabah and Sarawak). According to table 4.5, the Southern area received the most responses (38.8%), followed by the Central region (21.9%). The data for this study has been collected from the Northern and East Coast regions, which include 19.5% and 12.5% of respondents respectively. However, only 28 respondents, or 7.3% from East Malaysia were the most minor in this survey.

Table 4.9: States of respondents

States	Frequency	Percent
NORTHERN REGION (Perlis, Kedah, Penang and Perak)	75	19.5
EAST COAST REGION (Kelantan, Pahang and Terengganu)	48	12.5
CENTRAL REGION (Selangor, Kuala Lumpur, Putrajaya)	84	21.9
SOUTHERN REGION (Negeri Sembilan, Melaka and Johor)	149	38.8
EAST MALAYSIA (Sabah and Sarawak)	28	7.3
Total	**384**	**100.0**

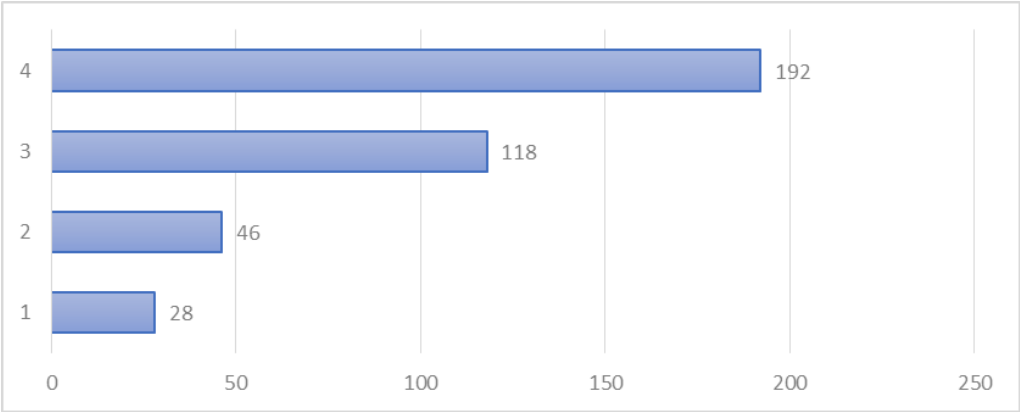


f) Year of study

The year of study for respondents is shown in Table 4.10. The table displays four categories of study years, covering year 1 to year 4. The questionnaire included 192 respondents who are in their fourth year of study. It represented half of all respondents. For the third year of the survey, there were 118 respondents, which was 30.7 percent of all respondents. For the first and second years of the research, a total of 28 and 46 respondents participated in this survey, representing 7.3 percent and 12.0 percent of the total respondents respectively.

Table 4.10: Year of study for respondents

Year of study	Frequency	Percent
1	28	7.3
2	46	12.0
3	118	30.7
4	192	50.0
Total	**384**	**100.0**

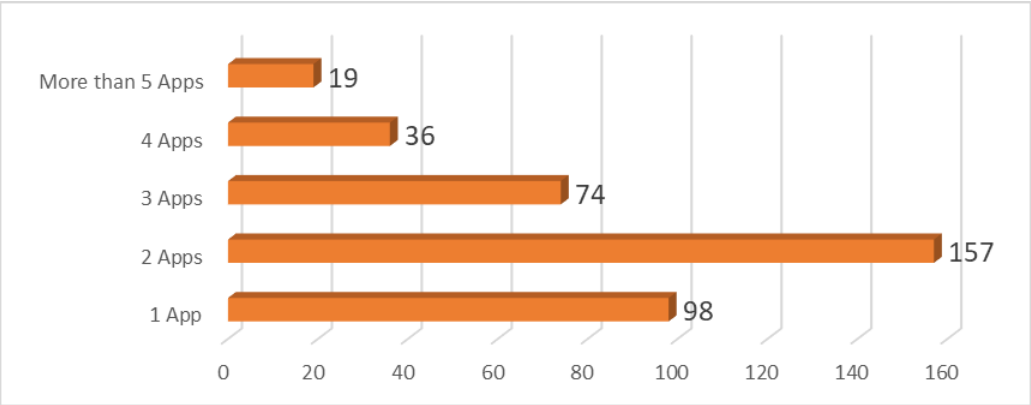


g) E-money application used

Next, the respondents were asked about their e-money application used. 40.9% of the total of 384 respondents had use two e-money application, which has the highest portion in this research as displayed in Table 4.11. Next, 98 respondents (25.5%) preferred to utilize a single e-money application. Interestingly, 74 respondents (19.3%) use three e-money applications, followed by 36 respondents (9.4%) showed a tendency to use four different e-money applications. A small group of respondents, including 19 people (4.9%) accessed more than five e-money applications.

Table 4.11: E-money application used for respondents

E-money application used	Frequency	Percent
1 App	98	25.5
2 Apps	157	40.9
3 Apps	74	19.3
4 Apps	36	9.4
More than 5 Apps	19	4.9
Total	**384**	**100.0**

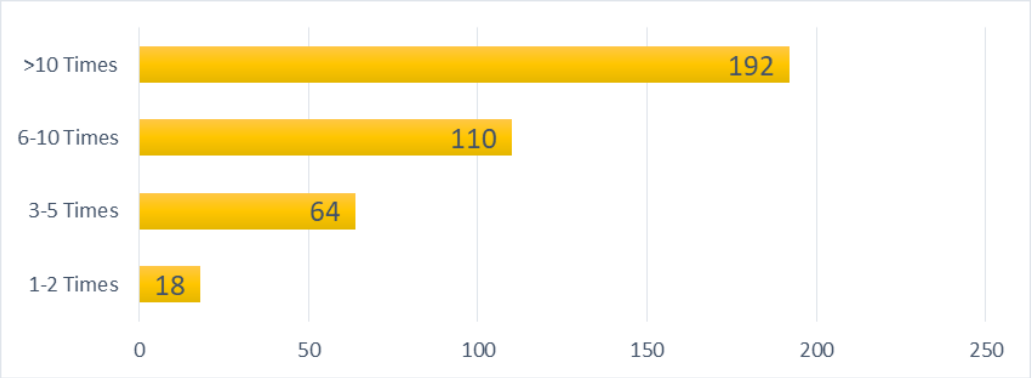


h) Frequency of e-money used per month

The analysis of the frequency of the respondents' monthly use of e-money showed in Table 4.12. 50.0% (192 respondents) of the overall population of 384 respondents use e-money more than 10 times each month, showing a high frequency of usage. In addition, 110 respondents which is occupied 28.6 percent of the total respondents use e-money services 6-10 times a month, while 64 respondents (16.7%) use e-money 3-5 times per month. 18 respondents uses e-money services once or twice a month. It occupied 4.7 percent of the total respondents.

Table 4.12: Frequency of e-money used per month for respondents

Frequency of e-money used per month	Frequency	Percent
1-2 Times	18	4.7
3-5 Times	64	16.7
6-10 Times	110	28.6
>10 Times	192	50.0
Total	**384**	**100.0**



4.6 Descriptive analysis of independent variables

Descriptive analysis describes the characteristics of data collection. In this section of the chapter, the researcher provides an explanation of the descriptive statistics for each variable, encompassing both independent and dependent variables. Descriptive statistics offer a precise exploration of the dimensions of the variables. This study utilized descriptive analysis to find out the mean and standard deviation values of the variables.

4.6.1 Performance expectancy

Table 4.13 displays the descriptive analysis findings for PE, as well as the mean for all components ranging from 4.26 to 4.60. The mean values indicate that the majority of respondents agreed with the items in the PE.

Table 4.13: Descriptive analysis for performance expectancy

Items	Mean	Std. Deviation
PE1: I use E-money because it allows me to conveniently access payment services from anywhere.	4.60	0.836
PE2: I use E-money because I can simply and clearly understand the connection of payment services.	4.33	0.998

PE3: I feel that using E-money has an expected effect in payment transactions.	4.26	1.014
PE4: Using E-money will help me finish financial transactions more quickly.	4.30	1.094
PE5: The use of E-money is consistent with all areas of my occupation and life style.	4.29	1.084
PE6: Using E-money will make payment transactions less stressful for me.	4.38	1.047
PE7: It will be faster for me to use E-money since I would be able to access payment transactions 24 hours.	4.36	1.015

4.6.2 Effort expectancy

The descriptive data for EE are shown in Table 4.14. The mean result for the EE items ranged from 4.30 to 4.41, indicating that respondents agreed with the statements in the items of EE.

Table 4.14: Descriptive analysis for effort expectancy

Items	Mean	Std. Deviation
EE1: The use of E-money can help me speed up payment transactions.	4.39	0.966
EE2: The use of E-money can significantly improve the quality of payment transaction results because it does not take much time.	4.41	1.000
EE3: The use of E-money can help me make payment transactions more secure.	4.30	1.063
EE4: The use of E-money makes it easy for me to find out payment information.	4.35	1.096

EE5: The use of E-money helps me always have full payment information.	4.37	1.076
EE6: E-money was practical and it helps me increase efficiency in the payment transactions.	4.39	1.024

4.6.3 Social influence

The descriptive analysis findings for SI are shown in Table 4.15. The mean values of the variables vary from 4.33 to 4.40. This might imply that the respondents agreed to the statements in SI.

Table 4.15: Descriptive analysis for social influence

Items	Mean	Std. Deviation
SI1: Many people encouraged me to utilise E-money for payment transactions.	4.33	1.002
SI2: People who influence me think that I should use E-money in the payment transactions.	4.40	1.023
SI3: People who are familiar with me think that I should use E-money in the payment transactions.	4.36	1.021
SI4: Because most of my classmates use it, I utilise E-money while making payments.	4.34	1.104
SI5: My family encourages me to utilise E-money for financial transactions.	4.40	1.060

4.6.4 Facilitating conditions

Table 4.16 displays the descriptive analysis for FC. The mean value ranges from 4.35 to 4.40 in this case, according to the results of the mean value. The value of

means might be taken as indicating that the majority of respondents agreed with the statements in the questionnaires.

Table 4.16: Descriptive analysis for facilitating conditions

Items	Mean	Std. Deviation
FC1: I have control over the use of E-money in the payment transactions.	4.35	0.953
FC2: The usage of E-money in payment transactions boosts my productivity since it allows me to do numerous payment transactions from any location.	4.40	0.975
FC3: The presence of evidence on each payment transaction that is finished with the payment time is solid evidence of E-money payment.	4.37	1.003
FC4: When I utilise E-money in my payment transactions, I am certain that the transaction conditions are guaranteed.	4.38	1.012
FC5: I am certain that the payment transactions is safe when I use E-money in the payment transactions.	4.35	1.059
FC6: I have a smartphone and have received approval from payment service providers to utilise E-money in payment transactions.	4.36	1.067

4.6.5 Trustworthiness

Finally, Table 4.17 displays the descriptive analysis of the variable trustworthiness. The mean scores range from 4.25 to 4.47, indicating that the majority of respondents agreed with the statements in the questionnaires.

Table 4.17: Descriptive analysis for trustworthiness

Items	Mean	Std. Deviation
TW1: The e-money application can be trusted in protecting my money.	4.44	0.921
TW2: I believe the e-money application is safe to use.	4.47	0.961
TW3: The e-money application was reliable when I needed it.	4.34	1.062
TW4: I'm sure I can use my money in the e-money app whenever I want.	4.25	1.185

4.7 Descriptive analysis of the dependent variable

The descriptive analysis for the dependent variable, the intention of university students' expenditure to use e-money, is shown in Table 4.18. The mean value is between 3.96 and 4.60. The greatest mean goes to PI1 "I intend to continue to use E-money in the payment transactions in the future." and the lowest mean goes to PI3 "I will recommend E-money in the payment transactions to other people."

Table 4.18: Descriptive analysis for the intention of university students' expenditure to use e-money

Items	Mean	Std. Deviation
PI1: I intend to continue to use E-money in the payment transactions in the future.	4.60	.711
PI2: I will use E-money in the payment transactions if I need to do payments.	4.21	.994
PI3: I will recommend E-money in the payment transactions to other people.	3.96	1.210

4.8 Factor analysis

This analysis is used to reduce the number of inter-correlated variables to a few components by exposing the links between variables. As a result, it is used to determine if there is a correlation between these variables. The three primary processes when performing factor analysis, according to Pallant (2011), are evaluating data suitability, factor extraction and rotation, and interpretation.

This analysis is employed to measure inter-correlated variables into a few factors, thereby revealing relationships among the variables. It is utilized to explore whether there are correlations among these variables.

Step 1: Initial step prioritize sample size as an important factor to consider. Several authors have expressed different views on this issue, although most agree that bigger is better. This is because smaller sample sizes may result in less precise correlation coefficients. Furthermore, according to Pallant (2011), the strength of intercorrelation between items should exceed 0.3. In addition, SPSS provides Bartlett and Kaiser-Meyer-Olkin (KMO) tests as a statistical measure for assessing factorability, where a KMO index between 0 and 1 as well as a Bartlett's test that produces $p > 0.05$ indicate suitability for factor analysis (Pallant, 2011).

Step 2: Factor extraction, the second step, involves determining the minimum number of variables needed to describe the relationship between variables (Pallant, 2011). There are other techniques for this strategy, but Principal Component Analysis (PCA), as a common technique, allows flexibility according to the needs of the researcher. In addition, it is with simple solutions to reduce the elements or extend the given original information. Therefore, three techniques are used to determine the number of factors: the Kaiser criterion, Catell's scree test and Horn's parallel analysis. In PCA, the Kaiser criterion discards components with eigenvalues less than 1 (when the data is normalised). Catell's scree test is more subjective in that it relies on the visual interpretation of eigenvalue curves on a scree plot and identify the point where

the curve undergoes a change in direction and becomes horizontal, taking into account all factors above the elbow, and Horn's parallel analysis produces numerous random matrices with dimensions equivalent to the original data and evaluates the scree maps produced by the related matrices.

Step 3: Considering that the number of components has been identified, it is time to interpret them. To simplify the interpretation process, all items were rotated. There are two primary approaches to conducting rotation in data analysis: orthogonal rotation, which includes methods such as Varimax, Quartimax, and Equamax, and oblique rotation, involving techniques like Direct Oblimin and Promax. Among the orthogonal rotation methods, Varimax stands out as the most frequently employed, while for oblique rotation, Direct Oblimin is often chosen as a typical option. This diversity in rotation methods allows researchers to alter their analytical approach based on the specific needs and characteristics of the data under examination. Because of the fact that it aims to decrease the number of variables that have high factor loadings.

In this research, the results obtained from Principal Component Analysis (PCA) and Varimax rotation are presented in Table 4.19. In accordance with the criterion, the Kaiser-Meyer-Olkin (KMO) measure should exceed 0.70. Table 4.19 indicates a KMO value of 0.983, indicating that the sample meets the quality criteria for factor analysis. The factor loadings were consistently high, with the minimum loading recorded at 0.707.

Table 4.19: Factor analysis

Items	Component				
	1	2	3	4	5
PE1	.836				
PE2	.816				
PE4	.763				
PE7	.754				
PE6	.748				

PE5	.743				
PE3	.707				
FC5		.788			
FC3		.773			
FC6		.770			
FC2		.752			
FC4		.717			
FC1		.708			
SI5			.770		
SI4			.759		
SI2			.741		
SI3			.720		
SI1			.710		
TW4				.764	
TW2				.749	
TW3				.747	
TW1				.734	
EE3					.817
EE1					.739
EE4					.738
EE6					.729
EE2					.726
EE5					.718

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.983
Bartlett's Test of Sphericity	Approx. Chi-Square	10334.294
	df	378
	Sig.	.000

4.9 The relationship between independent variables and dependent variable

4.9.1 Correlation analysis

Correlation is a statistical measure used to determine when two or more variables change together. Correlation analysis is employed to evaluate the strength and direction of the linear relationship between two variables—the independent variable and the dependent variable (Pallant, 2011). The correlation analysis in this study investigated the relationship between each of the independent variables (PE, EE, SI, FC, and trustworthiness) and the dependent variable (the intention of university students' expenditure to use e-money). According to Pallant (2011), correlation coefficients can only have values of -1 and +1 for both negative correlation and positive correlation.

The symbol in front represents the correlation between two variables, indicating whether it is positive or negative. In the case of a positive indication, it signifies that as one variable increases, the other variable is expected to increase. A negative sign shows that if one variable grows, it may cause the other variable to drop. Correlation coefficients can also be calculated by the strength of the connection. According to Cohen's classification, correlations are categorized as weak when they fall within the range of r = 0.10 to 0.29, moderate if they range from r = 0.30 to 0.49, and strong when they range between r = 0.50 to 1.0.

According to the findings, it was observed that the dependent variable positively influences all the independent variables. Furthermore, the strength of the relationship between the variables found a significant correlation, with r values ranging from 0.50 to 1.00. As shown in Table 4.20, facilitating conditions had the strongest positive correlation with intention at 0.910, while the variable "TW" displayed the lowest positive correlation at 0.874.

Table 4.20: Pearson's correlation

	PE	EE	SI	FC	TW	INTENTION
PE	1					
EE	.955**	1				
SI	.896**	.897**	1			
FC	.935**	.944**	.900**	1		
TW	.890**	.890**	.888**	.896**	1	
INTENTION	.902**	.904**	.877**	.910**	.874**	1
**. Correlation is significant at the 0.01 level (2-tailed).						

Remark

PE: Performance expectancy

EE: Effort expectancy

SI: Social influence

FC: Facilitating conditions

TW: Trustworthiness

4.9.2 Multiple linear regression analysis

The research employed multiple regression analysis techniques to examine the independent variables (performance expectancy, effort expectancy, social influence, facilitating conditions, and trustworthiness) in relation to the dependent variable.

R^2 illustrates the percentage of the independent variables that can be accounted for by the dependent variable. According to the summary of the model in Table 4.21,

the R^2 is 0.862, which signifies that 86.2% of the variation in performance can be explained by the five independent variables examined in this research.

Table 4.21: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.928[a]	.862	.860	.32037	1.854

a. Predictors: (Constant), TW, SI, PE, FC, EE

b. Dependent Variable: INTENTION

Next, as presented in Table 4.22, the ANOVA results indicate sufficient evidence that at least one of the independent variables has the capacity to predict the dependent variable. A p-value of 0.000 suggests a well-fitted model. In this study, the computed F value was 472.560, with a mean square of 48.503.

Table 4.22: ANOVA results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	242.517	5	48.503	472.560	.000[b]
	Residual	38.798	378	.103		
	Total	281.315	383			

a. Dependent Variable: INTENTION

b. Predictors: (Constant), TW, SI, PE, FC, EE

The following section presents the results from the analysis of coefficients associated with both the independent and dependent variables. According to the results of the study, all variables are significant determinants that positively influence the intention of university students' expenditure to use e-money ($p < 0.05$). Among these variables, Facilitating Conditions (FC) displays the highest beta value, $\beta = 0.312$, suggesting that FC has the most significant impact on intention of university students' expenditure to use e-money. Subsequently, PE follows with a beta coefficient of $\beta = 0.179$, trailed closely by EE at $\beta = 0.174$. TW and SI, with beta values of $\beta = 0.149$

and β = 0.147 respectively, contribute comparatively less to students' intentions regarding e-money expenditure.

Secondly, as shown in Table 4.21, the Durbin-Watson value is 1.854. The Durbin-Watson test serves as an indicator of autocorrelation in residuals for regression analysis, potentially causing miscalculations of standard errors and influencing the determination of the significance of predictor variables. The general guideline is to examine whether statistics fall within the range of 1.5 to 2.5, indicating relative normality. Values outside this range may raise concerns. Field (2009) contends that values below 1 or above 3 should indeed be a cause for concern.

Table 4.23: Coefficient analysis of variables

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.077	.088		.873	.383		
	PE	.181	.071	.179	2.534	.012	.073	13.680
	EE	.172	.073	.174	2.336	.020	.066	15.264
	SI	.143	.049	.147	2.925	.004	.145	6.911
	FC	.318	.067	.312	4.738	.000	.084	11.874
	TW	.144	.047	.149	3.059	.002	.153	6.535

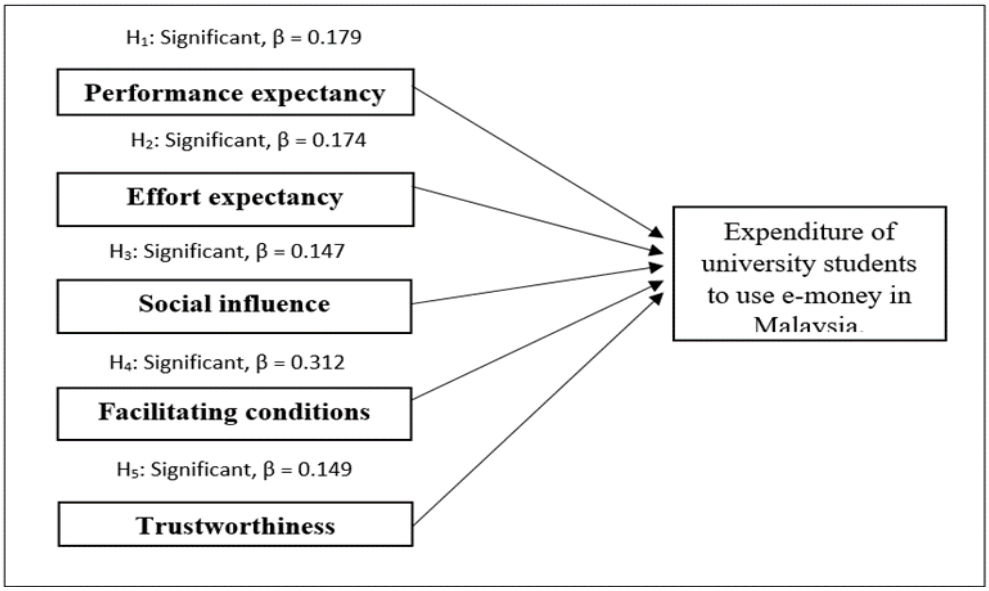
a. Dependent Variable: INTENTION

4.9.3 Summary of hypotheses testing

Hypothesis testing uses statistical data to assess the probability that a particular hypothesis is correct. Hypothesis testing uses regression analysis data to check the independent variable. Every hypothesis was examined, and all variables from H1 to H5 were determined to be supported. This implies that Performance Expectancy (PE), Effort Expectancy (EE), Social Influence (SI), Facilitating Conditions (FC), and Trustworthiness have a positive influence on intention of university students' expenditure to use e-money, as shown in Table 4.24.

Table 4.24: Hypotheses result

Hypotheses	Accepted	Not Accepted
H_1: Performance expectancy has a positive effect on expenditure of university students to use e-money in Malaysia.	√	
H_2: Effort expectancy has a positive effect on expenditure of university students to use e-money in Malaysia.	√	
H_3: Social influence has a positive effect on expenditure of university students to use e-money in Malaysia.	√	
H_4: Facilitating conditions has a positive effect on expenditure of university students to use e-money in Malaysia.	√	
H_5: Trustworthiness has a positive effect on expenditure of university students to use e-money in Malaysia.	√	



4.10 Discussion of findings

As mentioned in Chapter 1, this study aimed to identify the factors that influence university students' expenditure to use e-money in Malaysia based on the UTAUT model with the addition of trustworthiness.

H1: Performance expectancy has a positive effect on expenditure of university students to use e-money in Malaysia.

Based on Table 4.23, the significant value of the performance expectancy, p= 0.012, which is lower than 0.05 ($p < 0.05$). The findings underscore a significant and positive relationship between PE and the expenditure behavior of university students using e-money in Malaysia. This aligns with similar patterns observed in research by Venkatesh et al. (2003), Dzulhaida and Giri (2017), and Meuthia et al. (2020). However, there were significant differences in the PE results compared to the results of the HA & NGUYEN (2022) study. The convenience of accessing payment services from any place is the key motivation for university students to use electronic money. The simplicity of electronic money payment service greatly enhance its attraction to university students. The combination of the use of electronic money with all aspects of users' lifestyles has increased the expenditure of university students to use e-money in Malaysia. In addition, people believe that electronic money can reduce the pressure of payment transactions, thus enhancing its performance. The guarantee of 24-hour payment transaction further strengthens the expectation of fast and efficient transactions, and ultimately affects university students' preference for using electronic money for spending. Hence, to increase the expenditure of university students to use e-money in Malaysia, the performance of e-money application should also increase.

H2: Effort expectancy has a positive effect on expenditure of university students to use e-money in Malaysia.

Based on Table 4.23, the significant value of the effort expectancy, p= 0.020, which is lower than 0.05 ($p < 0.05$). The results of this study show that EE is significantly and positively related to the expenditure of university students to use e-money in Malaysia. This matches what earlier researchers like Venkatesh (2003) and Meuthia et al. (2020) discovered in their studies. It is believed that the effort expectancy of using e-money encourages faster and more efficient payment of the results of transactions, thus improving the quality of the results of payment transactions as it consumes minimal time while enhancing the security of payment transactions. The convenience of obtaining full payment information and the guarantee of having a comprehensive payment record greatly improve the ease of using electronic money and assist consumers to attain higher efficiency. This will influences university students in Malaysia utilize electronic money in payment transactions.

H3: Social influence has a positive effect on expenditure of university students to use e-money in Malaysia.

Based on Table 4.23, the significant value of the social influence, p= 0.004, which is lower than 0.05 ($p < 0.05$). The results show that SI is positively significant towards the expenditure of university students to use e-money in Malaysia. This aligns closely with the conclusions drawn by earlier researchers such as Widayat et al. (2020) and Salmones et al. (2005) in their respective studies. Many people encourage the use of electronic money for payment transactions, which significantly affects university students' consumption habits. The influential opinions of people around them who use of electronic money have greatly influenced their decision making. In addition, the familiarity and support of people in social circles further strengthens the concept of using electronic money for transactions. The popularity of e-money among students has had a strong influence, encouraging them to follow and use electronic money to pay. Peer influence is crucial for students who often interact closely. Friends positively

influence each other by sharing favorable comments about the convenience of using e-money. As university students find it easy to learn, they become excited in digital transactions. Peer influence fosters a positive perception of e-money's effectiveness in facilitating smooth financial transactions. In addition, the encouragement and recognition of family members greatly promoted the tendency of university students to use electronic money for financial transactions in Malaysia. Although the impact is the lowest, raising the SI would still increase the expenditure of Malaysian university students using e-money.

H4: Facilitating conditions has a positive effect on expenditure of university students to use e-money in Malaysia.

Referring to Table 4.23, the significance value for Facilitating Conditions is p= 0.000, which is below 0.05 ($p < 0.05$). The result of this study indicates that FC is positively significant to the expenditure of university students to use e-money in Malaysia. Furthermore, facilitating conditions demonstrated the highest impact on the intention. This aligns with earlier studies by authors such as Widayat et al., 2020 and Venkatesh et al. (2003). Users' sense of control over e-money transactions has increased their attractiveness and increased productivity through seamless transactions from anywhere. The evidence generated by each payment transaction, especially the recorded payment time, consolidates the reliability and credibility of electronic money transactions. This certainty of guaranteed trading conditions further enhances the confidence in using electronic money for payment. Ensuring the security of these transactions is another key factor to increase university students' trust and willingness to use e-money in daily life. In addition, the possession of smart phones and the approval e-money payment service providers provide the necessary convenience, which affects the consumption pattern of university students using e-money.

H5: Trustworthiness has a positive effect on expenditure of university students to use e-money in Malaysia.

Based on Table 4.23, the significant value of the trustworthiness, p= 0.002, which is lower than 0.05 ($p < 0.05$). Finally, the trustworthiness results have positive implications for the expenditure of university students to use e-money in Malaysia. This outcome aligns with findings from prior studies by other authors (Kalinic et al., 2019). However, the results are different from the study by HA & NGUYEN (2022). University students' confidence in the security and reliability of e-money applications, as well as their guarantee to remain trustworthy during the transaction and whenever they need to use money, will greatly affect their spending patterns. This positive connection emphasizes the key role of trustworthiness in encouraging university students in Malaysia to use electronic money to meet their financial needs. Therefore, the expenditure of university students to use e-money in Malaysia could be encouraging if TW is increased.

4.11 Summary

Upon completing the data collection phase, a total of 384 samples were gathered for analysis, determined using the Krejcie and Morgan (1970) sample size calculation method. All analyses were conducted using SPSS version 27.0. The data obtained was summarized, and the SPSS output was analyzed. The analysis includes Descriptive Analysis (frequency and descriptive), Normality Test, Factor Analysis, Reliability Analysis, Pearson Correlation Analysis, and Multiple Regression Analysis.

First, the data were analyzed for frequency analysis to determine the gender, age, race, monthly allowance, states, year of study, e-money application used, and frequency of e-money used each month. Subsequently, a descriptive analysis was carried out to ascertain the mean and standard deviation for all variables, with particular attention paid to skewness and kurtosis, serving as indicators of data normality. Third, the variables were tested using EFA to determine the presence of

potential items in the variables. Fourth, the reliability of the variables was conducted to ascertain the validity of the items within each variable. Fifth, correlation analysis and multiple regression were used to determine the relationship between the variables. This study enabled the researcher to assess the impact of the independent variables on the dependent variables. Finally, the results of the study show that all factors positively influence university students' expenditure on e-money in Malaysia, with facilitating conditions having the greatest impact in this study.

After this, the explanation of the results and the contribution of the findings, limitations of the research and recommendations for future research will be used for further discussion in the following chapter. For instance, identifying the difficulties encountered during the study and suggesting numerous solutions or tips for mitigating and solving any unforeseen challenges faced by researchers who will discover this topic further in the future.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The discussion in the fifth chapter is a summary of the results of this study. Therefore, this chapter will verify the research questions and research objectives. In order to determine the factors that influence the expenditure of university students to use e-money in Malaysia, this study analysed 384 samples of university students in Malaysia. This chapter introduces the contribution of the findings to the existing body of knowledge, e-money issuer, and policymakers. The researcher then discusses the research's limitations and makes recommendations for further research. The overall conclusion of this study is given at the end of this chapter.

5.2 Summary of the findings

The results of the findings based on three objectives were discussed and summarized in this part. First, the research objective is to identify the factors that influence university students' expenditure to use e-money in Malaysia. Second, the research objective is to analyse the relationship between the identified factors and university students' expenditure to use e-money in Malaysia. Lastly, the research objective is to determine the most influencing factor that influence university students' expenditure to use e-money in Malaysia. The total respondents for this research were 384 respondents represented as university students from different perspectives and opinions in Malaysia.

5.2.1 Research objective 1: To identify the factors that influence university students' expenditure to use e-money in Malaysia.

In Chapter 1, the primary research objective of the research was to identify the UTAUT elements that influenced the expenditure of university students to use e-money in Malaysia. According to the literature, there are four UTAUT factors in addition to the trustworthiness identified that can positively and significantly influence the expenditure of university students to use e-money in Malaysia, which are PE, EE, SI, FC and trustworthiness (HA & NGUYEN, 2022).

As a result, based on these variables, the researcher created a questionnaire that was adapted from previous authors (HA & NGUYEN, 2022; Indrawan et al., 2021). As the sample approach chosen was convenience sampling, the researcher distributed the questionnaire among acquaintances. Participants were then instructed to choose the most suitable Likert scale response for each question to complete the questionnaire.

According to the descriptive analysis, most of the respondents indicated their agreement with all the statements provided in each item. The independent variables have a mean value between 4.25 until 4.60, whereas the dependent variable has a mean value between 3.96 until 4.60. It also indicates that a significant number of respondents agreed that the mentioned items were influential factors capable of impacting the expenditure of university students to use e-money in Malaysia.

5.2.2 Research objective 2: To analyse the relationship between the identified factors and university students' expenditure to use e-money in Malaysia.

After collecting all the data, the analysis was carried out using the SPSS program. Correlation analysis was used to identify the link between the independent factors and the dependent variable. As previously stated, it also used to explain the strength and direction of a linear relationship that exists between two variables (dependent variable and independent variable) (Pallant, 2011). The correlation analysis in this study examines the connection between each independent variable,

namely PE, EE, SI, FC, and trustworthiness, and the dependent variable, which was the expenditure of university students to use e-money in Malaysia.

Based on the computed results in Chapter 4, there was a positive correlation observed between the dependent variable and each of the independent variables presented in the study. Moreover, the strength of the relationship between the variables indicated a high correlation. This means that when one independent variable is increased, the dependent variable will also positively increase. Therefore, when PE, EE, SI, FC, and trustworthiness are increased, the expenditure of university students to use e-money in Malaysia will also increases.

5.2.3 Research objective 3: To determine the most influencing factor that influence university students' expenditure to use e-money in Malaysia.

For this third objective, the multiple regression analysis of SPSS software proved the most influential factor. According to the study's findings, all independent factors had a positive significant influence on university students' expenditure on e-money in Malaysia. The following factors are ranked according to the extent of their power in influencing university students' expenditure on e-money in Malaysia:

Table 5.1: Ranking of factor

Factor	Beta value	Rank
Facilitating conditions	0.312	**1**
Performance expectancy	0.179	**2**
Effort expectancy	0.174	**3**
Trustworthiness	0.149	**4**
Social influence	0.147	**5**

In Table 5.1, facilitating conditions were placed first as they possessed the highest beta value among the various independent variables. Facilitating conditions create an environment that encourages and supports the adoption of e-money among

university students. When the barriers to entry are low and the advantages are obvious, students are more likely to spend money through e-money. For example, the existence and accessibility of reliable Internet connection and electronic payment system. Moreover, the willingness of on-campus and off-campus merchants to accept electronic money will influence the expenditure of university students to use e-money in Malaysia. This is because it improves the convenience of using e-money for various transactions. Electronic money systems and infrastructure must also be user-friendly so that individuals from all walks of life can benefit from it.

The second highest factor is performance expectancy. E-money provides convenience because it can realize fast transactions and eliminates the need to carry physical cash. If university students think e-money is a convenient choice for their transactions, they are more likely to use it in their daily life. For example, university students with busy schedules prefer the efficiency of e-money. This performance could increase the intention of university students' expenditure to use e-money in Malaysia.

The third highest went to effort expectancy. In the context of this research, "effort expectancy" relates to the efforts undertaken by e-money issuers to enhance the willingness of university students in Malaysia to utilize e-money for their expenditures. This involves a comprehensive examination of the measures and strategies implemented by e-money issuers to positively influence and encourage the spending behaviour of university students towards the adoption and usage of e-money in Malaysia. Thus, vendors and e-money issuers should enhance the e-money payment system where the university students feel the freedom of doing payment.

The fourth factor went to trustworthiness. Trust in the protection of personal data is crucial. Therefore, university students need to ensure that their sensitive information will be handled safely by e-money issuers. E-money issuers should ensure that e-money payment system in a safe and secure environment to enhance long-term customer relationships but also establishes a trustworthy impression. Besides that,

financial information and transactions are secure from potential threats like fraud or hacking.

Lastly, the least significant factor is social influence. Recommendations or positive experiences shared by friends, classmates, or family members regarding e-money usage can significantly impact university students' views. This is because they tend to learn from the behaviours of people around them. Aside from that, university students should be informed of the importance of e-money on frequently so that they may pass on their understanding and interest to others.

5.3 Contribution of the findings

At the conclusion of this research, this study achieved its goal by meeting the research objectives, as proposed in Chapter 1. Accordingly, the contributions of this research are divided into knowledge, e-money issuer, and policymaker.

5.3.1 Research contributions to knowledge

The integration of UTAUT variables in this study, the researcher gains the capability to determine the factors that influence university students' expenditure to use e-money in Malaysia. According to the UTAUT model, including PE, EE, SI, and FC have an effect to consumer behaviour and preferences. The final result shows that the Unified Theory of Acceptance and Use of Technology (UTAUT) factors play a significant role and has a great influence on the university students' expenditure to use e-money in Malaysia. This shows that the performance of e-money influences the expenditure of university students to use e-money in in accomplishing the goal, the effort they require to improve when university students utilizing e-money to pay, SI influenced by the conditions in which individuals live and their surroundings, and also FC support the system and infrastructure they engage with during payment processes.

In addition to the UTAUT elements, this study included trustworthiness as a fifth criterion. The study concluded that university students' confidence in e-money as a payment mechanism was one of the most important variables in deciding their expenditure. Finally, it demonstrates that trustworthiness has a significant influence on university students' spending to use e-money in Malaysia. As a result, when it concerns people's money, trustworthiness might be considered.

A descriptive analysis was carried out to establish and define the features of the variables of interest in a particular condition. Also, the quantitative method was applied in this research. The use of the quantitative method in this study was deemed appropriate for the research background. The proposed hypothesis was evaluated with the aim of gaining a deeper understanding of the connections that emerged among the various independent factors and their influence on the dependent variable.

Additionally, this research applied SPSS as a data analysis instrument. Using SPSS enabled the researcher to obtain the result from the analysis in this research, such as frequency analysis, descriptive analysis, factor analysis, reliability analysis, and correlation analysis. Accordingly, the researcher was able to test the hypotheses developed using multiple linear regression analysis.

5.3.2 Research contributions to e-money issuer

The findings of this study has successfully showed that all UTAUT factors and trustworthiness had a positively significant effect on the expenditure of university students to use e-money in Malaysia. Therefore, e-money issuers could use this knowledge as a guideline or reference for the future development of e-money payment instruments.

In addition, e-money issuers may investigate all the factors and determine ways to enhance the support from university students. For example, regarding PE, maybe they could implement ways for university students to develop a ranking system for feedback based on their performance in delivering and completing e-money payment system. This would help to improve the overall performance expectation, and make it an attractive choice for university students with financial awareness. This effort will also build the trust of the university students toward security measures implemented by e-money providers.

As for EE, they could conduct a pilot test for targeted university students in the e-money payment system. In this way, feedback, reaction, comments, and criticism could be received and improved in the future. Through this way, the final e-money services that satisfy requirements is user friendly and effective. User-friendly interface is very important to encourage university students to consider digital transactions as a part of their daily life. For university students, it is very important to integrate e-money into their daily activities. The effort expectancy is influenced by the cooperation between e-money and existing daily life. The same for FC as it also involves the condition of the e-money usage among university students. A strong customer support system helps to provide a positive user experience and reduce potential challenges or problems that may arise during trading with electronic money.

For EE, they can conduct a pilot test in the electronic money payment system for the target university students. In this way, feedback, reactions, comments and criticisms can be accepted and improved in the future. Therefore, the final product can generate a user-friendly and effective platform. User-friendly interface is very important to encourage students to regard digital transactions as a part of their daily life. It is very important for college students to integrate electronic money into their daily activities. Besides that, e-money providers should offer tutorials for university students to ease navigation during future payments. These tutorials enhance students' familiarity with different e-money apps, fostering a user-friendly environment and boosting confidence in financial transactions. Expectation can be achieved and influenced by the cooperation between electronic money and existing daily life. The

same is true of FC, because it also involves the conditions for college students to use electronic money. A strong customer support system helps to provide a positive user experience and reduce potential challenges or problems that may arise when trading with electronic money.

To enhance more SI, the awareness related surrounding e-money topics could be communicate on a regular basis. Social media platforms may be a good mechanism in spreading this awareness. The e-money issuers could also present a real-time situation of the e-money usage in Malaysia. Aside from that, images and videos related to the significance of e-money could be presented via social media. Furthermore, the e-money issuers could encourage others by partnering with social media influencers so that the message and awareness could be received and exposed to university students. The purpose of these strategies is not only to inform but also motivate and attract them towards adopting e-money in their lives.

Additionally, more advertising and marketing should be undertaken so that e-money usage could be viewed by all. For example, since the world has been significantly affected by the COVID19 pandemic that was first evidenced in late 2019 and early 2020, there have been increase usage of e-money among university students in Malaysia. These platforms were initiated to be used by people affected by the pandemic and also advance contactless payment methods. For example, e-money through mobile payment applications, digital wallets and online platforms has become a safer substitute for physical cash. By minimizing physical contact, e-money transactions contribute to the overall efforts to prevent the spread of the virus and ensure the safety of individuals and the wider community. Facts have proved that electronic money has invaluable value in fostering long-distance financial transactions. It allows individuals to pay bills, shop online and transfer money without leaving home.

5.3.3 Research contributions to policymakers

In the context of this research, as the policymaker or the government is the practitioner, this research was able to develop guidelines for practitioners, like the government, to follow in terms of enhancing the expenditure of university students to use e-money in Malaysia. For example, teenagers between the ages of 18 and 20 or full-time students studying in higher education institutions (IPT) can register for RM200 of eBelia Rahmah program, which may help to increase e-money usage in Malaysia. This program enables university students to participate more actively in academic activities and ensure that financial difficulties will not hinder their educational progress. For example, this financial assistance help students meet basic expenses, such as books, study materials and living expenses.

Due to this study applied convenience sampling, all of the respondents were university students, similar to the researcher. As a policy maker, the government can encourage university students to use e-money by reducing the dependence on physical cash and the risk of carrying money in Malaysia. Although the payment method is changed but it will not burden university students in daily lives.

5.4 Limitations of the research

The following limitations restrict the findings presented in this study. The main limitation in this study was the researcher could only distribute the questionnaires to the several target respondents based on the geographic regions due to time constraints, which means not all respondents were selected. In addition, the researcher had a limited time, which was three months, to collect the respondents' data. Hence, the study's research methodology was through quantitative research to complete these findings, and the respondents have answered the questionnaires through Google Form. The findings are more general and not presented in-depth compared to a mixed-methods or qualitative study. Lastly, the respondents may not have adequate knowledge towards features of e-money on influencing university students'

expenditure to use e-money in Malaysia which may cause misunderstanding of the topic was one of the limitations on the research.

5.5 Recommendations for future research

The recommendations can act as the proposal for several potential directions for future research. Firstly, the findings may not represent the general population due to the study conducted in the selected geographical area. In other words, although the research was conducted in entire Malaysia, not each of the respondents has been selected. Therefore, it is recommended that the research be done in Malaysia's more specific geographical regions to get more accurate and precise information. In addition, increasing the sample size to improve the generalizability of findings due to this study was based on a small number of respondents from selected states N = 384. The result would be more accurate if the time to do the research can be lengthened.

Further, this research applied UTAUT factors in determining factors that influence university students' expenditure to use e-money in Malaysia. However, this research did not use the moderator of the variables in the UTAUT model. As such, future research could use the entire model so that more refined findings could be achieved. Other theories and models could likewise be adapted to determine the intention of people, such as TPB, TRA, and others; future research could also apply other theories.

Besides, future research can be further explored deeper insights through conducts qualitative research and mixed-methods to view the results from different perspectives from respondents to determine factors that influence university students' expenditure to use e-money in Malaysia. As such, more detailed results could be achieved by employing these methods. Finally, there are numerous topics under e-money that could be unfolded by future researchers. For example, the barriers of e-money for older generation in Malaysia, and developing action plan for e-money.

5.6 Conclusion

In the era of digital transformation, electronic money has become an indispensable part of the financial sector and one of the significant payment methods for all university students in Malaysia. The importance of e-money in Malaysia, as probably agreed by university students, provides convenience for financial transactions and enables students to pay quickly and safely without carrying physical cash. This convenience is particularly useful in university environment due to students have to pay various fees for services, books, food or transportation. For university students, especially those who study or travel in other places, it provides a safer way of financial handling without carrying cash. Providers such as GrabPay, Boost and Touch 'n Go eWallet are popular for their convenience and accessibility. On the other hand, challenges such as network security issues and the need for continuous innovation still exist. The regulatory framework of Bank Negara Malaysia must be ensures security, transparency and fair practices within the e-money ecosystem and promotes trust among users.

As a result, the purpose of this study was to identify the factors that influence university students' expenditure on e-money in Malaysia. The UTAUT model was used for the study to analyse university students' expenditure on e-money in Malaysia. There were five independent variables: PE, EE, SI, FC, including trustworthiness as the fifth variable. The expenditure of university students to use e-money in Malaysia was selected as the dependent variable. This study produced five hypotheses based on the literature review.

To assess the hypotheses proposed in this study, a descriptive research approach was utilized, employing the distribution of a self-administered questionnaire among the respondents. Through this method, valuable data can be collected systematically to deeply understand the characteristics, viewpoints and experiences of participants, which is helpful to fully understand the research topic. Convenience

sampling was used, and 384 individuals participated by providing responses to the survey questions. All of the independent factors were shown to be significantly related to the expenditure of university students to use e-money in Malaysia. As a result, the expenditure of university students to use e-money in Malaysia is influenced by PE, EE, SI, FC, and trustworthiness.

This study made a valuable contribution to the field by applying the UTAUT framework within the context of e-money for the demographic of university students in Malaysia. Regarding e-money issuers in this field, this research could act as a guideline or reference to enhance the university students' expenditure to use e-money in Malaysia. Lastly, researcher hoped that this research is beneficial for policymakers that could be serve as a benchmark and reference for future e-money initiatives by the government.

As Malaysia continues to pursue the digital age, integrating e-money into university campuses represents a step towards creating a more efficient, safer and more economical student community. For example, university students can gain an in-depth understanding of their spending patterns through tracking previous transactions. The adoption of e-money of university students promotes a cashless environment, thus reducing the potential risks of carrying physical currency. This not only enhances the safety of financial transactions, but also complies with the current societal trend towards digital payment solutions. Additionally, it can reduces the dependence on traditional paper money and helps to mitigate the environmental impact related to the production and circulation of physical money. This is consistent with global efforts to encourage eco-friendly practices and sustainable living.

REFERENCES

Ahmed, R. R., Salman, F., Malik, S. A., Streimikiene, D., Soomro, R. H., & Pahi, M. H. 2020, 'Smartphone use and academic performance of university students: A mediation and moderation analysis', *Sustainability*, vol. 12, no. 3, pp. 439, DOI:10.3390/su12010439.

Aji, H. M., & Adawiyah, W. R. 2021, 'How e-wallets encourage excessive spending behavior among young adult consumers?', *Journal of Asia Business Studies*, vol. 16, no. 6, pp. 868–884, DOI:10.1108/jabs-01-2021-0025

Aji, H. M., Berakon, I., & Riza, A. F. 2020, 'The effects of subjective norm and knowledge about riba on intention to use e-money in Indonesia', *Journal of Islamic Marketing*, vol. 12, no. 6, pp. 1180–1196, DOI:10.1108/jima-10-2019-0203

Alam, Md. M., Awawdeh, A. E., & Muhamad, A. I. 2021, 'Using e-wallet for Business Process Development: Challenges and prospects in Malaysia', *Business Process Management Journal*, *27*(4), 1142–1162, DOI:10.1108/bpmj-11-2020-0528

Aliyev, F. 2016, 'Why Digital Can't replace cash', *Consumer Corner*. Available at: https://www.beuc.eu/blog/why-digital-cant-replace-cash/.

Alviere. 2023, 'Grab a seat at the Embedded Finance Table', *Alviere*. Available at: https://blog.alviere.com/grab-a-seat-at-the-embedded-finance-table

Amirul. 2022, 'Shopeepay's mission to empower Malaysia's MSMES via cashless payments', *MIDA*. Available at: https://www.mida.gov.my/shopeepays-mission-to-empower-malaysias-msmes-via-cashless-payments/

Ausmees, H. 2022, 'Everything about using GrabPay Wallet in Malaysia', *Wise*. Available at: https://wise.com/my/blog/grabpay-e-wallet-malaysia

Ausmees, H. 2022, 'Review of using boost e-wallet in Malaysia (2022)', *Wise*. Available at: https://wise.com/my/blog/boost-e-wallet

Ausmees, H. 2023, 'How to use and pay with ShopeePay in Malaysia', *Wise*. Available at: https://wise.com/my/blog/how-to-use-shopeepay-malaysia

Awang, Z., Che Aziz, R., Muhamed Yusoff, A., Farha wan Zulkiffli, W., Alif Amri Nik Hashim, N., Farha Wan Zulkifli, W., Maizana Mat Nawi, N., & Hafizah Muhammad, N. 2020, 'Grab Pay App: The Factors Influencing Tourists' Behavioural Intention-to-Use', *Talent Development & Excellence*, vol. 12, no. 3s, pp. 820-828.

Babatunde, S. O., & Perera, S. 2017, 'Public-private partnership in University Female Students' Hostel Delivery', *Facilities*, vol. 35, no. 1/2, pp. 64–80, DOI:10.1108/f-08-2015-0056

Bacon-Shone, J. 2015, 'Introduction to quantitative research methods', *Graduate School, The University of Hong Kong.*

Bagdatli, M. E., & Ipek, F. 2022, 'Transport mode preferences of university students in Post-covid-19 pandemic', *Transport Policy*, vol. 118, pp. 20–32, DOI:10.1016/j.tranpol.2022.01.017

Bagozzi, R.P. 1994, 'Measurement in marketing research: Basic principles of questionnaire design', *in Principles of Marketing Research*, ed. R. Bagozzi, Blackwell, Oxford, pp. 1–49.

Bakhtiar, I. shaheera, Jamaluddin, M. H. bin, Salim, M. A., & Harun, M. N. 2020, 'The students spending pattern on non-academic items towards food and beverage lead to poor financial management', *Proceedings of the International Conference on Student and Disable Student Development 2019 (ICoSD 2019)* DOI:10.2991/assehr.k.200921.011

Beaver, S. 2021, 'How to set up contactless payments', *Oracle NetSuite.* Available at: https://www.netsuite.com/portal/resource/articles/ecommerce/contactless-payment.shtml

Bee, T. S., & Ying, K. Y. 2021, 'An examination of determinants for e-wallet adoption in Malaysia: A combined approach', *F1000Research*, vol. 10, pp. 1155, DOI:10.12688/f1000research.73402.1

Belanger, F., Hiller, J. S., & Smith, W. J. 2002, 'Trustworthiness in electronic commerce: The role of privacy, security, and site attributes', *The Journal of Strategic Information Systems*, vol. 11, no. 3-4, pp. 245–270, DOI:10.1016/s0963-8687(02)00018-5

BNM. 2021, 'Alipay Malaysia Sdn bhd (formerly known as ... - bank Negara Malaysia', Available at: https://www.bnm.gov.my/-/alipay-malaysia-sdn-bhd

Boshkov, T. 2019, 'Blockchain and digital currency in the world of Finance', *Blockchain and Cryptocurrencies*, DOI:10.5772/intechopen.79456

Bray, J. 2017, 'Transportation costs in student living expenses. Transportation Costs in Student Living Expenses • ACCT •', Available at: https://perspectives.acct.org/stories/transportation-costs-in-student-living-expenses

Brunnermeier, M., James, H., & Landau, J.-P. 2019, 'The Digitalization of Money', DOI:10.3386/w26300

Cambridge Dictionary. 2023, '*Expenditure*', Cambridge Dictionary.

CFI Team. 2019, '*Expenditure*', Corporate Finance Institute.

CFI Team. 2022, 'Electronic money', *Corporate Finance Institute*. Available at: https://corporatefinanceinstitute.com/resources/economics/electronic-money/

Chakravorti, B. 2014, 'The hidden costs of cash', *Harvard Business Review*. Available at: https://hbr.org/2014/06/the-hidden-costs-of-cash

Chatterjee, R. 2022, 'E-money, Digital Age and safety', *Indus Net Technology - Award Winning Full Stack Digital Service Company*. Available at: https://www.indusnet.co.in/e-money-digital-age-and-safety/

Chauhan, S., & Jaiswal, M. 2016, 'Determinants of acceptance of ERP software training in business schools: Empirical Investigation Using Utaut Model', *The International Journal of Management Education*, vol. 14, no. 3, pp. 248–262, DOI:10.1016/j.ijme.2016.05.005

CompareHero.my Team. 2022, 'Best E-wallet comparison in Malaysia 2022', *CompareHero*. Available at: https://www.comparehero.my/e-wallet/articles/best-ewallet-malaysia

Conventus Law. 2022, 'Philippines - future of E-Money and digital payments', *Conventus Law*. Available at: https://conventuslaw.com/report/philippines-future-of-e-money-and-digital-payments/

Craig, M. 2019, 'High Transportation costs at Community College', *The Hechinger Report.* Available at: https://hechingerreport.org/opinion-transportation-costs-can-block-student-success-at-community-college/

Crail, C. 2023, 'What you need to know about contactless payments', *Forbes*. Available at: https://www.forbes.com/advisor/credit-cards/contactless-payments/

Cronbach, L. J. 1970, 'Essentials of psychological testing (3rd ed.)', *New York: Harper & Row.*

D"Silva, N. V. 2012, 'Market research on student spending', Available at: www.buzzle.com/articles/market-research-on-studentspending.html

Daud, N., Norwani, N. M., & Yusof, R. 2018, 'The primary sources of student financing in Higher Education Institutions', *International Journal of Academic Research in Business and Social Sciences*, vol. 8, no. 11, DOI:10.6007/ijarbss/v8-i11/5380

Dehghan, F., & Haghighi, A. 2015, 'E-money regulation for consumer protection', *International Journal of Law and Management*, vol. 57, no. 6, pp. 610–620, DOI:10.1108/ijlma-06-2014-0042

Demong, N. A., Othman, A. K., & Bawasa, S. 2016, 'Influencing factors on customer satisfaction towards American brands in the food and beverage industry in Malaysia', *ADVANCES IN BUSINESS RESEARCH INTERNATIONAL JOURNAL*, vol. 2, no. 2, pp. 69, DOI:10.24191/abrij.v2i2.10028

Dewanto, S. A., Munir, M., Wulandari, B., & Alfian, K. 2021, 'MFRC522 RFID technology implementation for conventional merchant with cashless payment system', *Journal of Physics: Conference Series*, vol. 1737, no. 1, pp. 012012, DOI:10.1088/1742-6596/1737/1/012012

Divineyouwellness. 2023, 'Importance of entertainment in life', *Divine You.* Available at: https://divineyouwellness.com/blog/why-is-entertainment-important-in-our-life/

Do, N., Ninh, H., & Do, T. 2020, 'An investigation of Generation Z's Intention to use Electronic Wallet in Vietnam', *Journal of Distribution Science*, vol. 18, no. 10, pp. 89–99, DOI:10.15722/jds.18.10.202010.89

Dörnyei, Z. 2007, 'Research methods in applied linguistics', *New York: Oxford University Press*.

Duyck, P., Pynoo, B., Devolder, P., Voet, T., Adang, L., & Vercruysse, J. 2008, 'User acceptance of a picture archiving and communication system. Applying the unified theory of acceptance and use of technology in a radiological setting', *Methods of Information in Medicine*, vol. 47, no. 2, pp. 149–156, DOI:10.3414/me0477

Dzulhaida, R., & Giri, R. R. W. 2017, 'Analisis Minat Masyarakat Terhadap Penggunaan Layanan E-Money Di Indonesia Dengan Menggunakan Model Modifikasi Unified Theory of Acceptance and Use Technology 2 (Utaut 2)', *Majalah Ilmiah UNIKOM*, vol. 15, no. 2, pp. 155–166, DOI:10.34010/miu.v15i2.555

easyuni. 2023, 'Top Universities & Colleges in Malaysia', *Updated: Top Universities & Colleges in Malaysia 2023.* Available at: https://www.easyuni.my/en/malaysia/

Edeh, F. O., Aryani, D. N., Subramaniam, T. A., Kee, D. M., Samarth, T., Nair, R. K., Kannappan, T. A., Tan, Y. S., & Teh, Y. C. 2021, 'Impact of covid-19 pandemic on consumer behavior towards the intention to use E-wallet in Malaysia', *International Journal of Accounting & Finance in Asia Pasific*, vol. 4, no. 3, pp. 42–59, DOI:10.32535/ijafap.v4i3.1205

Elmashhara, M. G., & Soares, A. M. 2019, 'The impact of entertainment and social interaction with salespeople on mall shopper satisfaction', *International Journal of Retail & Distribution Management*, vol. 47, no. 2, pp. 94–110, DOI:10.1108/ijrdm-06-2018-0112

eWhallet Team. 2023, 'Touch'n go ewallet - frequently asked questions', *eWhallet*. Available at: https://ewhallet.com/blog/post/touch-n-go-ewallet-frequently-asked-questions

Fatmasari, D., Waridin, Kurnia, A. S., & amin, R. 2019, 'Use of E-money and debit cards in student consumption behavior', *E3S Web of Conferences*, vol. 125, pp. 03013, DOI:10.1051/e3sconf/201912503013

Fintech News Malaysia. 2022, 'Touch 'n go ewallet can now be used in mainland China', *Fintech News Malaysia.* Available at: https://fintechnews.my/33236/payments-remittance-malaysia/touch-n-go-ewallet-can-now-be-used-in-mainland-china/

Friedman, M., & Meltzer, A. H. 2023, '*Money*', *Encyclopædia Britannica*. Available at: https://www.britannica.com/topic/money

Gaffar, A. 2020, 'The differences between E-money and E-wallet', *Gaffar & Co. Law.* Available at: https://gaffarcolaw.com/news-insights/the-differences-between-e-money-and-e-wallet/

Garrido, J., & Nolte, J. 2021, 'Making electronic money safer in the Digital age', *IMF.* Available at: https://www.imf.org/en/Blogs/Articles/2021/12/14/blog121421-making-electronic-money-safer-in-the-digital-age

Gina. 2022, 'Usage vs. use-learn the difference', *LanguageTool Insights.*

Ginee. 2022, 'Steps to do Lazada Wallet withdraw and top up wallet', *Ginee.* Available at: https://ginee.com/my/insights/lazada-wallet-withdraw/

Girardin, M. 2023, 'What is an expenditure? ', *Forage.*

Glowka, M., Kosse, A., & Szemere, R. 2023, 'Digital payments make gains but cash remains', *The Bank for International Settlements.* Available at: https://www.bis.org/statistics/payment_stats/commentary2301.htm

Goh, S. W. 2017, 'Factors affecting adoption of E-payment among private university students in Klang Valley', *UTAR Institutional Repository.* Available at: http://eprints.utar.edu.my/2487/

Gupta, S. 2022, 'Factors influencing the intention to use GrabPay among Malaysians', *International Journal of Accounting Finance in Asia Pasific*, vol. 5, no. 2. DOI:10.32535/ijafap.v5i2.1597

HA, V. D., & NGUYEN, T. T. 2022, 'A study on the behavioral intention and behavior of using E-money in Vietnam', *Central European Management Journal*, DOI:10.57030/23364890.cemj.30.3.16

Hair, J., Black, W. C., Babin, B. J. & Anderson, R. E. 2010, 'Multivariate data analysis (7th ed.) ', *Upper Saddle River, New Jersey: Pearson Educational International.*

Halpin, R., & Moore, R. 2009, 'Developments in electronic money regulation – the electronic money directive: A better deal for e-money issuers? ', *Computer Law & Security Review*, vol. 25, no. 6, pp. 563–568, DOI:10.1016/j.clsr.2009.09.010

Hamsa, P. S., Kang, H., Singh, J., & Ahlawat, F. 2021, 'A Project on Spending Function of Students of Scms, Pune', *International Journal of Advances in Engineering and Management*, vol. 3, no. 7, pp. 2649–2676, DOI:10.35629/5252-030726492676

Han, T. M. 2019, 'The e-money revolution', *Eastspring investments.* Available at: https://www.eastspring.com/insights/the-e-money-revolution

Han, T. M., & Roy, L. E. 2019, 'The e-money revolution', *Eastspring investments.* Available at: https://www.eastspring.com/insights/the-e-money-revolution

Harrington, D. 2022, 'Data security: Definition, explanation and guide', *Varonis.* Available at: https://www.varonis.com/blog/data-security

Hassan, M. A., Shukur, Z., & Hasan, M. K. 2021, 'Electronic wallet payment system in Malaysia', *Data Analytics and Management*, pp. 711–736, DOI:10.1007/978-981-15-8335-3_55

Heale, R., & Twycross, A. 2015, 'Validity and reliability in quantitative studies', *Evidence Based Nursing*, vol. 18, no. 3, pp. 66–67, DOI:10.1136/eb-2015-102129

Hoque, M. E., Susanto, P., Shah, N. U., Khatimah, H., & Mamun, A. A. 2023, 'Does perceived behavioral control mediate customers' innovativeness and continuance intention of e-money? the moderating role of& perceived risk and e-security', *International Journal of Emerging Markets*, DOI:10.1108/ijoem-06-2022-0914

Hsian, L. A. 2019, 'Is cash still king?: Skrine - Advocates & Solicitors', *Skrine*. Available at: https://www.skrine.com/insights/newsletter/april-2019/is-cash-still-king

Huizenga, J., Admiraal, W., Dam, G. ten, & Voogt, J. 2019, 'Mobile game-based learning in secondary education: Students' immersion, game activities, Team Performance and Learning Outcomes', *Computers in Human Behavior*, vol. 99, pp. 137–143, DOI:10.1016/j.chb.2019.05.020

Husin, M. M., Kamarudin, S., & Rizal, A. M. 2021, 'Food and beverage industry competitiveness and halal logistics: Perspective from small and medium enterprises in Malaysia', *Asian Journal of Islamic Management (AJIM)*, vol. 3, no. 1, pp. 1–10, DOI:10.20885/ajim.vol3.iss1.art1

Ikram, I. 2021, 'BNM: E-money liabilities have grown significantly from RM500M to RM1.6B', *The Edge Markets*. Available at: https://www.theedgemarkets.com/article/bnm-emoney-liabilities-have-grown-significantly-rm500m-rm16b

Indrawan, M. R., Livingstone, D., Kartono, R., & Sundjaja, A. M. 2021, 'Factors affecting millenials' acceptance of E-money application in Jakarta', *Turkish Journal of Computer and Mathematics Education (TURCOMAT)*, vol. 12, no. 3, pp. 4146–4156, DOI:10.17762/turcomat.v12i3.1706

Islam, S. 2015, 'An algorithm for electronic money transaction security (Three Layer Security): A new approach', *International Journal of Security and Its Applications*, vol. 9, no. 2, pp. 203–214, DOI:10.14257/ijsia.2015.9.2.19

JEBLIN, C. V. M. A., JUMI, J., ANAM, F., JOHN, N. F. N. B., HAMZAH, N. N. B. A., & AZWARDI, H. B. 2021, 'Boost E-wallet final draft version - group 10.pdf - principles of marketing GT00803 semester 1 2020/2021 group Assignment 40% Company Name: Axiata: Course hero', *Boost E-Wallet Final Draft Version - Group 10.pdf - PRINCIPLES OF MARKETING GT00803 SEMESTER 1 2020/2021 GROUP ASSIGNMENT 40% COMPANY NAME: AXIATA | Course Hero*. Available at: https://www.coursehero.com/file/92009485/Boost-E-Wallet-Final-Draft-Version-Group-10pdf/

Kagan, J. 2020, 'Contactless payment: History, advantages and types', *Investopedia.* Available at: https://www.investopedia.com/terms/c/contactless-payment.asp

Kalinic, Z., Marinkovic, V., Molinillo, S., & Liébana-Cabanillas, F. 2019, 'A multi-analytical approach to peer-to-peer mobile payment acceptance prediction', *Journal of Retailing and Consumer Services*, vol. 49, pp. 143–153, DOI:10.1016/j.jretconser.2019.03.016

Kamelia, A. 2022, 'Shopee Malaysia is discontinuing withdrawal-to-bank ShopeePay feature', Available at: https://says.com/my/tech/shopeepay-malaysia-discontinuing-withdrawal-to-bank-feature

Karjaluoto, H., Shaikh, A. A., Leppäniemi, M., & Luomala, R. 2019, 'Examining consumers' usage intention of contactless payment systems', *International Journal of Bank Marketing*, vol. 38, no. 2, pp. 332–351, DOI:10.1108/ijbm-04-2019-0155

Karpetis, C., Papadamou, S., Spyromitros, E., & Varelas, E. 2019, 'Optimism-pessimism effects on money demand: Theory and evidence', *Review of Behavioral Finance*, vol. 11, no. 1, pp. 23–35, DOI:10.1108/rbf-06-2018-0061

Khalaf, H. H. 2018, 'The impact of electronic money on the effectiveness of monetary policy', *Academy of Entrepreneurship Journal.* Available at: https://www.abacademies.org/articles/the-impact-of-electronic-money-on-the-effectiveness-of-monetary-policy-7338.html

Kiew, J. P., Toh, E. T., Ngian, E. T., & Law, S. H. 2022, 'Perceived Trust, convenience and promotion for the adoption of e-wallet', *International Journal of Academic Research in Business and Social Sciences*, vol. 12, no. 9, DOI:10.6007/ijarbss/v12-i9/14591

Koddenbrock, K. 2019, 'Money and moneyness: Thoughts on the nature and distributional power of the 'backbone' of capitalist political economy', *Journal of Cultural Economy*, vol. 12, no. 2, pp. 101–118, DOI:10.1080/17530350.2018.1545684

Kothari, S. 2018, '5 reasons why consumers still don't use digital payments', *The Economic Times*. Available at: https://economictimes.indiatimes.com/wealth/spend/5-reasons-why-consumers-still-dont-use-digital-payments/articleshow/64699938.cms?from=mdr

Krejcie, R.V., & Morgan, D.W., 1970, 'Determining Sample Size for Research Activities', *Educational and Psychological Measurement*.

Kumar, D. S., Sudin, H., & Othman, J. 2022, 'The Influence of Spending Behaviour Among University Students in Malaysia', *Asian Journal of Accounting and Finance*, September, pp. 29–43, DOI:10.55057/ajafin.2022.4.3.3

lalav, R. 2023, 'Blockchains with the highest transaction speed', *Bitpowr*. Available at: https://bitpowr.com/blog/blockchains-with-the-highest-transaction-speeds

Laney, A. 2022, 'What is electronic money? ', *The Balance*.

Laurer, C. 2020, 'What is E-money – definitions, processes, challenges', *trimplement blog*. Available at: https://trimplement.com/blog/2020/10/emoney-definition/

Lazada. 2018, 'Lazada Wallet- PRIVACY NOTICE TO WALLET USERS', *Pages.lazada.com.my*. Available at: https://pages.lazada.com.my/wow/i/my/MYCampaign/lazada-wallet-privacy-policy

Lee, E. 2018, 'Is E-money legal and safe in Malaysia?? – lee & poh partnership', *Lee Poh Partnership*. Available at: https://lpplaw.my/insights/e-articles/e-money/

Leng, N., Ikhwan, A., & Heng, Y. J. 2023, 'New Bank Negara Malaysia policy document updates e-money regulatory framework', *Rahmat Lim & Partners*. Available at: https://www.rahmatlim.com/publication/articles/23493/new-bank-negara-policy-document-updates-e-money-regulatory-framework

LOH, W. S., & SIMLER, K. 2018, 'Improving urban transportation for upward social mobility in Malaysia', *World Bank Blogs*. Available at: https://blogs.worldbank.org/eastasiapacific/improving-urban-transportation-upward-social-mobility-malaysia

Lokman, T. 2018, 'Boost e-wallet app targets to increase merchants by 100,000 by year end ... '. Available at: https://www.nst.com.my/news/nation/2018/01/330016/boost-e-wallet-app-targets-increase-merchants-100000-year-end

Luck, D. J., & Rubin, R. S. 1987, 'Marketing research. Prentice Hall. Tabachnick, B. G., Fidell, L. S., & Osterlind, S. J. (2001). Using multivariate statistics', *Allyn and Bacon.*

Lye, B. 2020, 'Starting an F&B business in Malaysia: A step-by-step guide - StoreHub Malaysia', *StoreHub Malaysia - Point of Sale System & Ecommerce Platform for SME Businesses.* Available at: https://www.storehub.com/my/blog/food-and-beverage-business-malaysia-guide/

M, K. 2019, 'Top 17 important benefits of choosing school buses for students', *Fleetroot.* Available at: https://www.fleetroot.com/blog/top-17-important-benefits-of-choosing-school-buses-for-students/

Macmillan Dictionary. 2023, 'Use (verb) definition and synonyms: Macmillan Dictionary. USE (verb) definition and synonyms', *Macmillan Dictionary*.

Malhotra, N. K., & Peterson, M. 2006, 'Basic marketing research: A decision making approach (2nd ed.)', *Upper Saddle River, NJ: Pearson Education. Management*, vol. 25, no. 8, pp. 269-274.

Mantri, C. 2021, 'What are the types of E-money?', *CreditMantri*. Available at: https://www.creditmantri.com/forum-what-are-the-types-of-e-money/

Marikyan, D. & Papagiannidis, S. 2023, 'Unified Theory of Acceptance and Use of Technology: A review', *In S. Papagiannidis (Ed), TheoryHub Book.*

Martínez Álvarez, J.-R., García Alcón, R., Villarino Marín, A., Marrodán Serrano, M. D., & Serrano Morago, L. 2015, 'Eating habits and preferences among the student population of the Complutense University of Madrid', *Public Health Nutrition*, vol. 18, no. 14, pp. 2654–2659, DOI:10.1017/s1368980015000026

McCann, L., Hutchison, N., & Adair, A. 2020, 'Student residences: Time for a partnership approach?', *Journal of Property Investment & Finance*, vol. 38, no. 2, pp. 128–146, DOI:10.1108/jpif-11-2019-0140

Md Noor, K. A., & Jusoh Yusoff, A. F. 2022, 'Issues in the application of wakalah (agency) in E-wallet', *International Journal of Academic Research in Business and Social Sciences*, vol. 12, no. 11, DOI:10.6007/ijarbss/v12-i11/15119

Mensah, M. N. A., & Jumah, A. 2021, 'Electronic money and consumer spending behaviour: Evidence from Ghana', *Advances in Management and Applied Economics*, pp. 105–121, DOI:10.47260/amae/1136a

Mersol, M. 2021, 'A look at food and beverage in Malaysia', *Mersol & Luo*. Available at: https://www.mersolluo.com/a-look-at-food-and-beverage-in-malaysia/

Meuthia, R., Ananto, R., Afni, Z., & Setiawan, Ilham. 2020, 'Understanding millenials' intention to use E-money: A study of students' university in Padang', *Proceedings of the Proceedings of the 1st International Conference on Applied Social Sciences, Business, and Humanity, ICo-ASCNITY, 2 November 2019, Padang, West Sumatra, Indonesia*, DOI:10.4108/eai.1-11-2019.2294012

Middleton, F. 2023, 'Reliability vs. validity in research: Difference, types and examples', *Scribbr*. Available at: https://www.scribbr.com/methodology/reliability-vs-validity/

Ming, L. Y. 2022, 'College students have much to gain from working part-time', Available at: https://www.nst.com.my/opinion/letters/2022/11/849313/college-students-have-much-gain-working-part-time

Ming, S. S. 2021, 'E-money: Toward promoting greater economic efficiency. E-money: Toward promoting greater economic efficiency - The Malaysia International Islamic Financial Centre (MIFC)', Available at: https://www.mifc.com/-/e-money-toward-promoting-greater-economic-efficiency

Moh, J. 2023, 'Mixed reviews on the F&B industry's outlook', Available at: https://themalaysianreserve.com/2023/01/05/mixed-reviews-on-the-fb-industrys-outlook/

Mohammadi, F. 2022, 'E-money: What it is and how to use it', *Youth Time Magazine*. Available at: https://youthtimemag.com/e-money-what-it-is-and-how-to-use-it/

Momani, A. M. 2020, 'The unified theory of acceptance and use of Technology', *International Journal of Sociotechnology and Knowledge Development*, vol. 12, no. 3, pp. 79–98, DOI:10.4018/ijskd.2020070105

Moorwand. 2021, 'E-money issuer - electronic money services - EMI " moorwand', *Moorwand.*

Mulyana, E., Tetep, T., Hamdani, N. A., & Uno, I. C. 2021, 'Less cash society movement: The impact of using E-money on social changes', *Proceedings of the 6th Global Conference on Business, Management, and Entrepreneurship (GCBME 2021)*, DOI:10.2991/aebmr.k.220701.006

Musselwhite, C., Avineri, E., & Susilo, Y. 2020, 'Editorial jth 16 –the coronavirus disease covid-19 and implications for transport and health', *Journal of Transport & Health*, vol. 16, pp. 100853, DOI:10.1016/j.jth.2020.100853

Myers, G. S. 2021, 'Convenient payment options— it's what customers want. Convenient Payment Options— It's What Customers Want | University of Maryland Extension', Available at: https://extension.umd.edu/resource/convenient-payment-options-its-what-customers-want

Newell, G., & Marzuki, M. J. 2018, 'The emergence of student accommodation as an institutionalised property sector', *Journal of Property Investment & Finance*, vol. 36, no. 6, pp. 523–538, DOI:10.1108/jpif-01-2018-0007

Pallant, J. 2011, 'Multivariate analysis of variance', *SPSS survival manual. Crows Nest: Allen & Unwin,* 20(11), pp. 283-96.

Papadopoulos, G. 2007, 'Electronic money and the possibility of a cashless society', *SSRN Electronic Journal*, DOI:10.2139/ssrn.982781

Payset.io. 2022, 'How is E-currency changing the economy?', *Virtual IBAN Account Provider.* Available at: https://www.payset.io/post/how-is-e-currency-changing-the-economy

Pelletier, J. E., & Laska, M. N. 2013, 'Campus food and beverage purchases are associated with indicators of diet quality in college students living off campus', *American Journal of Health Promotion*, vol. 28, no. 2, pp. 80–87, DOI:10.4278/ajhp.120705-quan-326

Pillai, V. 2020, 'How boost is innovating cashless payments in Malaysia. CleverTap. Ping, L. Y., & Ong, L. (2021, August 1)', *Updates to laws relating to e-money in Malaysia*. www.thesundaily.my. Available at: https://clevertap.com/blog/boost-cashless-payments-in-malaysia/

Pradigdya, C. A., & Ginardi, R. V. 2019, 'User Awareness Design for Electronic Money User Using Protection Motivation Theory and NIST 800-50 framework', *IPTEK Journal of Proceedings Series*, vol. 0, no. 5, pp. 416, DOI:10.12962/j23546026.y2019i5.6380

Putri Pertiwi, I. F., Puspita, R. E., Mohd Thas Thaker, M. A. B., Pratiwi, S. K., & Mustofa, N. H. 2021, 'An Evaluation of E-Money's Growth, Barriers, and Challenges to Build Green Finance on Post-Covid Era', *E3S Web of Conferences*, pp. *317*, DOI:10.1051/e3sconf/202131705014

Qu, B., Wei, L., & Zhang, Y. 2022, 'Factors affecting consumer acceptance of electronic cash in China: An empirical study', *Financial Innovation*, vol. 8, no. 1, DOI:10.1186/s40854-021-00312-7

Racine, E. F., Schorno, R., Gholizadeh, S., Bably, M. B., Hatami, F., Stephens, C., Zadrozny, W., Schulkind, L., & Paul, R. 2022, 'A college fast-food environment and student food and beverage choices: Developing an integrated database to examine food and beverage purchasing choices among college students', *Nutrients*, vol. 14, no. 4, pp. 900, DOI:10.3390/nu14040900

Ramasamy, S., Guru, B., Vaithilingam, S., & Nair, M. S. 2006, 'Development of E-money in Malaysia - researchgate', Available at: https://www.academia.edu/7199107/Development_of_E-Money_in_Malaysia

Renée, A. J. &. 2023, 'Malaysian food: 35 dishes to try in Malaysia', *Will Fly for Food.* Available at: https://www.willflyforfood.net/malaysian-food-guide/

Reynolds, A. 2020, 'Geographies of purpose built student accommodation: Exclusivity, precarity and (im)mobility', *Geography Compass*, vol. 14, no. 11, DOI:10.1111/gec3.12543

Romero-Blanco, C., Hernández-Martínez, A., Parra-Fernández, M. L., Onieva-Zafra, M. D., Prado-Laguna, M. del, & Rodríguez-Almagro, J. 2022, 'Food preferences in undergraduate nursing students and its relationship with food addiction and physical activity', *International Journal of Environmental Research and Public Health*, vol. 19, no. 7, pp. 3858, DOI:10.3390/ijerph19073858

Roscoe, J. T. 1975, 'Fundamental research statistics for the behavioral sciences (Second ed.)', *New York: Holt Rinehart and Winston.*

Sahi, S. K. 2023, 'Understanding gender differences in money attitudes: Biological and psychological gender perspective', *International Journal of Bank Marketing*, vol. 41, no. 3, pp. 619–640, DOI:10.1108/ijbm-08-2022-0352

Salmones, M. del, Crespo, A. H., & Bosque, I. R. 2005, 'Influence of corporate social responsibility on loyalty and valuation of services', *Journal of Business Ethics*, vol. 61, no. 4, pp. 369–385, DOI:10.1007/s10551-005-5841-2

Sani, R. 2019, 'Money woes at University | New Straits Times', Available at: https://www.nst.com.my/education/2019/04/475754/money-woes-university

Santander. 2023, 'Why do we still use cash?', *Web Corporativa Santander*. Available at: https://www.santander.com/en/stories/why-do-we-still-use-cash

Saunders, M., Lewis, P., & Thornhill, A. 2016, *Research methods for business students. Pearson Education Limited.*

Sekaran, U. 2006, 'Research Methods for Business: A Skill Building Approach', *Hoboken, NJ: John Wiley & Sons.*

Sekaran, U., & Bougie, R. 2010, 'Research methods for business: A skill-building approach (5th ed.)', *Haddington: John Wiley & Sons.*

Shea, S. 2022, 'What is Data Security? the ultimate guide', *Security*. Available at: https://www.techtarget.com/searchsecurity/Data-security-guide-Everything-you-need-to-know

Silva, C. 2017, 'Research design - the new perspective of research methodology', *British Journal of Education, Society & Behavioural Science*, vol. 19, no. 2, pp. 1–12, DOI:10.9734/bjesbs/2017/30274

Simpeh, F., & Shakantu, W. 2020, 'An on-campus university student accommodation model', *Journal of Facilities Management*, vol. 18, no. 3, pp. 213–229, DOI:10.1108/jfm-03-2020-0017

Siswanto, T., Shofiati, R., & Hartini, H. 2018, 'Acceptance and utilization of technology (utaut) as a method of technology acceptance model of mitigation disaster website', *IOP Conference Series: Earth and Environmental Science*, vol. 106 pp. 012011, DOI:10.1088/1755-1315/106/1/012011

Specialist, G. 2023, 'Cash versus Emoney – Pros, cons and predictions. Money Gate. SQUARE. What is a contactless payment?', *The Bottom Line by Square.* Available at: https://money-gate.com/cash-vs-emoney-pros-cons-predictions/

Statista Research Department. 2023, 'Malaysia: Value of electronic money transactions 2022', *Statista.* Available at: https://www.statista.com/statistics/957839/electronic-money-transactions-value-malaysia/

Statista Research Department. 2023, 'Topic: Digital payments in Malaysia', *Statista.* Available at: https://www.statista.com/topics/10601/digital-payments-in-malaysia/#topicOverview

Strelenko, O. 2018, 'Blockchain and transaction speed: Why does it matter?', *Medium*. Available at: https://medium.com/@s_o_s/blockchain-and-transaction-speed-why-does-it-matter-80bfd100fa89

StudyMalaysia.com. 2015, '5 ways to fund your education', *StudyMalaysia.com*. Available at: https://studymalaysia.com/education/top-stories/5-ways-to-fund-your-education

StudyMalaysia.com. 2020, 'A university student's cost of living in Malaysia', *StudyMalaysia.com*. Available at: https://www.studymalaysia.com/education/top-stories/a-university-students-cost-of-living-in-malaysia

StudyMalaysia.com. 2022, 'A glance at the Malaysian education system', *StudyMalaysia.com*. Available at: https://www.studymalaysia.com/education/higher-education-in-malaysia/a-glance-at-the-malaysian-education-system

Sukmajaya, S. 2017, 'Spending habits among Malaysian universi', *Academia.edu*. Available at: https://www.academia.edu/34581611/SPENDING_HABITS_AMONG_MALAYSIAN_UNIVERSI

SurveyMonkey. 2023, 'Causal research: How finding links can lead to business decisions', *SurveyMonkey*. Available at: https://www.surveymonkey.com/mp/how-causal-research-leads-business-decisions/

Susanto, P., Hoque, M. E., Hashim, N. M., Shah, N. U., & Alam, M. N. 2020, 'Moderating effects of perceived risk on the determinants–outcome nexus of E-money behaviour', *International Journal of Emerging Markets*, vol. 17, no. 2, pp. 530–549, DOI:10.1108/ijoem-05-2019-0382

Tam, R., Yassa, B., Parker, H., O'Connor, H., & Allman-Farinelli, M. 2017, 'University Students' on-campus food purchasing behaviors, preferences, and opinions on food availability', *Nutrition*, vol. 37, pp. 7–13, DOI:10.1016/j.nut.2016.07.007

Tan, J. 2019, 'Boost introduces new features and rewards programmes', *RinggitPlus*. Available at: https://ringgitplus.com/en/blog/e-wallet/boost-introduces-new-features-and-rewards-programmes.html

Taylor, S. 2023, 'Data security', *Corporate Finance Institute*. Available at: https://corporatefinanceinstitute.com/resources/data-science/data-security/

Tech Target Contributor. 2021, 'What is contactless payment?: Definition from TechTarget', *Customer Experience*. Available at: https://www.techtarget.com/searchcustomerexperience/definition/contactless-payment

tenner, Laporche. 2016, 'Lack of transportation = lack of education. *Medium*', Available at: https://medium.com/pedagogical-promise/lack-of-transportation-lack-of-education-ff0d8650a785

Tetik, N., & Albulut, I. I. 2022, 'The study of developing a financial literacy scale for university students in the Digital Era', *Handbook of Research on Digital Violence and Discrimination Studies*, pp. 652–684.

The Investopedia Team. 2022, 'What is money? definition, history, types, and Creation', *Investopedia*. Available at: https://www.investopedia.com/insights/what-is-money/

The Upwork Team. 2021, 'What is Data Security?', *the importance of data security | Upwork*. Available at: https://www.upwork.com/resources/data-security

thefrugalstudent. 2022, 'What you need to know about ShopeePay: Is it worth using?', *thefrugalstudent*. Available at: https://thefrugalstudent.com/what-you-need-to-know-about-shopeepay-is-it-worth-using/

Thompson, G. 2021, 'Importance of entertainment in a student's life', *Broke in London*. Available at: https://brokeinlondon.com/importance-of-entertainment-in-a-students-life/

TNG. 2021, 'What is the touch 'n go ewallet? – touch 'N go ewallet help centre. *What is the Touch 'n Go eWallet?*', Available at: https://support.tngdigital.com.my/hc/en-my/articles/360036093973-What-is-the-Touch-n-Go-eWallet-

Upendra. 2017, 'Difference between leisure and entertainment', *Compare the Difference Between Similar Terms*. Available at: https://www.differencebetween.com/difference-between-leisure-and-vs-entertainment/

Venkatesh, V., & Davis, F. D. 2000, 'A theoretical extension of the technology acceptance model: Four longitudinal field studies', *Management Science*, vol. 46, no. 2, pp. 186–204, DOI:10.1287/mnsc.46.2.186.11926

Venkatesh, V., Morris, M. G., Davis, G. B., & Davis, F. D. 2003, 'User acceptance of information technology: Toward a unified view', *MIS Quarterly*, vol. 27, no. 3, pp. 425-478, DOI:10.2307/30036540

Wardana, A. A., Saputro, E. P., Wahyuddin, M., & Abas, N. I. 2022, 'The effect of convenience, perceived ease of use, and perceived usefulness on intention to use E-wallet', *Proceedings of the International Conference on Economics and Business Studies (ICOEBS 2022)*, DOI:10.2991/aebmr.k.220602.051

Weerasinghe, I. M. S., & Fernando, R. L. 2018, 'University facilities and student satisfaction in Sri Lanka', *International Journal of Educational Management*, vol. 32, no. 5, pp. 866–880, DOI:10.1108/ijem-07-2017-0174

West, C. 2021, 'A surprising reason preventing some students from finishing college: Lack of transportation', *The Washington Post*. Available at: https://www.washingtonpost.com/education/2021/12/10/college-students-transportation-struggles/

Widayat, W., Masudin, I., & Satiti, N. R. 2020, 'E-money payment: Customers' adopting factors and the implication for open innovation', *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 6, no. 3, pp. 57, DOI:10.3390/joitmc6030057

Widiyati, D., & Hasanah, N. 2020, 'Factors affecting the use of E-MONEY (study on E-MONEY user in city of south tangerang)', *ACCOUNTABILITY*, vol. 9, no. 1, pp. 36, DOI:10.32400/ja.28881.9.1.2020.36-45

Wong, J. 2022, 'E-wallet adoption gaining momentum in rural areas', Available at: https://www.freemalaysiatoday.com/category/highlight/2022/08/04/e-wallet-adoption-gaining-momentum-in-rural-areas/

Wu, R., Wang, G., & Yan, L. 2019, 'The effects of online store informativeness and entertainment on consumers' approach behaviors', *Asia Pacific Journal of Marketing and Logistics*, vol. 32, no. 6, pp. 1327–1342, DOI:10.1108/apjml-03-2019-0182

Wulandari, D., Soseco, T., & Narmaditya, B. S. 2016, 'Analysis of the use of electronic money in efforts to support the less cash society', *International Finance and Banking*, vol. 3, no. 1, pp. 1, DOI:10.5296/ifb.v3i1.8802

Xuan, L. T., Khoa, T. T., & Kha, N. T. 2020, 'Reasons for customers reluctance to use electronic payments – a study in Ho Chi Minh City', *HCMCOUJS - ECONOMICS AND BUSINESS ADMINISTRATION*, vol. 9, no. 2, DOI:10.46223/hcmcoujs.econ.en.9.2.155.2019

Yau, P. T. 2019, ' Shopee releases its own E-Wallet, ShopeePay', *RinggitPlus*. Available at: https://ringgitplus.com/en/blog/e-wallet/shopee-releases-its-own-e-wallet-shopeepay.html

Yin, A. C. P. 2021, 'Lazada's upgraded wallet offers increased transaction limit, withdrawal feature', *RinggitPlus*. Available at: https://ringgitplus.com/en/blog/e-wallet/lazadas-upgraded-wallet-offers-increased-transaction-limit-withdrawal-feature.html

Yu, E. 2017, 'Alipay brand expands into Southeast Asia via lazada', *ZDNET*. Available at: https://www.zdnet.com/finance/alipay-brand-expands-into-southeast-asia-via-lazada/

Yunus, R. 2020, 'Covid-19 continues to fuel e-wallet - the malaysian reserve', Available at: https://themalaysianreserve.com/2020/11/30/covid-19-continues-to-fuel-e-wallet/

Zailan, A. 2022, 'F&B trends set to dominate Malaysia in 2023', *Dropee*. Available at: https://www.dropee.com/pages/fb-trends-set-to-dominate-malaysia-in-2023/

Zakaria, I. 2021, 'In a nutshell: Bank Negara Malaysia's new E-money policy draft', *Fintech News Malaysia*. Available at: https://fintechnews.my/27578/e-wallets-malaysia/bank-negara-malaysia-bnm-e-money-regulation/

Zhou, T., Lu, Y., & Wang, B. 2010, 'Integrating TTF and Utaut to explain mobile banking user adoption', *Computers in Human Behavior*, vol. 26, no. 4, pp. 760–767, DOI:10.1016/j.chb.2010.01.013

Źróbek-Różańska, A. 2022, 'Stay or leave the city? students and rented accommodation during covid-19 pandemic', *Cities*, vol. 128, pp. 103788, DOI:10.1016/j.cities.2022.103788

APPENDIX

Sample size determination by Krejcie and Morgan (1970)

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

QUESTIONNAIRE OF THE FACTORS INFLUENCING UNIVERSITY STUDENTS' EXPENDITURE TO USE E-MONEY IN MALAYSIA.

I am Hoh Sek Lii, from fourth year student of Universiti Teknikal Malaysia Melaka (UTEM) in Bachelor Degree in Technology Management (High Technology Marketing) with Honours. I would like to conduct a survey regarding to my title for my final year project. The purpose of this survey is to study the factors infuencing university students' expenditure to use e-money in Malaysia. This questionnaire consists three part which are section A, B and C. The information provided by respondents will be kept private and ensure security safety. This questionnaire will take your precious time in filling this questionnaire. Thank you for your cooperation to give your respond to my questionnaire.

SECTION A: BACKGROUND OF THE RESPONDENTS

This section is to collect the information of respondents about the personal details. Please tick the correct one in the space provided.

GENDER	
MALE	
FEMALE	

AGE	
UNDER 18 YEARS OLD	
18-20 YEARS OLD	
21-23 YEARS OLD	
ABOVE 23 YEARS OLD	

RACE	
MALAY	
CHINESE	
INDIAN	

HOW MUCH IS YOUR MONTHLY ALLOWANCE?	
RM500 OR LESS	

RM501 - RM1000	
RM1000 ABOVE	

WHICH STATES ARE YOU FROM?	
NORTHERN REGION (Perlis, Kedah, Penang and Perak)	
EAST COAST REGION (Kelantan, Pahang and Terengganu)	
CENTRAL REGION (Selangor, Kuala Lumpur, Putrajaya)	
SOUTHERN REGION (Negeri Sembilan, Melaka and Johor)	
EAST MALAYSIA (Sabah and Sarawak)	

YEAR OF STUDY	
1	
2	
3	
4	

E-MONEY APPLICATION USED	
1 APP	
2 APPS	
3 APPS	
4 APPS	
MORE THAN 5 APPS	

FREQUENCY OF E-MONEY USED PER MONTH	
1-2 TIMES	
3-5 TIMES	

6-10 TIMES	
>10 TIMES	

SECTION B: UTAUT FACTORS

This section is to identify the factors that influence university students' expenditure to use e-money in Malaysia. Please indicate to what extent you agree with the following statements by using the appropriate scale (tick √ in the space):

Likert Scale

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Performance Expectancy						
	DESCRIPTION	**1**	**2**	**3**	**4**	**5**
PE 1	I use E-money because it allows me to conveniently access payment services from anywhere.					
PE 2	I use E-money because I can simply and clearly understand the connection of payment services.					
PE 3	I feel that using E-money has an expected effect in payment transactions.					
PE 4	Using E-money will help me finish financial transactions more quickly.					
PE 5	The use of E-money is consistent with all areas of my occupation and life style.					
PE 6	Using E-money will make payment transactions less stressful for me.					
PE 7	It will be faster for me to use E-money since I would be able to access payment transactions 24 hours.					
Effort Expectancy						
	DESCRIPTION	**1**	**2**	**3**	**4**	**5**
EE 1	The use of E-money can help me speed up payment transactions.					

EE 2	The use of E-money can significantly improve the quality of payment transaction results because it does not take much time.					
EE 3	The use of E-money can help me make payment transactions more secure.					
EE 4	The use of E-money makes it easy for me to find out payment information.					
EE 5	The use of E-money helps me always have full payment information.					
EE 6	E-money was practical and it helps me increase efficiency in the payment transactions.					
Social Influence						
	DESCRIPTION	**1**	**2**	**3**	**4**	**5**
SI 1	Many people encouraged me to utilise E-money for payment transactions.					
SI 2	People who influence me think that I should use E-money in the payment transactions.					
SI 3	People who are familiar with me think that I should use E-money in the payment transactions.					
SI 4	Because most of my classmates use it, I utilise E-money while making payments.					
SI 5	My family encourages me to utilise E-money for financial transactions.					
Facilitating Conditions						
	DESCRIPTION	**1**	**2**	**3**	**4**	**5**
FC 1	I have control over the use of E-money in the payment transactions.					
FC 2	The usage of E-money in payment transactions boosts my productivity since it allows me to do numerous payment transactions from any location.					
FC 3	The presence of evidence on each payment transaction that is finished with the payment time is solid evidence of E-money payment.					

FC 4	When I utilise E-money in my payment transactions, I am certain that the transaction conditions are guaranteed.					
FC 5	I am certain that the payment transactions is safe when I use E-money in the payment transactions.					
FC 6	I have a smartphone and have received approval from payment service providers to utilise E-money in payment transactions.					
Trustworthiness						
	DESCRIPTION	**1**	**2**	**3**	**4**	**5**
TW 1	The e-money application can be trusted in protecting my money.					
TW 2	I believe the e-money application is safe to use.					
TW 3	The e-money application was reliable when I needed it.					
TW 4	I'm sure I can use my money in the e-money app whenever I want.					

Section C: Intention of university students' expenditure to use e-money

This section is looks at intention of university students' expenditure to use e-money. Please indicate to what extent you agree with the following statements by using the appropriate scale. Please tick (√) on your answer.

Likert Scale

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

	DESCRIPTION	**1**	**2**	**3**	**4**	**5**
1	I intend to continue to use E-money in the payment transactions in the future.					
2	I will use E-money in the payment transactions if I need to do payments.					
3	I will recommend E-money in the payment transactions to other people.					

Gantt Chart of Final Year Project (FYP) 1

WEEK/ ACTIVITIES	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
FYP talk																
Search for FYP topic																
Meeting with supervisor																
Topic discussion																
Title confirmation																
RO & RQ Construction																
Submission Chapter 1																
Submission Chapter 2																
Submission Chapter 3																
First draft of FYP 1																
Submission of FYP 1																
Presentation 1																
Revised of FYP 1																

MID SEMESTER BREAK

Gantt Chart of Final Year Project (FYP) 2

WEEK/ ACTIVITIES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Prepare the questionnaire									MID SEMESTER BREAK							
Discuss with FYP supervisor to check the questionnaire																
Prepare the Google form and start data collection																
Data analysis																
Report writing for Chapter 4																
Submission Chapter 4																
Report writing for Chapter 5																
Submission Chapter 5																
First draft of FYP 2																
Submission of FYP 2																
Presentation 2																
Revised of FYP 2																