

EXPLORING THE ADOPTION OF DIGITAL FINANCE
AMONG UNIVERSITY STUDENTS IN MALAYSIA USING
THE TECHNOLOGY ACCEPTANCE MODEL (TAM)

BY

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DECLARATION

We hereby declare that:

- (1) This undergraduate research project is the end result of my own work and that due acknowledgement has been given in the references to ALL sources of information be they printed, electronic, or personal.
- (2) No portion of this research project has been submitted in support of any application for any other degree or qualification of this or any other university, or other institutes of learning.
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This research is dedicated to Universiti Tunku Abdul Rahman for providing me an opportunity to enhance and utilize the knowledge learned throughout the three-years finance (Fintech) course.

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LIST OF ABBREVIATIONS

AI	Artificial intelligence
AVE	Average Variance Extracted
CR	Composite Reliability
CVPAT	Cross-Validated Predictive Ability Test Result
EVs	External Variables
d_G	geodesic discrepancy
DFU	Digital Finance Usage
DV	Dependent Variable
HTMT	Heterotrait Monotrait ratio
IVs	Independent Variables
NFI	Normed Fit Index
PEOU	Perceived Ease of Use
PLS-SEM	Partial Least Squares Structural Equation Modelling
PR	Perceived Risk
PT	Perceived Trust
PU	Perceived Usefulness
SEM	Structural Equation Modelling
SI	Social Influence
SPSS	Statistical Package for Social Sciences
SRMR	Standardized Root Mean Square Residual
SSL	Secure Sockets Layer
TAM	Technology Acceptance Model
TSL	Transport Layer Security
d_ULS	Unweighted Least Squares discrepancy
VIF	Variance Inflation Factor

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PERFACE

This research report, titled Exploring the Adoption of Digital Finance Among University Students in Malaysia Using the Technology Acceptance Model (TAM), is prepared to fulfill the partial requirements for the Bachelor of Finance (Financial Technology) with Honours at Universiti Tunku Abdul Rahman (UTAR). The report represents the culmination of my academic journey and reflects the skills, knowledge, and insights I have gained throughout my years of study.

This study was undertaken with the aim of deepening my understanding of how digital finance is adopted by university students, a demographic that plays a vital role in Malaysia's transition toward a digitally driven financial ecosystem. Guided by the Technology Acceptance Model (TAM), the research examines key variables such as perceived ease of use (PEOU), perceived usefulness (PU), social influence (SI), perceived risk (PR), and perceived trust (PT). Through these factors, the study aims to investigate digital finance usage among university students and to provide practical recommendations that support the development of digital finance initiatives in Malaysia.

The preparation of this research project has been an invaluable learning experience, requiring meticulous planning, data collection, data analysis, and critical interpretation. It demanded not only a strong understanding of the subject matter but also the development of essential analytical, decision-making, and problem-solving skills.

I hope this report contributes to a better understanding of digital finance adoption and serves as evidence of my commitment to academic excellence. It is my sincere hope that the findings of this study will offer meaningful insights for researchers, policymakers, and industry practitioners, and establish a foundation for future studies in the evolving field of financial technology.

ABSTRACT

The rapid evolution of digital finance in Malaysia has driven extensive research into exploring the adoption of digital finance among university students in Malaysia using Technology Acceptance Model (TAM). This research explores digital finance using fintech technologies with mobile applications such as Touch 'n Go eWallet, Shopee Pay, Grab Pay, Maybank2u, and Boost. It aims to identify the convenience, security, and cost savings. This study proposes an integrated model by synthesising Technology Acceptance Model (TAM) with perceived ease of use and perceived usefulness as the independent variables, digital finance usage (DFU) has been employed as the dependent variable and social influence, perceived risk, and perceived trust as the external variables. This study uses the quantitative approach research design with questionnaires distributed to university students in Malaysia. Data has been collected from 240 respondents and has been analyzed using Partial Least Squares Structural Equation Modelling (PLS-SEM) in SmartPLS. Outer loadings, composite reliability (CR), average variance extracted (AVE), discriminant validity, multicollinearity test, and structural equation modelling (SEM) have been checked in SmartPLS. The model explained 24.10%, 13.50%, and 28.70% of the variance in digital finance usage, perceived ease of use, and perceived usefulness respectively. The findings of this study in the original structural model, Perceived Usefulness has a strong and significant positive impact on Digital Finance Usage, Social Influence positively and significantly affects Perceived Usefulness, Perceived Risk positive and significant effect on Perceived Ease of Use, Perceived Trust positively and significantly affects Perceived Ease of Use and Perceived Usefulness, Perceived Ease of Use does not significantly affect Digital Finance Usage, Social Influence does not significantly affect Perceived Ease of Use, and Perceived Risk does not significantly affect Perceived Usefulness are statistically significant at the 5% level. Policymakers should prioritize cybersecurity and data protection in digital finance as these variables are considered important by the university students. Financial institutions for digital finance providers should leverage social recommendations and engaging platform features that can enhance trust, perceived usefulness, and continued usage among the student demographic.

Keywords: Digital Finance, Fintech, Technology Acceptance Model (TAM), Malaysia

Subject Area: HG1710 -1710.5 Electronic funds transfers

CHAPTER 1: INTRODUCTION

1.0 Introduction

The rapid evolution of digital finance for digital technologies have reshaped how financial systems operate worldwide with the given rise of digital finance as a pivotal component of modern economies (Ozili, 2018). Digital finance has services that use the application of financial technology such as mobile banking, e-wallets, and online payment platforms that have transformed financial interactions globally. Digital finance uses the digital technologies represented for understanding the digital finance acceptance.

The adoption of digital finance has been individuals, businesses, and institutions embrace financial industry with fintech application to improve financial services processes for financial institutions to service with customers use the digital finance such as online banking, mobile wallets, and cryptocurrency with fintech solutions to perform financial transactions and services (Kajol et al., 2022).

In Malaysia, the digital finance landscape is expanding rapidly, with contactless transactions reaching 68.9% of physical premise transactions in 2022 (The Malaysian Insight, 2024). E-payment adoption surged by 23.7% from 2022 to 2023, reflecting growing reliance on digital tools. However, challenges persist including security concerns such as phishing and data breaches with digital divide, where rural populations lag in access (Gazali & Jumadi, 2022). Moreover, the encouragement of cashless transactions promotes the transition to a cashless economy, resulting in increased financial in digital finance promote transparency (Li et al., 2024).

The Technology Acceptance Model (TAM) provides a theoretical framework emphasizing perceived usefulness and perceived ease of use and is widely applied to explain digital service adoption (Schorr, 2023). In Malaysia, TAM extensions of external factors such as integrating social influence, perceived risk, and perceived trust with customer service have been used to address fintech-specific challenges (Rahmiati & Jelitalia, 2021, Gazali & Jumadi, 2022). For example, studies on digital banking and e-wallets found that user-friendly interfaces and security assurances directly influence adoption intentions (Aliza et al., 2025).

1.1 Research Background

1.1.1 Digital Finance Among University Students in Malaysia

Fintech is defined as a new financial industry that includes technology application to improve financial activities (Liu et al., 2024). Besides that, Fintech is also known as any innovation that improves financial service processes by proposing technology solutions into distinct business situations (Leong & Sung, 2018). With the advancement of technology, technological integration is prevalent in the financial industry (Jourdan et al., 2023). There are various innovations emerging in the financial industries that have incorporated technology such as mobile payment, peer-to-peer lending, robo-advisory, insurance technology and crypto-assets have made financial services more accessible and convenient to consumers (Firmansyah et al., 2022).

Digital finance is using fintech with the mobile applications compared with the other technologies created to improve the traditional automate form with finance and fintech to the adoption of digital finance among university students in Malaysia such as Touch 'n Go eWallet, Shopee Pay, Grab Pay, Maybank2u, and Boost (Sehat et al., 2023) because they are using alternative finance such as artificial intelligence, blockchain, cloud computing, and data are key technologies driving innovation in the financial sector (Houda Fansa, 2024).

The digital finance for artificial intelligence is enabling financial institutions to automate processes, analyze customer data, and offer personalized services through technologies like chatbots and biometric identification. Artificial intelligence (AI) is a breakthrough technology for the fintech industry without digital finance among university students in Malaysia (Amog Adahallikar, 2024). Blockchain with digital finance is increasing the efficiency of financial transactions and enabling new decentralized finance (DeFI) applications with digital finance among university students in Malaysia (Bakare et al., 2024). Cloud computing with cloud-based systems is allowing financial institutions to reduce IT costs, improve data management, and more easily expand into new markets by digital finance among university students in Malaysia (Teo, 2025). The data check among university students in data analysis is to make better decisions with digital finance for alternative finance in Malaysia (Siti Khadijah, 2024).

In this era of digitalization, digital finance has leveraged technology to revolutionize payment systems, becoming a powerful force in financial transactions (Ly & Ly, 2024). Traditional cash transactions are rapidly being replaced by the convenience and efficiency of digital finance (Paygration, 2024). Consumers can conveniently make payment products and services can ease and quickly settle for payments with a simple action on their device.

According to the European Commission (2022), digital finance refers to the use of technological innovations to improve banking and payment services in Malaysia by university students commonly use digital finance solutions such as e-wallets, mobile banking apps, and QR code payment systems driven by accessibility and ease of use. Furthermore, university students are early adopters of technology making this important group in the adoption of digital finance innovations. Their engagement with digital finance not only reflects current trends but also influences financial institutions to develop solutions tailored to younger consumers aiming to build long-term customer relationships (Tariq et al., 2024).

University students are chosen because they represent the important segment of digital finance. Students are highly exposed to mobile applications and online services with active users of digital finance for daily activities such as food preparation, transportation, fees, and online shopping with the payments in digital finance for university students (Renuka Kasera & Banerjee, 2025). The younger generation is selected because they grew up with smartphones and internet access with technology-savvy groups, more willing to experiment with new technologies in fintech solutions (Mohd Johan et al., 2022). Their acceptance behaviour, different from older generations, will dominate Malaysia's future digital economy. The younger generation also tends to have higher expectations for speed, convenience, and ease of use with greater reliance on QR payments, e-wallets, and online banking in Malaysia digital finance will evolve in the coming years (Gan et al., 2025).

1.1.2 Technology Acceptance Model (TAM)

They are studying the Technology Acceptance Model (TAM) for exploring the adoption of digital finance among university students in Malaysia using Technology Acceptance Model (TAM). This digital finance has useful platforms transaction by basis to purchase with product and service. Digital finance uses digital technology to educate students by institutions adopting the online payment development in payment systems for education sectors (Haleem et al., 2022). For this university students into a digital finance environment also save time from processing the payment systems (Chelvarayan et al., 2022). They can use digital finance to predict adoption of new technology including digital finance with fintech in Technology Acceptance Model (TAM).

The Technology Acceptance Model (TAM) provides a theoretical framework to analyze the factors influencing adoption of digital finance among university students in Malaysia. TAM is a position that has two primary constructs: perceived ease of use (PEOU) and perceived usefulness (PU) play a significant role

in determining willingness to unilaterally adopt for university students with intention for the technology adoption of digital finance (Sullivan, 2016).

Digital finance is using perceived ease of use (PEOU) to the simplicity and convenience of using such systems and perceived usefulness (PU) refers to the extent to which university students believe that digital finance improves transaction efficiency (Chelvarayan et al., 2022). TAM with other factors such as social influence (SI), perceived risk (PR), and perceived trust (PT) can also impact adoption decision making for digital payment systems among university students in Malaysia using the Technology Acceptance Model (TAM).

The Technology Acceptance Model (TAM) is also suitable because high explanatory power compared to other adoption models, can simplify and make it easier to operationalize in quantitative studies, and strong reliability with many past studies for consistency in technology adoption research (Schorr, 2023). This is because the Technology Acceptance Model (TAM) strong theoretical framework in foundation needs to explain user behaviour with the nature of digital finance in fintech.

Although many researchers have applied with TAM, it is important to continue digital finance continuously with fintech such as mobile payments and banking apps (Amnas et al., 2025). Past research studies do not fully reflect its new features in digital finance platforms, increase cybersecurity concerns, and integration of AI-driven services in digital banking (Ahmed et al., 2025). The Technology Acceptance Model (TAM) has been widely used, applying it to a new context: digital finance adoption among Malaysia university students still provides new insights that reflect current technology trends, updated university students behaviour patterns, and local factors unique to Malaysia (Leong & Chaichi, 2021). The Technology Acceptance Model (TAM) is not outdated and has continued to be one of the most reliable and accepted models for modern technology adoption in this research.

1.2 Problem statement

Exploring adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM) presents both opportunities and challenges. While mobile payments and online banking are widely accessible, barriers such as perceived risk and perceived trust hinder widespread adoption. The Technology Acceptance Model (TAM) has been widely used to explain technology adoption with research primarily focuses on general fintech users rather than university students. Furthermore, perceived risk and perceived trust remain underexplored within TAM-based digital finance adoption studies in Malaysia, despite their critical role in financial transactions (Wang, 2025). They are understanding these factors with fintech firms and policymakers may struggle to develop effective strategies to build confidence in digital financial solutions.

Then, the external factors that bring these issues include social influence, perceived risk, and perceived trust include this study exploring the adoption of digital finance among university students in Malaysia using Technology Acceptance Model (TAM).

Social influence refers to the extent to which university students that are important such as family and friends use the new technology system (Rizkalla et al., 2024) expect to use digital finance. In a highly connected and socially driven environment with university students such as peer pressure (Nagarajan et al., 2022) and societal norms (Fahrati, 2023) can significantly impact adoption decisions. For instance, digital finance is widely used and endorsed within a university student's social circle. They may feel compelled to adopt these systems to fit in or avoid being left behind. The influence of social media, financial literacy campaigns, and university initiatives also plays a role in shaping students.

Perceived risk encompasses the potential uncertainties and negative outcomes associated with using digital finance such as financial loss, data breaches, and fraudulent activities (Zhao & Khaliq, 2024). For university students who may have limited financial resources and experience with the fear of losing money or compromising personal information can be a significant barrier to adoption (Norazlan et al., 2020). Understanding how perceived risk influences their decision making is crucial for addressing these concerns and building confidence in digital finance (Amol Gawande et al., 2023). The risks may be amplified by a lack of university students with digital platforms such as concerns over the credibility of service providers and the prevalence of cyber threats in the digital environment. Additionally, peer influence with the level of trust in institutional safeguards can significantly shape university students' perceptions. If university students perceive digital finance as unreliable and unsafe use, they are more likely to avoid its use regardless of its potential benefits.

Perceived trust relates to the degree to which university students believe that digital finance is reliable, secure, and capable of protecting their interests (Alrawad et al., 2023). Trust is a critical factor in technology adoption, particularly in financial transactions where the stakes are high (Azamsadat Hosseini Shoabjareh et al., 2024). If university students lack trust in the system's ability to safeguard their money and personal data. They are less likely to adopt it regardless of its perceived ease of use or perceived usefulness (He et al., 2018). Moreover, trust is established for students are more likely to engage with digital financial tools leading increase adoption and more financial empowered student population.

This study seeks to bridge this research gap by integrating perceived risk and perceived trust into TAM and these external factors into the Technology Acceptance Model (TAM) to provide a comprehensive understanding of digital finance adoption drivers in this population. Therefore, this study aims to investigate the intention to adopt digital finance among university students in Malaysia and uses Technology Acceptance Model (TAM).

1.3 Research Question

The following question about the adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM) was created in accordance with research objectives.

RQ1. Is there any relationship between perceived ease of use (PEOU) and digital finance adoption among university students in Malaysia?

RQ2. Is there any relationship between perceived usefulness (PU) and the digital finance adoption among university students in Malaysia?

RQ3. Is there any relationship among external factors, i.e. social influence, perceived risk, and perceived trust, and TAM factors, i.e. perceived ease of use and perceived usefulness among university students in Malaysia?

1.4 Research Objectives

The general objective of this study is the adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM) created in accordance. The specific objectives of this study are as follows:

RO1. To examine the relationship between perceived ease of use (PEOU) and digital finance adoption among university students in Malaysia.

RO2. To examine the relationship between perceived usefulness (PU) and digital finance adoption among university students in Malaysia.

RO3. To investigate the relationship between external factors, i.e. social influence, perceived risk, perceived trust, and TAM factors, i.e. perceived ease of use and perceived usefulness among university students in Malaysia.

1.5 Significance of the Study

Firstly, this research introduces a new variable for digital finance usage to explore digital finance in relation to digital finance methods. As these platforms continue university students will increasingly rely on them for their convenience, speed, and efficiency. However, growing evidence suggests that psychological factors such as the digital finance satisfaction derived from making purchases significantly influence university students' spending habits (Kumar et al., 2022). By incorporating adoption of digital finance into the analysis of how digital finance impacts finance systems, study addresses a critical gap in existing research, which has largely focused on practical elements like convenience, security, and cost savings.

Consequently, the study's findings will offer a deeper understanding of digital finance with attention to the digital finance platforms and methods (Bajaj Finserv, 2023). This could lead to the development of more comprehensive models that include both social and cultural factors when predicting university students.

Furthermore, this study examines the potential use of Technology Acceptance Model (TAM) theories regarding digital finance particularly among university students in Malaysia. While traditional theories often emphasize practical factors such as perceived ease of use (PEOU), perceived usefulness (PU), social influence (SI), perceived risk (PR), and perceived trust (PT) in influencing digital finance adoption emerging evidence suggests a disconnect when it comes to university students' actual spending patterns (Abd Malik, 2020).

University students known for their tech savvy and demographic for adoption of digital finance may exhibit digital finance driven by factors not fully accounted for in the existing framework (Al-Qudah et al., 2024). By investigating this potential use of Technology Acceptance Model (TAM), the study aims to bridge theoretical gaps and provide for understanding exploring the adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM).

Besides, policymakers must understand the link between the growth of digital finance and shifts in accelerating the growth of the digital economy (Zhang et al., 2022). The findings of this research can guide them in formulating regulations that promote the adoption of digital finance while safeguarding university students' interests (Ishak et al., 2024). For example, if the research finds that the rapid expansion of digital finance causes financial literacy and security risk for digital finance among university students, policymakers could implement measures to mitigate these effects (Mirza Hedismarlina Yuneline & Firnandya, 2023). This might include implementing robust security frameworks and ensuring financial inclusion to encourage responsible spending or enforcing spending limits to protect the future workforce and economy of Malaysia.

Moreover, the research will assist digital finance providers and financial institutions in optimizing their offerings (Kristen, 2025). By recognizing how different university students respond to digital finance options, financial institutions can tailor their online marketplaces to better university students for digital finance preferences. For example, if university students express a preference for mobile payment apps, institutions might invest more in developing user-friendly mobile interfaces (Yong et al., 2021).

Additionally, understanding university students' preferences and spending behaviours could drive innovation in development targeted marketing campaigns with finance systems (Dwivedi et al., 2021). Financial institutions might create new features or solutions within digital finance that address university students' concerns and enhance overall user satisfaction and engagement to optimize their digital finance in Malaysia (Mahdzan et al., 2022).

1.6 Outline of the study

Chapter 1: Introduction

This chapter outlines the research background, problem statements, research questions, research objectives and significance of the study. This research introduced the factors such as perceived ease of use (PEOU), perceived usefulness (PU), social influence (SI), perceived risk (PR), and perceived trust (PT) influence the adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM).

Chapter 2: Literature Review

This chapter provides a review of existing literature with theoretical review, discussion of the variables, research gaps, proposal conceptual framework and hypotheses development. These theories are used to support the examination of how perceived ease of use (PEOU), perceived usefulness (PU), social influence (SI), perceived risk (PR), and perceived trust (PT) affect the adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM).

Chapter 3 Research Methodology

This chapter describes the study approach, including the sampling design, variable measurement and scale, data collection procedures, and the creation of a questionnaire based on information from the journal article. This method uses primary data that have been collected from 240 respondents with data processing and data checking.

Chapter 4: Data Analysis

This chapter focuses on the analysis of data in relation to the study's hypotheses and research questions. It includes relationships between independent, dependent, and external variables, and descriptive analysis to profile respondents' demographics. Data has been analysed using SPSS software and SmartPLS which will include descriptive analysis, reliability analysis, and inferential analysis.

Chapter 5: Discussion, Conclusion and Implications

The final chapter summarizes main findings to lead this study's conclusion. It highlights the important of discussion of major findings, implications of study, limitations, and recommendations for further research.

CHAPTER 2: LITERATURE REVIEW

2.0 Introduction

This chapter begins by discussing relevant theories from previous theoretical review. Next, this chapter reviews how previous researchers measured and tested the relationships between independent variables, dependent variable, and external variables, which is digital finance adoption by university students in Malaysia using Technology Acceptance Model (TAM). The independent variables include PEOU and PU, dependent variable include DFU, and external variables include SI, PR, and PT. It also covers the discussion of the variables, research gaps, proposal conceptual framework, hypotheses development, and chapter summary for this research.

2.1 Theoretical Review

2.1.1 Technology Acceptance Model (TAM)

According to Davis et al. (1989) the Technology Acceptance Model (TAM) is theory part one important framework in technology model study for understanding technology and usage. TAM suggests two primary constructs: PEOU and PU. These factors influence how users evaluate and ultimately decide whether to engage with a technology. When applied to digital finance, TAM helps explain how university students with intention for the technology by useful and effortless they perceive these platforms to be digital finance, PEOU relates to how effortless and convenient students find these platforms, whereas PU reflects their perception of whether such tools enhance the speed and efficiency of their financial transactions. Beyond these original components, additional elements such as SI, PR, PT are also relevant in shaping university students' willingness to adopt digital financial services in Malaysia. Incorporating these external dimensions allows for a more comprehensive explanation of technology-related behaviours.

Many researchers have extended TAM by integrating other influential factors to better suit modern technological environments. For example, Keng-Soon et al. (2019) and Teo et al. (2020) applied TAM to fintech and e-wallet adoption by incorporating PEOU, PU, and social influence to observe how these constructs interact in digital settings. Wang (2025) further broadened the model by including perceived risk and social influence to assess continued use of internet banking and its relationship with subjective well-being. Similarly, Lim et al. (2022) expanded TAM in the context of mobile commerce by focusing on ease of use and usefulness within developing markets. Kou and Sun (2024) also enhanced the model by adding

perceived risk and perceived trust to investigate users' initial willingness to pay for online knowledge platforms.

Overall, TAM offers an important framework for understanding how university students decide to use digital finance tools, particularly when they perceive benefits such as convenience, speed, and improved financial management. In this study, TAM is extended by incorporating three external factors: social influence, perceived risk, and perceived trust to capture a broader range of behavioural motivations. Considering peers, privacy concerns, and confidence in digital financial services alongside PEOU and PU enables a clearer understanding of what drives or hinders digital finance usage among university students.

2.2 Discussion of the Variables

This section examines and discusses how past researchers examined and tested the characteristics that may adopt digital finance among university students. PEOU and PU serve as independent variables, DFU as the dependent variable and SI, PR, and PT are external variables.

2.2.1 Perceived Ease of Use (PEOU)

PEOU with classified independent variables for this study, reflects how easily an individual believes they can operate a specific technology without requiring significant effort. It also relates about which the system more easily and improves their overall efficiency (Worthington & Burgess, 2021). In the context of the Technology Acceptance Model (TAM), PEOU alongside PU is considered a key factor influencing a user's willingness to adopt and continue using a technological system.

Previous research has consistently shown that PEOU plays a crucial role in encouraging the adoption of digital financial tools, including e-wallets and digital payment applications. Features such as simple navigation, quick transaction processes, and ease of learning make these platforms more attractive to users (Shetu et al., 2022). Evidence from studies involving Malaysian university students also demonstrates that PEOU significantly influences their likelihood of adopting e-wallets and other digital finance solutions (Chelvarayan et al., 2022). Moreover, perceiving a digital finance platform as easy to use can strengthen users' trust; when students feel comfortable and confident navigating the system, they are more willing to rely on it for financial transactions (Barus et al., 2020).

2.2.2 Perceived Usefulness (PU)

PU with classified independent variable in this study. PU reflects an individual believes that the technology to improve the quality or effectiveness of their work or daily tasks (Marikyan & Papagiannidis, 2024). Within the Technology Acceptance Model (TAM), this construct represents the user's perception with the technology will contribute to improved performance and increase their intention to adopt and rely on the system.

Perceived usefulness in adoption of digital finance is studies consistently show that PU strongly drives adoption digital finance. For example, when users perceive that digital payment systems enhance convenience, save time, and improve financial management, they are more likely to adopt such technologies (Ramayanti et al., 2023). In other studies, perceived usefulness has been identified as a critical determinant for adopting financial technologies, including mobile banking and digital finance platforms (Prastiawan et al., 2021). It is often linked with improved operational performance and ease of achieving financial goals.

2.2.3 Digital Finance Usage (DFU)

Digital finance usage (DUF) is a dependent variable. This research focuses on digital finance usage is commonly defined as the students' intention to use or actual use of digital financial services likes digital banking, fintech payment platforms, and online payment systems (Neves et al., 2023). This variable typically measures either the behavioral intention when to use digital finance with their actually frequency use it.

In most quantitative studies, the digital finance usage is measured through survey items that assess his plan to adopt or persist in using digital finance services. For example, "I intend to use digital banking services in the future" (Tian et al., 2024). Then, acceptance or willingness to use specific digital finance platforms such as online banking, fintech payment apps, and mobile wallets (Neves et al., 2023). Another study focused on the use of fintech digital payment services, quantifying it by students' familiarity and self-reported use of these platforms.

2.2.4 Social Influence (SI)

Social influence (SI) is classified as an external variable. It refers to the degree to which an individual decision to use a technology is affected by the opinions or behaviours of others (Venkatesh et al., 2012). Social influence was developed from Innovation Diffusion Theory and indicates how much a person to adopt or reject based on consensus among the members (Roger, 2003).

A study involving 177 among Malaysian university students with social influence emerged as the strongest factor among those examined, even surpassing other motivators. Students reported being

influenced by celebrities and social media influencers, as well as peer pressure and government incentives such as E-Tunai Rakyat, E-Penjana, and E-Belia, which required the use of e-wallets to claim benefits. This created social pressure to adopt and use e-wallets for payment transactions (Teo et al., 2020).

2.2.5 Perceived Risk (PR)

Perceived risk (PR) is an external variable. Perceived risk referring indicates the level to which an individual feels that using digital finance services like mobile banking, e-wallets, and online payments may lead to negative outcomes such as financial loss, fraud, data breaches, and transaction errors (Khan & Abideen, 2023).

Perceived risk encompassing security, privacy, and performance concerns reduces students' willingness to adopt digital finance platforms used in Malaysia highlight that 31% of Malaysians hesitate to use digital banking due to security risks (Kanapathipillai et al., 2023). For e-wallets, specific perceived risks such as privacy risk, performance risk, and overall trust in the platform play substantial roles in shaping behavioral intentions in e-wallet users prioritize perceived security and privacy risks as top barriers (Razif et al., 2020).

While risk perceptions matter, perceived control such as safety awareness and transaction oversight can mitigate their negative effects. A study found control factors exert a stronger influence on adoption than risk factors with the platforms for robust authentication and encryption reducing risk perceptions (Hassan et al., 2025).

Then, impact on university students' adoption of digital finance with studies focusing on Malaysian university students consistently find that perceived risk plays a critical role in limiting the adoption of digital finance. University students tend to adopt new technology early but remain cautious due to perceived risks, particularly regarding privacy and financial security. Research indicates that while students value the convenience and platform quality of digital finance, their concerns about risk, especially financial and security risks, can significantly reduce their intention to adopt these services (Saif et al., 2022).

2.2.6 Perceived Trust (PT)

Perceived trust (PT) is an external variable. Trust can be described as a state in which one party is willing to expose its vulnerabilities to another, based on the belief that the latter will perform an essential action for the former without requiring supervision or control (Mayer et. al., 1995). Perceived trust is defined as a multifaceted and elaborate phenomenon that has a substantial impact on corporate relationships (Chawla et al, 2023). Perceived trust refers to the degree to which an individual believes that a digital finance provider will act responsibly and not exploit the user. (Ryu & Ko,2020) stated that perceived trust is especially

important for adoption of digital finance in fintech due to the greater uncertainty and risk involved compared to traditional e-commerce and e-banking.

Most of the research has developed a result of perceived trust that tends to have a context of digital payments and finance. Trust is essential due to the inherent uncertainty and risks associated with online transactions (Dawood et al., 2022). Then, focus on the study among Malaysian university students with the populations consistently showing that trust significantly impacts the adoption to use digital finance platforms such as e-wallets and digital banking services (Mainul Hossain et al., 2022). Trust reduces perceived risks and makes users more comfortable with adopting digital financial solutions (Nik Hasfizul Safuri et al., 2024).

2.3 Research Gaps

Despite the growing research on the adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM) several gaps remain. One key gap limited TAM-based studies on university students. Most studies applying TAM in the Malaysian context have concentrated on general fintech adoption or mobile banking, rather than targeting university students' use of digital finance solutions (Kaveh Javani et al., 2023). For example, research examining digital banking adoption in Malaysia often focuses on the general population or specific professional groups, leaving a gap in understanding the unique elements shaping university students.

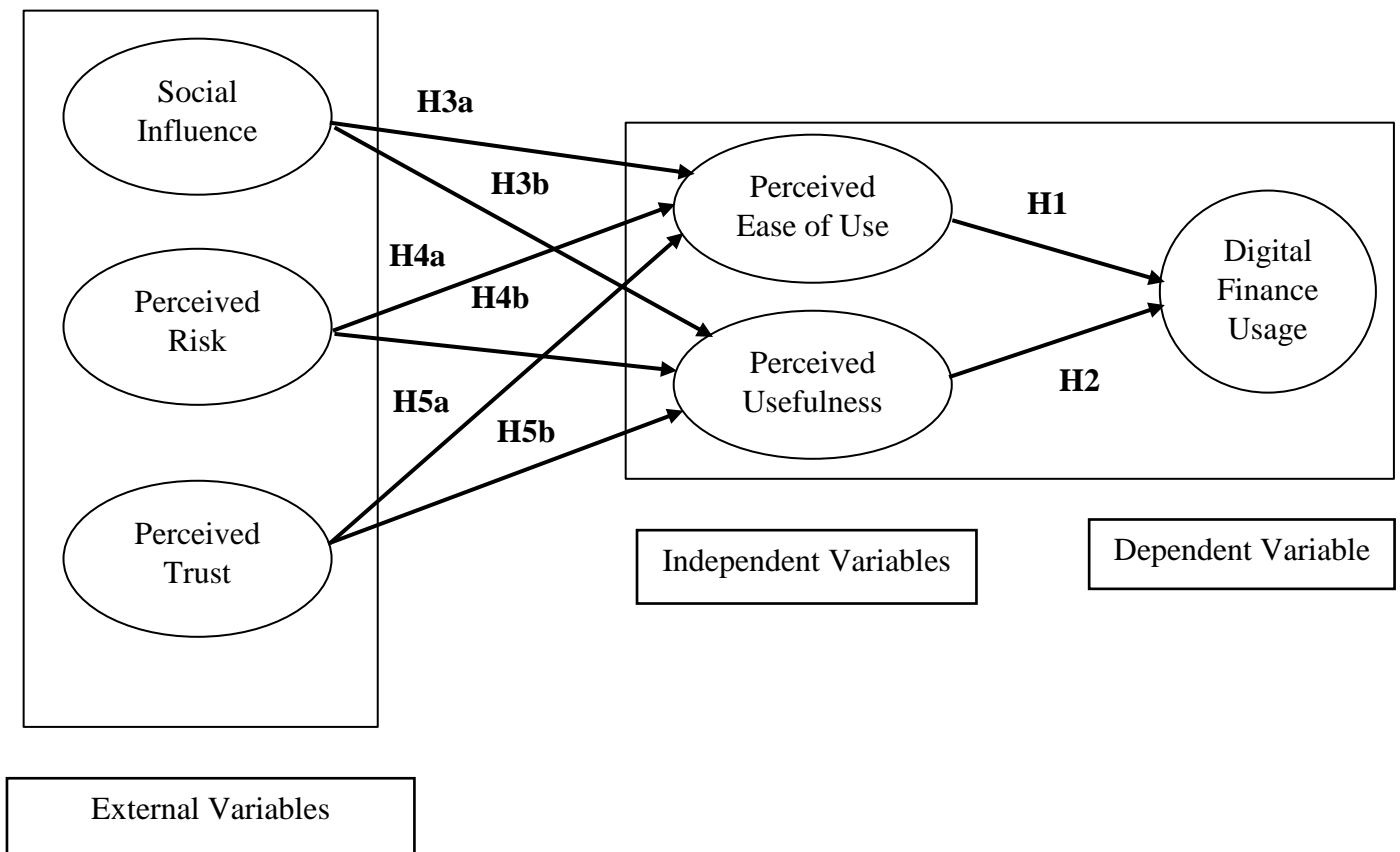
Moreover, past research acknowledges perceived risk and perceived trust as critical factors in digital finance, their roles in shaping adoption behavior among university students in Malaysia remain underexplored (Wang, 2025). Then, despite the prominence of digital finance innovations like e-wallets and digital banking, user concerns about security risks and privacy vulnerabilities are not sufficiently addressed in the current literature, especially among university students who understanding of risk may differ with the general population (None Nurabiah et al., 2024).

Furthermore, limited research examines how social influence, perceived risk, and perceived trust interact together to shape the adoption of digital finance among university students, especially in Malaysia. There is a lack of research delving into personal, psychological, and demographic factors such as security concerns, privacy, and innovation acceptance that influence digital finance adoption among young, tech-savvy populations like university students in Malaysia (Hassan et al., 2025). Most prior research has concentrated on technological, regulatory, and institutional factors rather than individual user perspectives. They are gaining an understanding that the combined implications of these external factors are important for providing a complete understanding of the determinants influencing digital finance adoption in this demographic.

These research gaps are crucial for developing a comprehensive understanding of digital finance adoption among university students in Malaysia which can support targeted strategies to enhance the acceptance and use within this demographic.

2.4 Proposal Conceptual Framework

Figure 2.1: Conceptual Framework of the Study



Technology Acceptance Model (TAM)

Conceptual Framework for this Research Study

Source: Development by own research.

Following the previous theoretical model in the previous section 2.1, the conceptual framework in section 2.1.1 is introduced to explore the adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM). The conceptual framework starts with independent variables connected with dependent variable; PEOU and PU directly influence DFU.

Then, external variables linked with the independent variables where social influence will affect PEOU and PU. Furthermore, perceived risk is linked to PEOU and PU. Through the previous study, most of the studies inferred that perceived trust will significantly influence the continuity of perceived ease of use and

perceived usefulness. While focusing on digital finance on continuity to use PEOU and PU and further influences digital finance usage has not much studies on it.

This is because PEOU and PU is still newly adopted in the technologies to influence the continuity of use and further influence digital finance usage. However, the studies also inferred that it will significantly influence PEOU and PU and further influence digital finance usage. Therefore, this framework has been used to assess whether the inference is correct. The hypotheses will also be created based on this framework in the following section.

2.5 Hypotheses Development

The previous section 2.4, the conceptual framework of the study in figure 2.1 examining the adoption of digital finance usage through several interconnected variables. This framework will illustrate the hypothesized relationship between H1, H2, H3a, H3b, H4a, H4b, H5a, and H5b these include the external variables (SI, PR, and PT), independent variables (PEOU and PU), and dependent variable (DFU).

2.5.1 Perceived Ease of Use (PEOU)

They are finding digital finance platforms easy to navigate and understand, the barrier to entry becoming lower, making them more likely to adopt it (Wang, 2025). An easy-to-use interface also reduces anxiety and increases user confidence, minimizing fear or resistance toward new technology (Cserdi & Kenesei, 2020). Therefore, perceived ease of use is supposed to have a positive relationship with digital finance usage in the current research.

H1: There is a significant relationship between perceived ease of use that has a significant positive effect on the digital finance usage.

2.5.2 Perceived Usefulness (PU)

If users believe that digital finance tools such as online payments or budgeting apps help them manage money more efficiently, save time, and improve access to financial services, they are more likely to adopt them (Mahdzan et al., 2022). These functional benefits enhance perceived usefulness and drive adoption decisions (Peng & Robinson-Tay, 2025). Thus, perceived usefulness is supposed to have a positive effect on digital finance usage in the current research.

H2: There is a significant relationship between perceived usefulness that has a significant positive effect on the digital finance usage.

2.5.3 Social Influence (SI)

When individuals observe that their peers or social circle are using digital systems such as mobile banking or digital payment apps, they may receive help from others, making the system feel easier to use (Usman et al., 2025). Social groups may also influence individuals' beliefs about system ease of use based on others' positive experiences (Taylor, 2024). Additionally, individuals may feel social pressure to adopt the system because it is seen as efficient or beneficial by others (Dejonckheere et al., 2022). Therefore, social influence is expected to positively affect both the perceived ease of use and perceived usefulness within this study.

H3a: There is a significant relationship between social influences that has a significant positive effect on perceived ease of use.

H3b: There is a significant relationship between social influences that has a significant positive effect on perceived usefulness.

2.5.4 Perceived Risk (PR)

Digital finance often exposes users to risks that are sometimes “more unpredictable and uncontrollable” (Dalmolin et al., 2019). In many cases, trust remains embedded within narrow social circles, leading individuals to rely on informal financial arrangements and reducing their willingness to adopt formal digital financial services (Sholevar & Bachmann, 2025). When users perceive a digital finance platform as risky, they may view it as unreliable or not worth the potential negative outcomes, which typically reduces perceptions of usefulness (Ghani et al., 2022).

However, in this study, the empirical findings indicate the opposite: perceived risk has a positive and significant effect with PEOU and PU. This suggests that users who are more aware of risks may also be more motivated to evaluate, understand, and navigate the platform carefully, leading to higher PEOU and PU. It may also imply that students are willing to take calculated risks when the benefits of digital finance services outweigh concerns.

H4a: There is a significant relationship between perceived risk that has a significant positive effect on perceived ease of use.

H4b: There is a significant relationship between perceived risk that has a significant positive effect on perceived usefulness.

2.5.5 Perceived Trust (PT)

Trust in broader networks encourages individuals to choose formal finance options (Nisful Laila et al., 2025). Trust in a digital finance platform or institution increases user confidence, enhancing perceived ease of use (Wilson et al., 2021). Moreover, trusted platforms are viewed as more effective and reliable, which increases perceived usefulness (Kou & Sun, 2024). Thus, perceived trust is expected to positively influence both PEOU and PU.

H5a: There is a significant relationship between perceived trust that has a significant positive effect on perceived ease of use.

H5b: There is a significant relationship between perceived trust that has a significant positive effect on perceived usefulness.

2.6 Chapter Summary

To summarize, this chapter focuses on the present and explains the key theories relevant to this study, including TAM. Additionally, it presented a discussion of the variables by discussing independent variables (PEOU and PU), the dependent variable (DFU) and external variables (SI, PR, and PT) that are relevant to this research. The research gaps highlighted in previous studies, along with their limitations and recommendations for future investigation. These insights contributed with the development for the proposed conceptual framework which relationships between the independent, dependent, and external variables and subsequently guided the formulation of the study's hypotheses. The next chapter will empirically test these hypotheses using appropriate statistical techniques to evaluate the validity of the theoretical relationships proposed.

CHAPTER 3: METHODOLOGY

3.0 Introduction

This chapter of the research thoroughly reviews the research methods used in this study. It outlines the research design, data collection methods, sampling design, research instrument, measurement constructs, as well as the data processing, and data analysis. Throughout this chapter, the reader will gain a clear understanding of this study's purpose.

3.1 Research Design

The current research examines exploring the adoption of digital finance among university students in Malaysia using the Technology Acceptance Model (TAM). A research design is a comprehensive framework or structure that drives the study process (McCombes, 2021). It includes detailing the overall methodology and procedures that has been utilized to collect and analyze the data with the strategy for testing hypotheses and addressing research questions through data collection, interpretation, analysis, and discussion (Indeed, 2024).

An appropriate research design must be chosen to avoid errors in data collection. It can be classified into qualitative and quantitative research. The structural methodology is commonly employed in quantitative research methods. To achieve the study's objectives, a quantitative research approach was employed to test the study model.

This study employs a quantitative approach, gathering numerical data to facilitate statistical analysis, which helps in quantifying and summarizing the research findings (Bhandari, 2020). Quantitative research presents dependable data that could be tailored according to respondents' needs and informed decision-making (Lim, 2024).

In this study, the quantitative research method has been used as a causal research design to identify the extent and nature of cause-and-effect relationships between variables (Qualtrics, 2022). The purpose of this causal

research aims to test hypotheses and explain the causal relationship linking the independent variables (PEOU and PU), dependent variable is DFU, and external variables (SI, PR, and PT).

Furthermore, it allows the researcher to include a larger group than in the qualitative research approach. Questionnaires are a typical approach for performing quantitative studies. We will gather and analyze the perspectives of the intended respondents to develop conclusions and provide recommendations based on the data methodologies (Schindler, 2022).

This study applies a descriptive quantitative research approach to investigate the factors affecting digital finance adoption among university students in Malaysian by Technology Acceptance Model (TAM). This research methodology is intended to collect data methodically to gain a complete understanding of the events, conditions, or populations under consideration (McCombes, 2023).

3.2 Data Collection Methods

Data collection uses systematic methods used with the information, whether through observations or measurable data. It allows us to obtain first-hand knowledge and unique perspectives on the research subject (Bhandari, 2020). In general, data collection methods are classified into primary data (Taherdoost, 2021). The analysis in this research has been carried out using information collected directly with primary data.

3.2.1 Primary data

This study uses primary data collection, which focuses on gathering first-hand information directly from respondents. Primary data can be collected using a variety of approaches, including interviews, surveys, and experiments (Aggarwal, 2023). This study will utilize a questionnaire survey to collect primary data concerning independent, dependent, and external variables. ensuring that the data corresponds with the research objectives and represents the present state of digital finance adoption among university students in Malaysia.

The questionnaire is designed to measure respondents' perceptions of PEOU, PU, DFU, SI, PR, and, PT along with their digital finance usage in Malaysia. It has been distributed with Google form through social media and email. The data collection process is predicted to take several weeks due to the study's huge sample size.

3.3 Sampling Design

Sample design refers to the procedure used to select the subset of individuals from a larger population. It is planned of the data collection process to ensure that the chosen sample is adequate for drawing conclusions that represent the population of interest (Turner, 2020). In this research, the sampling approach used to gather information on digital finance adoption among university students in Malaysia by Technology Acceptance Model (TAM), has been described and justified.

3.3.1 Non-Probability Sampling

This study employs a non-probability sampling method, which is widely recognized as suitable for field-based research. Non-probability sampling refers to a technique where certain members of the population have no chance of being included, or the likelihood of their selection cannot be determined accurately (Bhattacharjee, 2012). In this method, selection is not random, and some units may have unequal chances of being chosen. This approach is particularly useful for gaining insights into small or hard-to-reach groups.

Common non-probability sampling strategies include convenience sampling, consecutive sampling, purposive sampling, snowball sampling, and quota sampling (Nikolopoulou, 2022). Specifically, the study adopts convenience sampling, gathering information from the most easily accessible participants.

3.3.1.1 Convenience Sampling

Convenience sampling reduces the time and effort needed to select participants compared to other sampling techniques, as it targets readily available respondents without requiring a full population list (Golzar, Tajik & Noor, 2022). Furthermore, this sample strategy is ideal for preliminary studies in which the focus is on assessing the survey tool or ensuring measurement accuracy instead of deriving extensive generalizations (Bhattacharjee, 2012). The researcher may distribute the survey to participants via social media platforms, academic networks, or local community organizations where it may be easily assessed.

3.3.2 Target Population

The target population refers to all individuals whose characteristics are of interest to the researchers (Willie, 2024). The primary goal for this study seeks to explore adoption of digital finance among university students in Malaysia by Technology Acceptance Model (TAM). Therefore, the target population consists of not all but only studying at universities situated in Klang Valley with experience using digital finance.

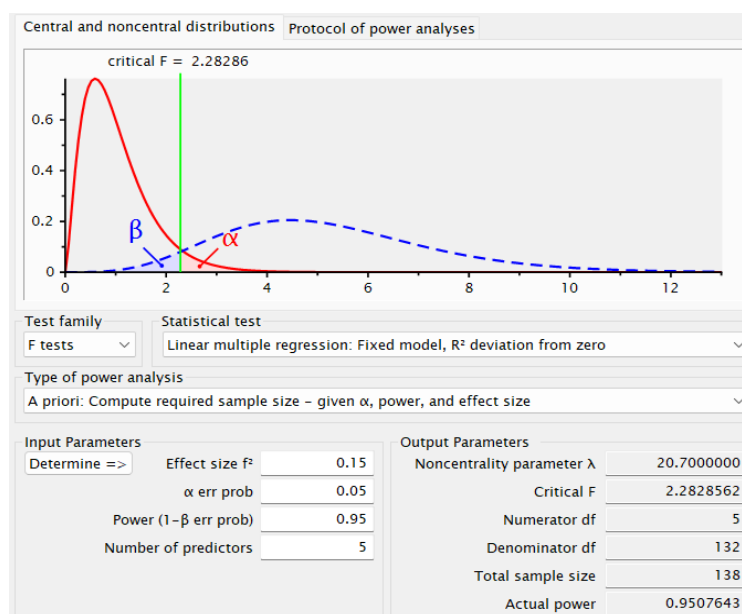
3.3.3 Sampling Size

Sample size refers to how many individuals are included in a research study to serve as a representation of the overall population (OmniConvert, 2019). Determining an appropriate number of participants is important for producing valid statistical results and precise demographic estimates, as well as maintaining feasibility in terms of time and cost (McCombes, 2023).

In research, sample size refers to the required minimum number of respondents for proper representation of the targeted population. According to (Faber & Fonseca, 2014) accuracy in determining this minimum adds a plus, as in utilizing the minimum conditions usually yields valid results. As much as increasing sample sizes may give more accurate outcomes, a very large sample would result in a waste of resources and time. Conversely, if the sample size is insufficient, the results might lack scientific rigor and lead to unethical conclusions by underestimating the effect (Andrade, 2020).

Then, sample size indicates how many participants or observations were selected for a study or experiment. It is a crucial factor, as it affects the reliability and more generalized finding from a larger population (Hennink & Kaiser, 2022). A larger sample size improves the accuracy of estimates and narrows the margin of error. This research aims to collect data from 240 respondents. However, due to time constraints, the study may not reach this target. The statistical method used in the G*Power is linear multiple regression, forecasting outcome of a variable based on the values of two or more variables. Additionally, an a priori analysis was executed through G*Power, a sample size calculation performed prior to the study's design and planning phase. Hence, based on the output of G*Power use the minimum number of respondents needed for this current study is 138 respondents.

Figure 3.1: Results of G*Power for Sample Size



3.3.4 Sampling Frame and Sampling Location

The sampling frame represents the entire set of elements in the population (McCombes, 2023). Due to limited resources and time constraints, this research focuses on a specific area, rather than targeting respondents from all states in Malaysia. The sampling frame consists of university students in Selangor, specifically Utar, as it is the most developed state in Malaysia and ranking and ratings in QS World University Rankings 2025 (UTAR Sungai Long: Ranking, Fees & Courses, 2024). This makes Selangor a key location for studying digital finance users, as most new products are initially launched there.

3.3.5 Sampling Period

Sampling period refers to the time interval between consecutive data samples in a measurement or data collection process. Typically, 1-2 months depending on data collection methods with best conducted during this semester to ensure university students availability (Therriault, 2019).

3.4 Research Instrument

A research instrument is designed for collecting, assessing, and analyzing data pertinent to these study purpose (Oben, 2021). The research utilized a questionnaire for data collection due to its ability to obtain responses in a timely, practical, and budget-friendly manner from large groups of people. This questionnaire has only closed-ended questions and is self-administered. The respondent fills out the questionnaire themselves, hence the phrase "self-administered".

This allows individuals to stay anonymous and feel more comfortable offering their thoughts (Balamurugan, 2023). As a result, our study sent questionnaires online using the free online tool Google Forms to collect feedback that can help everyone acquire information more conveniently and effectively. The Google Form can be reached using the QR code and link which has been spread through various social media channels including WhatsApp, Ms Teams, and emails.

3.4.1 Questionnaire

This research using the questionnaire comprised solely close-ended questions, where participants were presented with predetermined response options and asked to select the one that best represented their views. Close-ended questions generally encourage higher participation since they require less time and effort than open-ended questions, making respondents more inclined to complete the survey.

A questionnaire serves as a data collection tool consisting of a series of questions aimed at gathering information from respondents. Among its benefits, particularly when used with university students, is its cost-effectiveness and efficiency. Additionally, they are taking the collection data from a large group of participants within a short time, ensuring that essential information is obtained promptly.

For this study, the questionnaire includes three sections with Section A dedicated to gathering demographic information, while Sections B, C, and D include independent variables, dependent variables, and external variables.

The development process involved gathering questions from previous studies and using adapt-and-adopt methods to create the final questionnaire. Once designed, the Google Form questionnaire was distributed to participants use social media platforms such as WhatsApp, MS Teams, and email.

Section A: Demographic Information

Table 3.1 shows that Section A includes six questions concerning the respondents demographics such as gender, age, occupation, education, monthly income, and mobile app.

Table 3.1: Section A of the Questionnaire

Section A: Demographic Information	
Questions	Options
1. Gender	<ul style="list-style-type: none"> ● Male ● Female
2. Age	<ul style="list-style-type: none"> ● 18-22 years ● 23-27 years ● 28-32 years ● Above 33 years
3. Occupation	<ul style="list-style-type: none"> ● Student ● Self-employed ● Employed ● Unemployed
4. Education	<ul style="list-style-type: none"> ● Diploma/STPM/Foundation ● Undergraduate (bachelor's degree) ● Postgraduate ● Professional
5. Monthly income	<ul style="list-style-type: none"> ● Below RM2500 ● RM2500-RM6000 ● Above RM6000

6. Which mobile app do you use to make and receive payments? You can select more than one.

- **Touch'n Go eWallet**
 - **ShopeePay**
 - **GrabPay**
 - **Online Banking Apps**
 - **Boost**
-

Source: Developed by own research.

3.4.2 Pilot Test

Pilot studies are an important step in this research process. This study results test research methodologies, data collection tools, sample recruitment, and other research techniques before a larger study can be conducted. Prior to the adoption of the research equipment and methodology, a feasibility study was conducted to identify potential areas of weakness and potential problem areas (Hassan et al., 2006). Most pilot studies are conducted with members of the relevant population rather than with those who will make up the final sample (Simkus, 2023). It is necessary to conduct a pilot study to ensure the validity with questionnaires before implementing them across the entire study.

In this study, university students will participate by distributing a Google Form used with questionnaire, serving as one of the measurement instruments, and sharing it through WhatsApp, Ms Teams, and email. In addition, respondents might also provide useful feedback to the researcher about improving the questions and avoiding terminology that may be unclear to the public. It is intended for this study to include the English language of all items in the Google Form to ensure that respondents can successfully complete with questionnaire.

Because of providing the questions in both English, potential language barriers are reduced, and the questions become clearer for respondents who are more familiar with English. By English language surveys, respondents have been able to understand the survey content more easily, resulting in more reliable and valid responses. With the assistance of English, this study seeks to increase the quality with data collected and to ensure that all participants are included in the study. Therefore, these researchers may select a subset of respondents from the sample size before conducting a questionnaire survey to assess the feasibility of the survey.

3.5 Constructs Measurement

This questionnaire design includes several relevant and effective measurement scales for collecting replies from respondents. It is critical within the study consistency and credibility of the result outcomes.

3.5.1 Scale of Measurement

The measurement scale is important part of processing, collecting, and analysing with data collection of facts, such as numbers or measurements. It could be statistics, words, measurements, observations, or even simple descriptions of things (Mishra et al., 2018). Types of four different measurement scales in the data can be classified as one of the four scales is nominal scale, ordinal scale, interval scale, and ratio scale (Bhandari, 2020) in this study has been utilized to assess the questions.

3.5.1.1 Nominal Scale

The nominal scale represents the most basic level of measurement, used to differentiate and classify respondents (Chetty, 2015). It is applied to questions in Section A, specifically Questions 1 and 3 in this research.

Table 3.2: Example of Nominal Scale in Questionnaire

1. Gender
<ul style="list-style-type: none">● Male● Female
3. Occupation
<ul style="list-style-type: none">● Student● Self-employed● Employed● Unemployed

Source: Developed by own research.

3.5.1.2 Ordinal Scale

The ordinal scale is a ranking scale, but it does not reflect the true distance between rankings. It shows differences but not the exact gaps between observations (Chetty, 2015). In this research, the ordinal scale is used for questions in Section A, such as Questions 4 and 6.

Table 3.3: Example of Ordinal Scale in Questionnaire

4. Education

- Diploma/STPM/Foundation
- Undergraduate (bachelor's degree)
- Postgraduate
- Professional

6. Which mobile app do you use to make and receive payments? You can select more than one.

- Touch'n Go Wallet
 - Shopee Pay
 - GrabPay
 - Online Banking Apps
 - Boost
-

Source: Developed by own research.

3.5.1.3 Interval Scale

The interval scale is used in Sections B, C and D of the questionnaire, where a 5-point Likert scale is employed. The scale represents different levels of agreement: strongly disagree-1, disagree-2, neutral-3, agree-4, and strongly agree-5. Respondents select the option that best reflects their level of agreement with the statements in Sections B, C and D.

Table 3.4: Example of Interval Scale in Questionnaire

Five-Point Likert scale	Coded
Strongly Disagree	1
Disagree	2
Neutral	3
Agree	4
Strongly Agree	5

Source: Developed by own research.

Table 3.5: The Origin of Constructs with Questionnaire References

Section B: Independent Variables (IVs)			
Variable	Items	Description	Sources
Perceived Ease of Use (PEOU)	PEOU1	Learning to use digital finance applications would be easy for me.	Davis (1989); Venkatesh et al. (2003); Alalwan et al. (2017)
	PEOU2	I find digital finance applications easy to use.	
	PEOU3	Interacting with digital finance applications is clear and understandable.	
	PEOU4	It would be easy for me to become skilful at using digital finance applications.	
Perceived Usefulness (PU)	PU1	Using digital finance applications would enhance my effectiveness in managing finances.	
	PU2	I find digital finance applications useful for making financial decisions.	
	PU3	Using digital finance applications would improve my financial productivity.	
	PU4	Digital finance applications would make it easier to manage my finances.	
Section C: Dependent Variable (DV)			
Digital Finance Usage (DFU)	DFU1	I frequently use digital finance applications for financial transactions.	Venkatesh et al. (2003); Taylor & Todd (1995); Alalwan et al. (2017)
	DFU2	I use digital finance applications for various financial activities.	
	DFU3	I spend a significant amount of time using digital finance applications.	
Section D: External Variables (EVs)			
Social Influence (SI)	SI1	People who are important to me think I should use digital finance applications.	Venkatesh et al. (2003); Taylor & Todd (1995); Alalwan et al. (2017)
	SI2	People who influence my behavior think I should use digital finance applications.	
	SI3	People whose opinions I value prefer that I use digital finance applications.	

Perceived Risk (PR)	PR1	I am concerned that using digital finance applications could lead to financial loss.	Featherman & Pavlou (2003); Pavlou (2003); Alalwan et al. (2017)
	PR2	I worry that my personal information could be compromised when using digital finance applications.	
	PR3	I feel that using digital finance applications could result in errors or mistakes.	
Perceived Trust (PT)	PT1	I trust that digital finance applications will protect my financial information.	Gefen et al. (2003); McKnight et al. (2002); Alalwan et al. (2017)
	PT2	I believe digital finance applications are reliable for financial transactions.	
	PT3	I feel confident that digital finance applications will not misuse my data.	
	PT4	I trust that digital finance applications will provide accurate financial advice.	

Source: Developed by own research.

3.5.1.4 Ratio Scale

The ratio scale is the highest level of measurement of all the properties of the other scales (nominal, ordinal, and interval) plus a true zero point (Bhandari, 2020). It is applied to questions in Section A, specifically Questions 2 and 5 in this research.

Table 3.6: Example of Ratio Scale in Questionnaire

2. Age
<ul style="list-style-type: none"> ● 18-22 years ● 23-27 years ● 28-32 years ● Above 33 years
5. Monthly Income
<ul style="list-style-type: none"> ● Below RM2500 ● RM2500-RM6000 ● Above RM6000

Source: Developed by own research.

3.6 Data Processing

Data processing involves collecting and converting data into useful, actionable information (Anwar, 2025). It begins with data collection, where relevant information is gathered through questionnaires, ensuring alignment with the research objectives. After data collection, checking, editing, and cleaning stages involves reviewing raw data for completeness, consistency and accuracy, identifying and addressing any missing or errors are identified, and appropriate adjustments are made to improve the reliability and validity of the dataset. This method ensures that the information obtained is without errors or inaccuracies that could damage the overall research outcomes.

3.6.1 Data Checking

The data collected in this study to ensure their accuracy, validity, and relevance for the research with review and analyze respondents' data to understand their responses and identify patterns across different questions (Rouder et al., 2021). Before final analysis with the data collected in the dataset any issues such as incomplete responses or detected errors identified must be resolved with the data are fully cleaned and editing prepared by the final stage in this research (Rouder et al., 2021).

3.6.2 Data Editing

After completion the data checking process with the data editing was carried out to identify and, where possible, correct errors and omissions in the questionnaire data (Francis, 2012). This step is essential for reducing the number of errors or incorrect responses by the dataset to improve accuracy, reliability, and consistency.

To maintain the data quality for questionnaires that contain incomplete, illogical, or inconsistent responses with corrected or removed. For these cases involving missing data, imputation techniques such as mean or median substitution were used to resolve the issue. To avoid bias, missing data that was significant but could not be reliably estimated was excluded. Throughout the research process, all changes were meticulously documented to ensure transparency and data integrity, ultimately increasing the consistency and credibility of the findings.

3.7 Data Analysis

An analytical procedure is used to transform the data collected from respondents into useful results using data analysis techniques with insights that can be extracted from datasets to support informed decision-making (Eldridge, 2023). This study uses SPSS software and SmartPLS has been utilized to remove outliers from the data collected from respondents with questionnaires using several statistical methods including descriptive analysis, reliability analysis, and inferential analysis.

The data analysis process with three steps are data processing, data output and data storing. Firstly, the systematically organized data is analyzed using appropriate statistical or analytical methods to derive meaningful patterns and insights. Next, data output stage where processed data involves summarised and presented in forms such as tables or graphs with making the results clear and accessible for interpretation. Lastly, store with the output data and metadata in the decided for future reference, calibration, and potential reanalysis.

3.7.1 Descriptive Analysis

Descriptive analysis is also called descriptive statistics which summarizes data using simple measures such as percentages or means, or through visual representations like histograms and box plots (Kaliyadan & Kulkarni, 2019). This study uses descriptive analysis to examine respondents' demographic profiles to ensure the sample accurately represents the larger population. It also helps identify anomalies, outliers, or missing data in the demographics data with ensuring data's quality and accuracy before more complex statistical analyses.

When selecting a statistical measure for descriptive statistical analysis, it is critical to distinguish between continuous and categorical variables (Library, 2024). Continuous variables are numeric numbers with an infinite number of possible values inside a given range. They can be measured on a scale and include fractions or decimals, but categorical variables reflect discrete categories or groups that do not follow a natural order. They can be nominal or ordinal.

In this study, the researcher uses mean and standard deviation to analyze continuous variables such as PEOU, PU, DFU, SI, PR and PT. Additionally, the researcher uses frequency counts and percentages to categorize variables such as gender, age, occupation, education, monthly income, and mobile app. As a result, categorical variables will be represented visually using bar charts to effectively express the distribution of responses.

3.7.2 Reliability Analysis

Reliability analysis assesses the consistency of a scale or measurement tool (Sonwalkar, 2024). This study employs Cronbach's alpha to measure internal consistency, estimating the reliability of questionnaire responses. In other words, it assesses the reliability of questionnaire responses, instruments, or ratings evaluated by subjects, which indicates the consistency of the tools (Middleton, 2019). The technique for doing dependability analysis consists of multiple steps, the majority of which are carried out using SPSS software. Initially, the questionnaire results have been loaded into SPSS to ensure that all variables relating to PEOU, PU, DFU, SI, PR and PT are correctly coded.

Following that, Cronbach's Alpha has been determined for each of these variables. Table 3.7 shows (Glen, 2023) rule of thumb for interpreting the Cronbach's Alpha value for the likert scale instrument. A high Cronbach's Alpha value ($\alpha \geq 0.90$) implies strong internal consistency between items, while values between 0.80 and 0.90 are regarded as satisfactory. The values between 0.70 and 0.80 are acceptable whereas lower values (0.60 to 0.70) may be questionable. An alpha value below 0.50 is considered unsatisfactory.

According to (Glen, 2023), the study will help researchers determine if the independent variables, dependent variable, and external variables are significantly related. A high level of alpha indicates a strong association, whereas a lower alpha shows less connection between these variables. This analysis tests the reliability of the questionnaire used in the study to adequately reflect the underlying elements that explore the adoption of digital finance among university students in Malaysia, hence increasing with validity of the research findings.

Table 3.7: Range of Reliability and Its Coefficient of Cronbach's Alpha

Cronbach's Alpha	Internal Consistency
$\alpha \geq 0.90$	Excellent
$0.80 \leq \alpha < 0.90$	Good
$0.70 \leq \alpha < 0.80$	Acceptable
$0.60 \leq \alpha < 0.70$	Questionable
$0.50 \leq \alpha < 0.60$	Poor
$\alpha < 0.50$	Unacceptable

Source: (Glen, 2023).

3.7.3 Inferential Analysis

Inferential analysis is employed to interpret the data and draw conclusions about respondents' perspectives, the likelihood of certain outcomes in this study, and potential future trends. Several inferential techniques are utilized in this paper, including SmartPLS previous research in this field has used Partial Least Squares Structural Equation Modelling (PLS-SEM) including outer loadings, composite reliability (CR), average variance extracted (AVE), discriminant validity, multicollinearity test, and structural equation modelling (SEM). These methods help to assess relationships between variables and make predictions based on the sample data.

3.7.3.1 Outer Loadings

Outer loadings show to refer which an indicator contributes to measuring its latent construct and its indicators of reflective measurement models. When a construct demonstrates that it explains more than 50% of the variance in its indicators, it reflects the reliability of those items. In the assessment of reflective models, outer loadings are also useful for guiding the use of formative measures (Hair et al., 2019). They are primarily applied to refine and confirm the measurement model, ensuring it meets acceptable reliability standards. As noted by Chin (1998), an indicator should ideally have a loading of at least 0.70, while a minimum threshold of 0.60 is acceptable. Indicators falling below 0.60 should be considered for removal, although eliminating them may influence the overall reliability by potentially increasing the average variance extracted (AVE).

3.7.3.2 Composite Reliability (CR)

According to Netemeyer et al. (2003), composite reliability measures internal consistency of scale items using the method with Cronbach's alpha can be overcome since different weights are allowed for each indicator. The CR value is 0.7 or higher and the results are acceptance or good reliability. Meaning that the CR value greater than 0.7 indicates satisfactory internal consistency reliability for the measurement model.

3.7.3.3 Average Variance Extracted (AVE)

The Average Variance Extracted (AVE) was introduced by Fornell and Larcker (1981) as a measure of the variance captured by latent variables relative to the variance attributable to measurement error with AVE values should lie within the range of 0 to 1 and should be at least 0.5, indicating this means latent variable accounts for at least 50% of the variance in its indicators. An AVE below 0.5 suggests that a greater portion of measurement error accounts for a larger share of the variance. On the other hand, an AVE of 0.5 or higher demonstrates enough discriminant validity, making it suitable for evaluating relationships among the independent, dependent, and external variables.

3.7.3.4 Discriminant Validity

The Heterotrait-Monotrait ratio (HTMT) is a technique employed to evaluate discriminant validity by statistically distinguishing between latent variables (Benitez et al., 2020). Compared to earlier approaches for assessing discriminant validity, HTMT provides notable benefits, with reported specificity and sensitivity rates ranging from 97% to 99% (Hamid et al., 2017).

HTMT can determine discriminant validity using two approaches (Benitez et al., 2020). First, the value obtained from the analysis should be less than 1, indicating that the two constructs are not identical and that the correlation between them is low. A value approaching 1, however, suggests a lack of discriminant validity, implying that the latent variables are highly correlated and cannot be clearly distinguished. Second, discriminant validity can be assessed using a predetermined threshold, typically suggested to be below 0.90

(Gold et al., 2001). Values exceeding this threshold indicate insufficient discriminant validity according to the HTMT criterion.

Discriminant validity refers to the extent to which the constructs in a study are truly different from one another. It ensures that variables that appear related conceptually do not measure the same underlying idea. One of the most common methods for assessing discriminant validity is the Fornell–Larcker criterion. This approach compares the square root of each construct’s Average Variance Extracted (AVE) with the correlations it has with other constructs. Discriminant validity is confirmed when the square root of a construct’s AVE is greater than its correlations with other latent variables, indicating that each construct captures a unique concept (Hamid et al., 2017).

3.7.3.5 Multicollinearity Test

In PLS-SEM, multicollinearity test refers to high correlations among predictor constructs which can bias path coefficient estimates and lead to inflated standard errors (Kock, 2015). This may result in unstable results and difficulty in determining the significance of relationships. SmartPLS evaluates multicollinearity using the Variance Inflation Factor (VIF) value above 5 indicates a potential multicollinearity issue, while some stricter guidelines suggest a cut from 3.3. Therefore, before interpreting the structural model, VIF values for both indicator and construct levels should be examined, and values exceeding the threshold should prompt consideration of construct specification or item removal.

3.7.3.6 Structural Equation Modelling (SEM)

Structural equation modelling (SEM) was applied to evaluate the proposed relationships within the research framework on digital finance usage. Partial Least Squares Structural Equation Modelling (PLS-SEM) was used to conduct the inferential analysis, allowing the estimation of path coefficients, significance values (p-values), and the explanatory strength of the endogenous constructs through R^2 values. This method provides insight into both direct and indirect links among the variables, particularly how PEOU and PU influence DFU, as well as how external factors is SI, PR, and PT affect PEOU and PU.

The path coefficients (β) represent the direction and magnitude of the relationships between constructs, while the t-statistics and p-values, generated through a bootstrapping procedure with 5,000 subsamples, determine whether these relationships are statistically significant. Meanwhile, the R^2 values indicate the predictive accuracy with the model for each dependent variable, where higher values reflect stronger explanatory power.

In this study, H1 and H2 examine the direct effects of PEOU and PU on DFU. The sets of hypotheses H3a–H3b, H4a–H4b, and H5a–H5b explore how SI, PR, and PT influence PEOU and PU. Indirect effects were

also assessed to determine whether PEOU and PU serve as mediating variables linking the external factors to DFU.

Overall, the structural model results clarify which hypothesised paths are supported and reveal the key drivers behind digital finance usage. The findings also demonstrate the extent to which external perceptions such as social influence, trust, and risk shape users' evaluations of system usefulness and ease of use.

3.7.4 Assessment of Structural Model

After confirming that the measurement model fulfilled the required criteria Cronbach's alpha, outer loadings, composite reliability (CR), average variance extracted (AVE), discriminant validity, and multicollinearity the next step involves evaluating the structural model. The structural model reflects the hypothesised relationships between independent, dependent, and external variables in the research framework. Using the PLS-SEM approach, this stage examines how well the proposed conceptual model explains the relationships between constructs. The structural model assessment focuses on determining the predictive strength and significance of the hypothesised paths. This involves analysing the path coefficients, coefficient of determination (R^2), and effect sizes (f^2), which collectively indicate the strength of each relationship and the overall predictive capability of the model. A bootstrapping procedure is then conducted to generate t-values and p-values, allowing the significance of each path and hypothesis to be evaluated.

3.8 Summary of the Chapter

In summary, this chapter outlines this study utilized qualitative research methods to explore the adoption of digital finance among university students in Malaysia guided by the Technology Acceptance Model (TAM) through with online survey. The research aimed to gather responses from 240 users across various generations in Selangor using convenience sampling. A pilot study was conducted to clarify and improve the questionnaire items. The questionnaire employed nominal, ordinal, interval, ratio scales for measurement. Then, the development and discussion of research methodologies, including the design of questionnaires and the overall research framework. Finally, the study used SPSS software and SmartPLS for descriptive, reliability, and inferential analysis to process the data and study the relationships between independent, dependent, and external variables. A comprehensive analysis of the results has been provided to next chapter.

CHAPTER 4: DATA ANALYSIS

4.0 Introduction

The purpose of this chapter was to analyze and interpret the results generated from the questionnaire. This study employed SPSS software to analyse the data obtained from respondents and used SmartPLS to perform PLS-SEM analysis. This chapter presents three types of analysis with descriptive analysis, reliability analysis and inferential analysis. This chapter presented the respondent's demographic profile and the descriptive analysis and reliability analysis by using the Statistical Package for Social Science (SPSS) has been utilized to input and analyze the data obtained from respondents. Furthermore, SmartPLS is used for the Partial Least Squares Structural Equation Modelling (PLS-SEM) including inferential analysis such as outer loadings, composite reliability (CR), average variance extracted (AVE), discriminant validity, multicollinearity test, and structural equation modelling (SEM).

4.1 Descriptive Analysis

4.1.1 Respondent Demographic Profile

Table 4.1: Statistics of Respondents' Demographic Profile

Characteristics	Frequency	Percentage (%)
Gender		
Male	115	47.90
Female	125	52.10
Age		
18-22 years	216	90
23-27 years	24	10
28-32 years	0	0
Above 33 years	0	0
Occupation		
Student	240	100
Self-employed	0	0
Employed	0	0
Unemployed	0	0

Education

Diploma/STPM/Foundation	0	0
Undergraduate (bachelor's degree)	240	100
Postgraduate	0	0
Professional	0	0

Monthly Income

Below RM2500	210	87.5
RM2500-RM6000	30	12.5
Above RM6000	0	0

Source: Developed by own research.

As shown in Table 4.1 the responses are first divided into gender-specific groups. A total of 240 respondents took part in this study. There are 115 male respondents and 125 female respondents, with a gender ratio of 47.90% and 52.10%. Consequently, more women are participating than men. Along with gender, we classified the age groups depending on generation based on the age ranges to which they belong. There are 90% (216 respondents) of the university students who are from 18-22 years. Moreover, both university students from 28-43 years have 10% (24 respondents) in this study. Notably, there are no respondents in the 28–32 years above 33 years category, making its percentage 0.00% for university students.

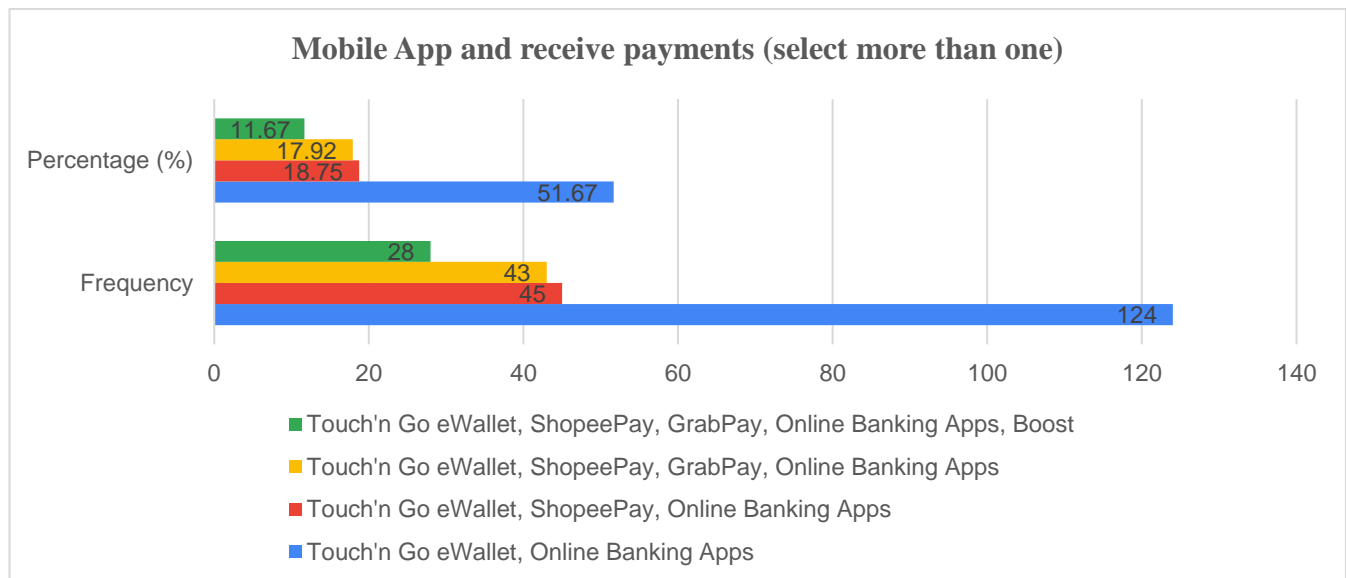
Next, most of the respondents in this study are students which are 100% (240 respondents) respectively. Notably, there are no respondents in the self-employed, employed, and unemployed category, making its percentage 0.00% for university students. A majority of the participants in this study are Undergraduate (bachelor's degree) which are 100% (240 respondents) respectively. Notably, there are no respondents in the diploma/STPM/foundation, postgraduate, and professional category, making its percentage 0.00%. The distribution of monthly income among respondents. The largest group earns spending income with 87.50% (210 respondents) below RM2500. In contrast, only 12.50% (30 respondents) spent between RM2500-RM6000 in monthly income. Notably, there are no respondents in the above RM6000 category, making its percentage 0.00% for monthly income with university students.

4.1.2 Mobile App and receive payments (select more than one)

Table 4.2: Descriptive Analysis for Mobile App and receive payments (select more than one)

	Frequency	Percentage (%)
Touch'n Go eWallet, Online Banking Apps	124	51.67
Touch'n Go eWallet, ShopeePay, Online Banking Apps	45	18.75
Touch'n Go eWallet, ShopeePay, GrabPay, Online Banking Apps	43	17.92
Touch'n Go eWallet, ShopeePay, GrabPay, Online Banking Apps, Boost	28	11.67
Total	240	100

Figure 4.1: Descriptive Analysis for Mobile App and receive payments (select more than one)



In this question, 240 respondents were given the opportunity to answer the openly, allowing them to select mobile app and receive payments (select more than one) they had previously experienced. Most of the university students are using the Touch'n Go eWallet, Online Banking Apps as it consists of 124 respondents with 51.67%. Next, Touch'n Go eWallet, ShopeePay, Online Banking Apps was the second highest with the response from 45 respondents at 18.75%. Furthermore, followed by Touch'n Go eWallet, ShopeePay, GrabPay, Online Banking Apps which consist of 43 respondents at 17.92%. Lastly, the lowest response which is the Touch'n Go eWallet, ShopeePay, GrabPay, Online Banking Apps, Boost consists of 28 respondents at 11.67%.

4.2 Central Tendencies Measurement of Constructs

In this section, the mean and standard deviation for the independent variables (IVs), dependent variable (DV), and external variables (EVs) has been computed. The 21 questions from Sections B, C, and D of the questionnaire has been analyzed using SPSS software.

Table 4.3: Central Tendencies Measurement of Constructs of variables

Independent Variables (IVs)	Items	Mean	Standard Deviation
Perceived Ease of Use (PEOU)	PEOU1	4.25	0.746
	PEOU2	4.28	0.782
	PEOU3	4.26	0.726
	PEOU4	4.23	0.770
Perceived Usefulness (PU)	PU1	4.24	0.726
	PU2	4.25	0.707
	PU3	4.23	0.720
	PU4	4.30	0.726
Dependent Variables (DV)	Items	Mean	Standard Deviation
Digital Finance Usage (DFU)	DFU1	4.25	0.739
	DFU2	4.26	0.720
	DFU3	4.25	0.746
External Variables (EVs)	Items	Mean	Standard Deviation
Social Influence (SI)	SI1	4.20	0.743
	SI2	4.18	0.754
	SI3	4.20	0.761
Perceived Risk (PR)	PR1	4.17	0.730
	PR2	4.24	0.701
	PR3	4.19	0.745
Perceived Trust (PT)	PT1	4.25	0.710
	PT2	4.26	0.722
	PT3	4.25	0.707
	PT4	4.29	0.729

Source: Author's own data analysis from SPSS.

4.2.1 Perceived Ease of Use (PEOU)

Firstly, the questions pertaining to perceived ease of use are examined in “Table 4.3”. PEOU2 has the highest value of standard deviation of 0.782 and has the highest mean value which is 4.28. Then, PEOU3 has the second largest mean value ranking, 4.26 whereas its standard deviation is 0.726. Moreover, PEOU1 has the same rank which is ranked as third of mean and standard deviation values which are 4.25 and 0.746. Lastly, PEOU4 has the lowest mean value of 4.23 and its standard deviation is 0.770.

4.2.2 Perceived Usefulness (PU)

Moreover, the questions pertaining to perceived usefulness are examined in “Table 4.3”. PU4 has the highest value of standard deviation of 0.726 and has the highest mean value which is 4.30. Then, PU2 has the second largest mean value ranking, 4.25 whereas its standard deviation is 0.707. Moreover, PU1 has the same rank which is ranked as third of mean and standard deviation value which are 4.24 and 0.726. Lastly, PU3 has the lowest mean value of 4.23 and its standard deviation is 0.720.

4.2.3 Digital Finance Usage (DFU)

Next, the questions pertaining to digital finance usage are also being analyzed. The result is attached in Table 4.3. There are also items with similar mean values in this section. DFU1 and DFU3 have the same mean value, which is 4.25, while their standard deviations are also relatively close at 0.739 and 0.746, respectively. The largest mean value is obtained by DFU2, with a value of 4.26, and its standard deviation is the lowest at 0.720.

4.2.4 Social Influence (SI)

Furthermore, the questions pertaining to social influence are also being analyzed. The result is attached in Table 4.3. There are also items with similar mean values in this section. SI1 and SI3 have the same mean value, which is 4.20, while their standard deviations are also relatively close at 0.743 and 0.761, respectively. The smallest mean value is obtained by SI2, with a value of 4.18, and its standard deviation is the second largest at 0.754.

4.2.5 Perceived Risk (PR)

Moreover, the questions pertaining to perceived risk are examined in “Table 4.3”. PR2 has the lowest value of standard deviation of 0.701 and has the highest mean value which is 4.24. Then, PR3 has the second largest mean value ranking, 4.19 whereas its standard deviation is 0.745. Lastly, PR1 has the lowest mean value of 4.17 and its standard deviation is 0.730.

4.2.6 Perceived Trust (PT)

Lastly, the questions pertaining to perceived trust are also being analyzed. The results are attached in Table 4.3. PT2 has the second largest mean value of 4.26, with a standard deviation of 0.722. There are also items with similar mean values in this section. PT1 and PT3 have the same mean value, which is 4.25, while their

standard deviations are also close at 0.710 and 0.707, respectively. The largest mean value is obtained by PT4, with a value of 4.29, and its standard deviation is 0.729, indicating moderate consistency in responses.

4.3 Reliability Analysis

Table 4.4: Result of Cronbach's Alpha

No.	Name of Variables	No. of Items	Cronbach's Alpha	Results of Reliability
1.	Perceived Ease of Use	4	0.778	Acceptance
2.	Perceived Usefulness	4	0.761	Acceptance
3.	Digital Finance Usage	3	0.804	Good
4.	Social Influence	3	0.766	Acceptance
5.	Perceived Risk	3	0.725	Acceptance
6.	Perceived Trust	4	0.718	Acceptance

Source: Author's own data analysis from SPSS.

Table 4.4 summarises the reliability analysis for the two independent variables, the dependent variable, and the three external variables used in this study. Cronbach's Alpha was applied to evaluate internal consistency, following the interpretation guidelines suggested by George and Mallery (2003). According to their scale, values between 0.80 and 0.90 indicate good reliability, values above 0.90 reflect excellent reliability, scores from 0.70 to 0.80 are acceptable, values between 0.60 and 0.70 may be questionable, and values below 0.50 are considered poor.

The Cronbach's Alpha results of the reliability test in this study are presented in Table 4.4. A Cronbach's Alpha of 0.70 or higher is considered to indicate at least acceptable reliability. As shown in Table 4.4, all the Cronbach's Alpha values for the independent, dependent, and external variables exceed 0.70 demonstrating good reliability. Specifically, the independent variables exhibit Cronbach's Alpha values 0.778 for perceived ease of use and 0.761 for perceived usefulness. These dependent variables mentioned have good reliability as they fall under the range of 0.70 to 0.80 is DFU (0.804). In addition, the results of Cronbach's Alpha with external variables are SI (0.766), PR (0.725), and PT (0.718).

Overall, all the Cronbach's Alpha values in this study exceed the 0.70 threshold, confirming that the research instrument demonstrates good reliability. The values range from 0.718 to 0.804 suggesting that the measurement items used for each construct are reliable for subsequent data analysis.

4.4 Inferential Analysis

4.4.1 Outer Loadings

Table 4.5: Result of Outer Loadings

Constructs	DFU	PEOU	PR	PT	PU	SI
DFU1	0.843					
DFU2	0.836					
DFU3	0.862					
PEOU1		0.819				
PEOU2		0.796				
PEOU3		0.716				
PEOU4		0.756				
PR1			0.805			
PR2			0.728			
PR3			0.864			
PT1				0.729		
PT2				0.735		
PT3				0.791		
PT4				0.689		
PU1					0.775	
PU2					0.730	
PU3					0.795	
PU4					0.751	
SI1						0.808
SI2						0.853
SI3						0.816

Source: Author's own data analysis from SmartPLS

According to Hair et al. (2019), outer loadings analysis indicates that the digital finance usage, perceived ease of use, perceived risk, perceived trust, perceived usefulness, and social influence are well explained by their respective indicators with high consistency. This suggests that each construct accounts for more than 50% of the variance in the indicator, demonstrating satisfactory item dependability. As shown in Table 4.5

shown PR3 (0.864) exhibits the highest reliability, while the remaining indicators fall within the benchmark range of 0.60 to 0.80. Therefore, no items were eliminated from the measurement model.

4.4.2 Composite Reliability (CR)

Table 4.6: Result of Composite Reliability

No.	Name of Variables	No. of Items	Composite Reliability
1.	Perceived Ease of Use	4	0.855
2.	Perceived Usefulness	4	0.848
3.	Digital Finance Usage	3	0.884
4.	Social Influence	3	0.865
5.	Perceived Risk	3	0.842
6.	Perceived Trust	4	0.826

Source: Author's own data analysis from SmartPLS.

A composite reliability (CR) value reflects the internal consistency of items measuring a latent construct. According to Fornell and Larcker (1981), CR values between 0.70 and 0.80 results are acceptance or good reliability with value above 0.70 or higher results are acceptance or good reliability . Based on the results in Table 4.6, PEOU has a CR of 0.855, indicating strong internal consistency across its 4 items. PU shows a CR of 0.848, also demonstrating good reliability across its 4 items. DFU records a CR of 0.884, which reflects excellent reliability for its 3 items. SI with a CR of 0.865, shows strong reliability across its 3 items. PR shows a CR of 0.842, indicating good reliability for its 3 items. PT has a CR of 0.826, demonstrating acceptable to good reliability across its 4 items. Overall, all constructs surpass the 0.70 benchmark, indicating good internal consistency for each construct and reliable measurement.

4.4.3 Average Variance Extracted (AVE)

Table 4.7: Result of Average Variance Extracted

No.	Name of Variables	No. of Items	Average Variance Extracted
1.	Perceived Ease of Use	4	0.597
2.	Perceived Usefulness	4	0.583
3.	Digital Finance Usage	3	0.718
4.	Social Influence	3	0.682
5.	Perceived Risk	3	0.642
6.	Perceived Trust	4	0.543

Source: Author's own data analysis from SmartPLS.

Average Variance Extracted (AVE) reflects how much variance in the indicators of a construct is captured compared to the amount attributed to measurement error. It is an essential criterion for evaluating convergent validity. An AVE value of 0.50 or higher indicates that the construct captures at least half of the variance in its items, signifying satisfactory convergent validity. If the AVE falls below 0.50, it implies that less than half of the variance is explained, which may point to weaknesses in the measurement model. Nevertheless, Fornell and Larcker (1981) argue that a construct may still demonstrate acceptable convergent validity when the AVE is below 0.50, provided the composite reliability exceeds 0.60.

As shown in Table 4.7, PEOU (AVE = 0.597), PU (AVE = 0.583), SI (AVE = 0.682), PR (AVE = 0.642), and PT (AVE = 0.543) meet this threshold, demonstrating strong convergent validity. These results indicate that these constructs capture enough variance from their items, ensuring their reliability and appropriateness for further analysis. Notably, DFU exhibits an exceptionally high AVE of 0.718, reflecting an excellent representation of the construct by its indicators. However, when the CR for these constructs exceeds 0.60, as indicated in prior findings, the convergent validity can still be considered marginally adequate. These constructs may still be included in the analysis, provided that their reliability and discriminant validity are sufficiently demonstrated.

4.4.4 Discriminant Validity

Table 4.8: Result of Heterotrait Monotrait ratio (HTMT)

Constructs	DFU	PEOU	PR	PT	PU	SI
DFU						
PEOU	0.315					
PR	0.247	0.404				
PT	0.405	0.348	0.590			
PU	0.620	0.464	0.424	0.624		
SI	0.222	0.278	0.363	0.396	0.488	

Source: Author's own data analysis from SmartPLS.

Benitez et al. (2020) recommend evaluating discriminant validity using the Heterotrait–Monotrait ratio (HTMT), which examines the extent to which one latent construct differs from another. As shown in Table 4.8, all HTMT values fall below the commonly accepted cut from 0.90, confirming that discriminant validity is achieved for every construct in the model. This indicates that each variable represents a unique concept and is not overly correlated with the others. The highest HTMT value, 0.624, is observed between Perceived Trust (PT) and Perceived Usefulness (PU), suggesting a comparatively stronger association between these two constructs. Nonetheless, the value remains comfortably below the 0.90 threshold, demonstrating that discriminant validity is still satisfactorily maintained.

Table 4.9: Result of Fornell-Larcker Criterion

Constructs	DFU	PEOU	PR	PT	PU	SI
DFU	0.847					
PEOU	0.250	0.773				
PR	0.184	0.312	0.801			
PT	0.306	0.275	0.429	0.737		
PU	0.485	0.368	0.329	0.465	0.763	
SI	0.174	0.227	0.279	0.299	0.374	0.826

Source: Author's own data analysis from SmartPLS.

As part of using the Fornell-Larcker criterion, each latent construct is assessed for discriminant validity to ensure that it is distinct from the other latent constructs. Discriminant validity is established when the square root of a construct's AVE (diagonal values) exceeds its correlations with other constructs (off-diagonal values). This comparison demonstrates that each construct accounts for a greater proportion of variance in its own indicators than in those of other constructs.

From Table 4.9, the results highlight that most constructs satisfy the Fornell-Larcker Criterion. For example, the square root of the AVE for DFU is 0.847 higher than its correlations with the remaining constructs, demonstrating strong discriminant validity. Similarly, PEOU, PT with an AVE square root of 0.773, 0.737 and PU with 0.763 exceed their respective correlations, confirming their distinctiveness in

the model. These findings suggest that the latent constructs are well-differentiated and appropriately measured.

However, some constructs such as PR (0.801) and SI (0.826) all exceed their correlations with other constructs, suggesting that each construct is more strongly associated with its own indicators than with other constructs. Therefore, the model demonstrates adequate discriminant validity, as all constructs have square root AVE values that exceed their correlations with other constructs, showing that each construct is distinct and appropriately measured.

4.4.5 Multicollinearity Test

Table 4.10 Multicollinearity Test

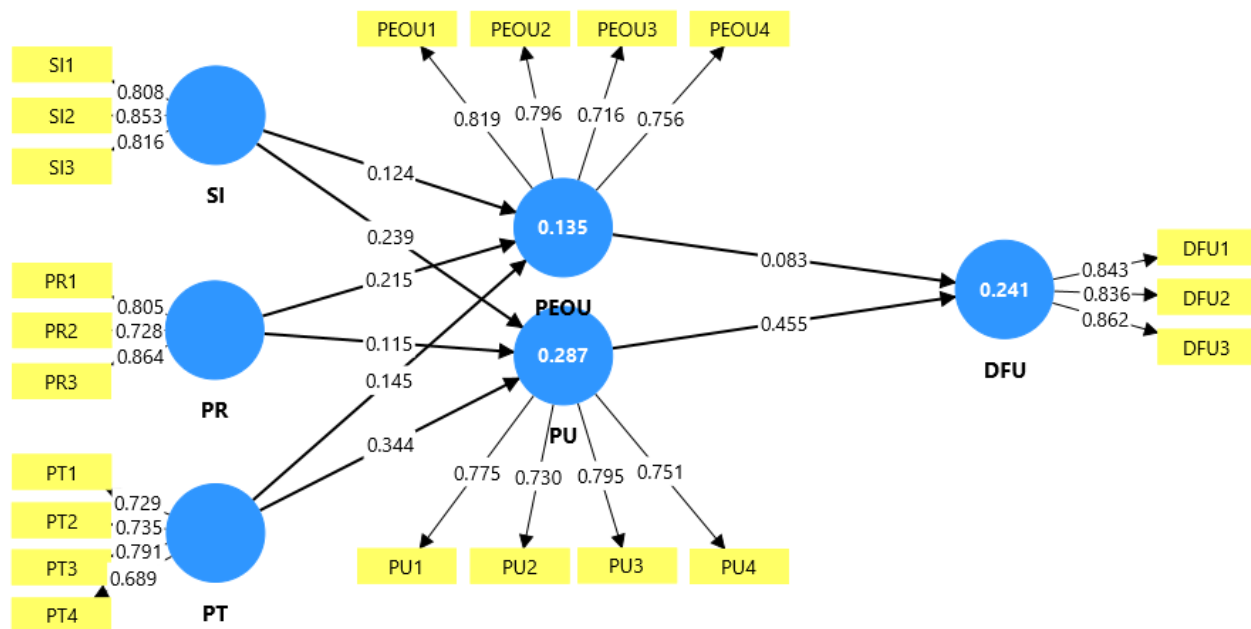
Construct	Items	VIF Value
Perceived Ease of Use (PEOU)	PEOU1	1.580
	PEOU2	1.746
	PEOU3	1.428
	PEOU4	1.444
Perceived Usefulness (PU)	PU1	1.480
	PU2	1.392
	PU3	1.593
	PU4	1.443
Digital Finance Usage (DFU)	DFU1	1.659
	DFU2	1.746
	DFU3	1.825
Social Influence (SI)	SI1	1.455
	SI2	1.766
	SI3	1.582
Perceived Risk	PR1	1.514
	PR2	1.322
	PR3	1.498
Perceived Trust	PT1	1.322
	PT2	1.358
	PT3	1.484
	PT4	1.290

Source: Author's own data analysis from SmartPLS.

This study performed a multicollinearity test to test how well two independent variables can be represented by the one dependent variable, and three external variables (Vatcheva & Lee, 2016). Variance Inflation Factor (VIF) is used to measure the severity of multicollinearity in regression analysis (CFI Team, 2022). A VIF value below 5 generally indicates low multicollinearity, while values above 3.3 suggest potential multicollinearity issues (Kim, 2019; Kock, 2015). The VIF values in the data set are all within an acceptable range, indicating low multicollinearity across all constructs. As shown in Table 4.10, the VIF values range from 1.290 to 1.825, all of which fall within the acceptable range, indicating that multicollinearity is not a concern in this study. Therefore, the constructs are distinct and do not exhibit redundancy, ensuring the reliability of subsequent structural model estimations.

4.4.6 Structural Equation Modelling (SEM)

Figure 4.2: Original Structural Model



Source: Author’s own data analysis from SmartPLS.

Table 4.11: Coefficients of Determination (R²)

Constructs	R-square	R-square adjusted
DFU	0.241	0.235
PEOU	0.135	0.124
PU	0.287	0.278

Source: Author’s own data analysis from SmartPLS.

Figures 4.2 illustrate this study examines the relationships among the two independent variables PEOU and PU the dependent variable, DFU, and the three external variables, namely SI, PR, and PT. Table 4.11 provides the R² values, which show how much of the variance in each endogenous construct is explained by its predictors. For DFU, the structural model reports an R² value of 0.241, indicating that PEOU and PU together account for 24.10% of the variation in digital finance usage. Meanwhile, the external variables (SI,

PR, and PT) explain 13.50% of the variance in PEOU, as reflected by the R² value of 0.135. These same external variables also explain 28.70% of the variance in PU, as shown by the R² value of 0.287. Overall, the results suggest that the independent and dependent contribute a meaningful portion of the explained variance for PEOU, PU, and DFU within the context of digital finance adoption.

However, if all explanatory variables in the model are statistically insignificant, the model should be rejected (Ozili, 2022). According to Table 4.18, in the original structural model, H2: PU > DFU, H3b:SI > PU, H4a: PR > PEOU, H5a: PT > PEOU, and H5b: PT > PU are statistically significant at the 5% level. Since both models contain significant explanatory variables, they can be considered valid, though the original structural model demonstrates stronger predictive power due to its higher R² value.

Table 4.12: Cross-Validated Predictive Ability Test (CVPAT) Results

Indicator	Construct	Q ² predict	PLS-SEM_RMSE	LM_RMSE (Benchmark)	Result (PLS-SEM vs. LM)
DFU1	DFU	0.060	0.718	0.736	Better
DFU2	DFU	0.074	0.694	0.709	Better
DFU3	DFU	0.051	0.729	0.734	Better
PEOU1	PEOU	0.117	0.702	0.715	Better
PEOU2	PEOU	0.046	0.766	0.786	Better
PEOU3	PEOU	0.014	0.722	0.734	Better
PEOU4	PEOU	0.071	0.744	0.757	Better
PU1	PU	0.194	0.652	0.664	Better
PU2	PU	0.128	0.662	0.676	Better
PU3	PU	0.176	0.654	0.667	Better
PU4	PU	0.099	0.691	0.706	Better

Source: Author's own data analysis from SmartPLS.

The Cross-Validated Predictive Ability Test (CVPAT) results in Table 4.12 demonstrate that all Q² predict values are positive, confirming the predictive relevance of the model. Additionally, the PLS-SEM_RMSE values are consistently lower than with linear model (LM_RMSE), indicating superior predictive accuracy of the PLS-SEM model for all observed indicators. Among the constructs, PU shows the highest predictive power (Q² predict = 0.099 to 0.194) with PEOU and DFU. These findings confirm that the PLS-SEM

model has substantial out-of-sample predictive capability and better performance than the linear regression benchmark.

Table 4.13: Model Fit

	Saturated model	Estimated model
SRMR	0.068	0.075
d_ULS	1.071	1.295
d_G	0.341	0.350
Chi-square	503.068	508.060
NFI	0.707	0.704

Source: Author's own data analysis from SmartPLS.

Model fit indices in PLS-SEM help researchers the evaluation of the proposed model aims to assess how well it reproduces the empirical data and to identify potential model misspecifications (Hair et al., 2017; Hair et al., 2021). Commonly reported fit indices include the Standardized Root Mean Square Residual (SRMR), the Unweighted Least Squares discrepancy (d_ULS), the geodesic discrepancy (d_G), Chi-square, and the Normed Fit Index (NFI).

SRMR reflects the average difference between the observed and model-implied correlations, with lower values indicating a better model fit; values below 0.08 are generally considered acceptable. The d_ULS and d_G values measure discrepancies between the empirical and model-implied covariance matrices, providing additional assessment of model fit and are typically evaluated against bootstrap confidence intervals rather than fixed cut offs. NFI compares the Chi-square compared to the null model, where values approaching 1 signify a better fit.

Based on Table 4.13, the saturated model shows slightly better fit indices than the estimated model, with lower SRMR (0.068 vs. 0.075), d_ULS (1.071 vs. 1.295), d_G (0.341 vs. 0.350), and Chi-square (503.068 vs. 508.060). The NFI value is also marginally higher for the saturated model (0.707) compared to the estimated model (0.704). This outcome is expected because the saturated model estimates all possible relationships, resulting in the best possible measurement model fit.

However, in PLS-SEM, the estimated model is typically used for substantive interpretation because it incorporates the structural relationships that reflect the theoretical framework. If the estimated model demonstrates acceptable SRMR and provides strong R² and Q² values, it can be considered adequate even if its fit indices are slightly weaker than those of the saturated model.

Table 4.14: Main Effects and Path Coefficients

Hypothesis	Beta	t-values	p-values	f ²	Result
H1: PEOU > DFU	0.083	1.367	0.172	0.008	Rejected
H2: PU > DFU	0.455	7.140	0.000	0.236	Accepted
H3a: SI > PEOU	0.124	1.872	0.061	0.016	Rejected
H3b:SI > PU	0.239	3.949	0.000	0.071	Accepted
H4a: PR > PEOU	0.215	2.916	0.004	0.042	Accepted
H4b: PR > PU	0.115	1.815	0.070	0.015	Rejected
H5a: PT > PEOU	0.145	2.085	0.037	0.019	Accepted
H5b: PT > PU	0.344	5.326	0.000	0.130	Accepted

Source: Author's own data analysis from SmartPLS.

This study aims to explore the digital finance adoption among university students in Malaysia using Technology Acceptance Model (TAM). There are eight; each hypothesis has distinct assumptions, making all hypotheses essential for the proposed model. The path coefficients and their corresponding significance levels are presented in Table 4.14. It is seen that out of the eight hypotheses proposed, five are supported. Firstly, PEOU does not significantly affect DFU in data ($\beta = 0.083$, $t = 1.367$, $p = 0.172$). The f^2 value of 0.008 indicates a very small effect size, meaning PEOU has limited but meaningful predictive value of DFU. Therefore, H1 is rejected in both datasets.

Secondly, PU has a strong and statistically significant effect on DFU in data ($\beta = 0.455$, $t = 7.140$, $p = 0.000$). The f^2 value of 0.236 indicates a medium to large effect size, meaning PU has a strong predictive value of DFU. Thus, H2 is accepted in both datasets. Furthermore, SI does not significantly affect PEOU in data ($\beta = 0.124$, $t = 1.872$, $p = 0.061$). The f^2 value of 0.016 indicates a small effect size, meaning SI has limited but meaningful predictive value of PEOU. Therefore, H3a is rejected in both datasets. SI significantly increases PU in data ($\beta = 0.239$, $t = 3.949$, $p = 0.000$). The f^2 value of 0.071 indicates a small to medium effect size, meaning SI has limited but meaningful predictive value of PU. Thus, H3b is accepted in both datasets.

Moreover, PR significantly affects PEOU in data ($\beta = 0.215$, $t = 2.916$, $p = 0.004$). The f^2 value of 0.042 indicates a small effect size, meaning PR has limited but meaningful predictive value of PEOU. Thus, H4a is accepted in both datasets. PR does not significantly affect PU in data ($\beta = 0.115$, $t = 1.815$, $p = 0.070$). The f^2 value of 0.015 indicates a small effect size, meaning PR has limited but meaningful

predictive value of PU. H4b is rejected in both datasets. PT significantly increases PEOU in data ($\beta=0.145$, $t = 2.085$, $p = 0.037$). The f^2 value of 0.019 indicates a small effect size, meaning PT has limited but meaningful predictive value of PEOU. PT has a strong, significant effect on PU in data ($\beta= 0.344$, $t = 5.326$, $p = 0.000$). The f^2 value of 0.130 indicates a medium effect size, meaning PT has limited but meaningful predictive value of PU. Thus, similar results H5a and H5b are accepted in both datasets.

In summary, the model demonstrates satisfactory predictive capability for DFU, PU, and PEOU. Although some effect sizes are small or negligible, the overall results meet the recommended standards for PLS-SEM analysis and therefore serve as the basis for further discussion.

4.5 Conclusion

In summary, this study performs descriptive analysis with SPSS software to analyse the respondent's demographic profile. This chapter also explains the mean and standard deviation of each construct. This study performs a reliability analysis with SPSS software to analyse the Cronbach's Alpha values for Likert Scale instruments. Besides, this study performs outer loadings, composite reliability (CR), average variance extracted (AVE), discriminant validity, multicollinearity test, and structural equation modelling (SEM) using SmartPLS software and verified that the measurement model is reliable and validate to perform inferential analysis. PLS-SEM analysis is the analysis performed to examine the significant relationships among the variables. The results indicate a good fit for explaining the model and a detailed discussion with findings has been presented in the following chapter.

CHAPTER 5: DISCUSSION, CONCLUSION AND IMPLICATIONS

5.0 Introduction

In chapter 4, this study had conducted an analysis based on convenience sampling method involving 240 respondents. Accordingly, this chapter provides an overview of statistical results presented in chapter 4, followed by discussions of key findings, implications of study, limitations, recommendations for future research, and the overall conclusion of this project.

5.1 Discussion of Major Findings

Table 5.1: Results of Hypotheses Testing

Hypothesis	Beta	t-values	p-values	f²	Result
H1: PEOU > DFU	0.083	1.367	0.172	0.008	Rejected
H2: PU > DFU	0.455	7.140	0.000	0.236	Accepted
H3a: SI > PEOU	0.124	1.872	0.061	0.016	Rejected
H3b:SI > PU	0.239	3.949	0.000	0.071	Accepted
H4a: PR > PEOU	0.215	2.916	0.004	0.042	Accepted
H4b: PR > PU	0.115	1.815	0.070	0.015	Rejected
H5a: PT > PEOU	0.145	2.085	0.037	0.019	Accepted
H5b: PT > PU	0.344	5.326	0.000	0.130	Accepted

Source: Author's own data analysis from SmartPLS.

5.1.1 Perceived Ease of Use and Digital Finance Usage

H1: There is a significant relationship between perceived ease of use that has a significant positive effect on the digital finance usage.

The findings of this study reveal that PEOU does not significantly influence DFU among university students of digital finance in Malaysia, leading to the rejection ($\beta = 0.083$, $p = 0.172$) of the proposed hypothesis (H1). This suggests that although digital finance services may be easy to use, ease of use alone does not motivate students to adopt or continue using them (Prastiawan et al., 2021). A major reason is that today's university students are "digital natives" who already possess advanced technological literacy. For them, learning to use digital finance applications requires minimal effort. As a result, ease of use becomes a basic expectation rather than a reason to use the service. In other words, usability is no longer a source of competitive advantage because almost all digital finance apps such as e-wallets, banking apps, QR payment apps are designed with intuitive interfaces (Ramli et al., 2023).

This finding aligns with studies showing that when users have prior experience with digital technologies, the influence of PEOU on actual usage becomes weaker. University students may care more about usefulness, security, social trends, and trust, rather than how easy the system is to operate. Therefore, H1 is rejected, as university students prioritise the practical and experiential benefits they receive from digital finance usage over the assurance of perceived ease of use (Truc, 2024). Although ease of use is important in early technology adoption, it becomes less relevant in environments where users already have high digital skills. Even if digital finance is easy to use, ease of use alone does not strongly motivate university students to actively use digital finance services.

5.1.2 Perceived Usefulness and Digital Finance Usage

H2: There is a significant relationship between perceived usefulness that has a significant positive effect on the digital finance usage.

The findings indicate that PU has a strong and significant positive impact on DFU among university students of digital finance in Malaysia, leading to the acceptance ($\beta = 0.455$, $p = 0.000$) of the proposed hypothesis (H2). Perceived Usefulness emerges as the strongest direct predictor of digital finance usage. This finding confirms a core principle of the Technology Acceptance Model (TAM), where perceived usefulness is consistently one of the most influential factors in predicting actual system usage (Schorr, 2023). University students are more likely to use digital finance services when they believe these platforms save time compared to cash transactions, simplify daily financial activities, offer practical features such as bill payment, fund transfer, and QR pay, provide convenience for online purchases, and reduce the need for physical bank visits (Usman et al., 2025).

In Malaysia, where digital transformation is rapidly growing, the usefulness of e-wallets, online banking, and digital payments is highly recognised by the younger generation. The strong impact of PU suggests that students adopt digital finance because they gain real functional benefits, not because the apps are easy to use (Abdullah et al., 2025). This reinforces the idea that usefulness is the primary motivation for repeated usage rather than usability. In a rapidly digitalising country like Malaysia, these functional benefits strongly drive adoption. Students adopt digital finance not because the apps are easy to use, but because the apps add value to their daily lives (Amnas et al., 2023). Therefore, H2 is accepted when students use digital finance when they believe it genuinely helps them save time, improve convenience, and efficiency.

5.1.3 Social Influence and Perceived Ease of Use

H3a: There is a significant relationship between social influences that has a significant positive effect on perceived ease of use.

The findings indicate that SI does not significantly affect PEOU, ($\beta = 0.124$, $p = 0.061$). Students' perception of how easy digital finance systems are to use is not shaped by their peers, family, or social networks. University students often form ease of use judgments based on personal hands-on experience, prior exposure to apps and technology, and their own confidence in navigating digital platforms (Li et al., 2024).

This is because young users tend to experiment with new apps independently, social pressure does not influence how easy or difficult they perceive these systems to be. Even if friends encourage them to try digital finance, such encouragement does not necessarily change their evaluation of user-friendliness (Tariq et al., 2024). This finding shows that ease of use is driven by individual cognitive evaluation, not social expectations. Young users tend to experiment independently, and thus, social pressure does not affect how easy or difficult they perceive a system to be (Javaid et al., 2025). Therefore, H3a is rejected with social pressure or influence from peers does not significantly change how easy students think digital finance

5.1.4 Social Influence and Perceived Usefulness

H3b: There is a significant relationship between social influences that has a significant positive effect on perceived usefulness.

The findings disclose that SI positively and significantly affects PU in the context of Malaysia's digital finance, ($\beta = 0.239$, $p = 0.000$). This means that students perceive digital finance as more useful when people around them, friends, family, influencers, or classmates speak positively about it. In Malaysian culture, peer groups play a crucial role in shaping attitudes among young adults. University students are influenced by recommendations from peers, social trends such as "cashless campus" or "e-wallet promotions", influencer endorsements, group norms encouraging digital payments (Diong & Toh, 2022).

When many people around them use digital finance with university students tend to believe that these services provide real value, convenience, and advantages. This creates a bandwagon effect where usefulness is reinforced through social validation. Social validation strengthens the belief that digital finance provides meaningful advantages. Therefore, H3b is accepted when friends, family, or society encourage digital finance, university students perceive it as more useful.

5.1.5 Perceived Risk and Perceived Ease of Use

H4a: There is a significant relationship between perceived risk that has a significant positive effect on perceived ease of use.

The findings demonstrate a positive and significant effect of PR on PEOU in digital finance, ($\beta = 0.215$, $p = 0.004$). This means that as students' perception of risk increases, their perceived ease of using digital finance services also increases. However, this positive direction is contrary to most prior TAM-based studies, where perceived risk usually has a negative relationship with PEOU (I Suroso et al., 2022). Traditionally, higher perceived risk makes users more cautious, uncomfortable, or anxious, which reduces their perception that the system is easy to use. Conversely, lower PR generally promotes feelings of confidence and reduces cognitive effort, leading to higher PEOU.

This researchers unexpected positive sign suggests that students who are more aware of risks may also become more motivated to understand or explore digital finance features, which in turn increases their PEOU (Kumar et al., 2022). Another possible interpretation is that students may view digital finance systems as having built-in safety features such as security authentication, transaction alerts which makes them feel that handling risks is easy due to the system's user-friendly design. Therefore, H4a is accepted, as the relationship is statistically significant. But the positive direction contradicts conventional theory, indicating the need for further investigation or contextual explanation.

5.1.6 Perceived Risk and Perceived Usefulness

H4b: There is a significant relationship between perceived risk that has a significant positive effect on perceived usefulness.

The findings demonstrate PR does not significantly affect PU, ($\beta = 0.115$, $p = 0.070$). Since the p-value is above 0.05, the relationship is statistically insignificant. This means university students continue to view digital finance as useful even though they are aware of potential risks. This outcome is consistent with typical behaviour among young digital users, who tend to prioritise convenience, accessibility, and functionality over security concerns. Students may still perceive digital finance as highly useful because it is widely accepted and needed for online transactions, many financial services are available only through digital platforms, it saves time and simplifies daily activities, and it offers cashback, discounts, and rewards (Moreno-Garcia et al., 2021).

Thus, their perception of usefulness is based on the practical benefits, rather than emotional concerns about risk. Risk does not significantly diminish the value they place on digital finance tools. Therefore, H4b is rejected, indicating that although risks are present, students still recognise the practical advantages

of digital finance. Perceived Risk does not significantly reduce students' perceptions of the usefulness of digital finance.

5.1.7 Perceived Trust and Perceived Ease of Use

H5a: There is a significant relationship between perceived trust that has a significant positive effect on perceived ease of use.

The findings demonstrate a positive and significant effect of PT on PEOU in digital finance, ($\beta = 0.145$, $p = 0.037$). Since the p-value is below 0.05, the relationship is statistically significant, confirming that higher trust leads to greater perceived ease of use among students. When university students trust a digital finance, platform use more likely PEOU. Trust reduces feelings of anxiety and uncertainty, allowing users to interact with the system more comfortably and confidently. Trust enhances PEOU because users feel safe performing digital transactions, trusted apps tend to appear clearer, more structured, and more reliable, users experience less hesitation when exploring features, and trust creates confidence that the system will function consistently and accurately (Amin et al., 2014).

As a result, university students who trust digital finance platforms find them more intuitive and user-friendly. Therefore, H5a is accepted, indicating that higher perceived trust contributes to a higher perception of ease of use in digital finance.

5.1.8 Perceived Trust and Perceived Usefulness

H5b: There is a significant relationship between perceived trust that has a significant positive effect on perceived usefulness.

The findings demonstrate a positive and significant effect of PT on PU in digital finance, ($\beta = 0.344$, $p = 0.000$). Since the p-value is well below 0.05, the relationship is statistically significant. This indicates that the more students trust digital finance platforms, the more useful they perceive them to be. When students trust a digital finance provider, they are more likely to view the service as reliable, beneficial, and worth using. Trust increases perceived usefulness because users believe transactions has been completed successfully, concerns about fraud, scams, or data breaches are reduced, confidence in the safety of online payments increases, and users feel assured that their money and personal information are protected (Prasetyo et al., 2025).

This demonstrates that trust is not only an emotional factor it enhances the perceived functional value of digital finance systems. In financial services, perceived usefulness often depends on the user's level of trust, making trust a critical construct within TAM, especially in high-risk digital environments (Alrawd et al., 2023). Therefore, H5b is accepted, confirming that higher trust significantly increases perceived usefulness of digital finance services.

5.2 Implications of Study

5.2.1 Theory Implication

This study uses the theoretical by Technology Acceptance Model (TAM) with the adoption of digital finance among university students in Malaysia. While the original TAM emphasises PEOU and PU, this research has three additional external variables in this models such as SI, PR, and PT use in the fintech with this TAM. These additional variables enhance the relevance of TAM in explaining user behaviour within contemporary digital finance in ecosystems. The empirical results indicate that the independent and dependent variables collectively account for 24.10%, 13.50%, and 28.70% of the variance in DFU, PEOU, and PU, respectively.

In addition, this study introduces digital finance usage as a key variable to provide deeper insights into how students engage with digital financial tools and methods. Previous research has primarily concentrated on practical attributes such as convenience, security, and cost efficiency in understanding digital finance adoption among Malaysia university students. In contrast, this study highlights digital finance usage as an important element in examining students' spending behaviour within the digital context. The findings demonstrate that PEOU and PU exert a significant positive effect on DFU which indicates ease, benefits, and enhanced user experience contribute to greater engagement. Conversely, SI, PR, and PT exhibit significant indirect effects through PEOU and PU. This suggests that for these issues of security and trust remain relevant contextual factors, they may not directly shape continued usage behaviour among students.

Theoretically, these findings broaden TAM by demonstrating that its core constructs continue to predict adoption even when contextual variables are added, while certain social and risk-related factors may exert indirect or moderating influences. This enriches existing literature by clarifying how personal and experiential factors shape the adoption of emerging fintech in developing economies. This study therefore strengthens the theoretical applicability of TAM to the digital finance domain and contributes new empirical evidence for the university student population in Malaysia.

5.2.2 Practical Implications

This study highlights an important part of practical implications with digital finance among university students in Malaysia by Technology Acceptance Model (TAM). Based on empirical results, factors such as PEOU and PU significantly influenced adoption, while SI, PR, and PT played indirect roles with two main areas of application emerging.

Firstly, this study highlights the importance of policymakers as trust and security remain critical even when they do not directly determine usage behaviour for these findings. Policymakers should prioritise robust cybersecurity and data protection frameworks to reduce perceived risk and improve perceived trust (Qudus, 2025). Malaysia's regulators can require digital finance providers to implement multi-factor authentication, secure sockets layer (SSL) or transport layer security (TLS) encryption, and tokenisation as minimum-security standards. Enforcing compliance with these measures will help mitigate cyberattacks, data breaches, and unauthorised transactions. For example, user-awareness and education universities and government agencies should collaborate on awareness campaigns that educate university students about safe digital finance practices recognizing phishing attempts, protecting personal credentials, and avoiding unverified platforms need to improve financial literacy and cybersecurity knowledge can strengthen trust and reduce perceived risk, thereby increasing willingness to adopt digital finance tools (Bottyan, 2023).

Furthermore, financial institutions for digital finance providers, fostering social influence through peer feedback is essential. User-generated reviews and testimonials can build perceived trust and encourage adoption among university students who often rely on peer recommendations before providers should invite satisfied users to share authentic experiences with social media by offering small incentives such as reward points or cashback to encourage participation (Reza Marvi et al., 2023). This results in increased engagement with the brand through reviews and the company can use this feedback to improve these products or create development with new products ensuring customer satisfaction. As well, these authentic reviews provide social proof that potential users trust in adopting digital finance (Handoyo, 2024). Thus, encouraging users to share authentic feedback and testimonials with creating a sense of community and reinforcing the platform's credibility.

5.3 Conclusion

As digital finance becomes increasingly integrated into everyday life, understanding how university students in Malaysia adopt these platforms is essential. Guided by the Technology Acceptance Model (TAM), this study factors such as PEOU, PU, SI, PR, and PT influence adoption of digital finance among university students. A quantitative survey approach was implemented, using a structured questionnaire administered to 240 respondents from Universiti Tunku Abdul Rahman (UTAR) through social media platforms and email distribution. Data has been analysed using SPSS and SmartPLS, which included descriptive statistics, reliability assessments, and inferential evaluations of both the measurement and structural models. In the structural model, the relationships represented by H2: $PU > DFU$, H3b: $SI > PU$, H4a: $PR > PEOU$, H5a: $PT > PEOU$, and H5b: $PT > PU$ were found to be statistically significant at the 5% level. The overall model demonstrated an acceptable fit, consistent with the proposed framework.

The findings indicate that PEOU and PU have strong, positive effects on digital finance usage, providing empirical support for TAM in the context of student adoption behaviour. Meanwhile, SI, PR, and PT were shown to exert indirect effects through PEOU and PU, implying that security and trust-related concerns function as contextual factors rather than direct predictors of usage intentions. These results align with earlier research on technology adoption but also reflect a shift among digital-native users, for whom convenience, user experience, and functional value take precedence over security considerations.

From a policymaker's standpoint, this study highlights the importance of enhancing cybersecurity mechanisms, including multi-factor authentication, SSL or TLS encryption, and tokenisation, within Malaysia's regulatory landscape. On a practical level, the results suggest the need for targeted financial literacy and cybersecurity education initiatives to increase student confidence in digital finance usage. For financial institutions and digital finance providers, strengthening trust, improving system usefulness, and incorporating engaging features including social recommendation elements may support sustained student adoption.

In conclusion, this study successfully extends TAM within the digital finance domain and offers both theoretical and practical contributions to understanding the behaviour of Malaysian university students. Future studies are encouraged to examine these relationships across broader demographic groups to gain a more comprehensive perspective on digital finance adoption and its wider implications.

5.4 Limitations of the Study

This study brings several limitations that warrant consideration. Firstly, the original intent of this research was the sample size and representativeness. The study relied on a relatively small sample of 240 respondents. Although adequate for basic analysis, a limited sample size may reduce statistical power and prevent detection of smaller but meaningful relationships. Moreover, a small sample might not be able to capture the full range of experiences and perspectives that might be present in a larger population, resulting in potentially skewed results. Future research should employ a larger and more representative sample across Malaysia's diverse ethnic, socioeconomic, and regional backgrounds to strengthen generalisability.

Secondly, this study is a model scope for Technology Acceptance Model variables such as PEOU, PU, SI, PR, and PT the moderate effect of 24.10%, 13.50%, and 28.70% in R^2 , it suggests that DFU, PEOU, and PU. Moreover, the focus on general digital finance usage may have overlooked specific forms such as mobile payments with digital finance especially in contexts where convenience and functionality are more prominent than emotional or enjoyment-driven factors. This indicates that the current model, while valuable, may not fully capture the complex interplay of motivations that drive university students' engagement with digital finance.

Furthermore, the age distribution of respondents with respect to the engagement of university students' populations. Only 18-22 years and 23-27 years influence digital finance across different age demographics. There are many challenges older adults face in relation to financial literacy and cybersecurity knowledge such as their inexperience with technology and a variety of life experiences that influences their financial decisions. In the absence of representation from this demographic, the study is not able to draw comprehensive conclusions regarding the role of age in the digital finance university students in Malaysia using Technology Acceptance Model (TAM). As well, university students have different perceptions of risk and differing coping strategies when confronted with possible fraud, which is critical to understanding their vulnerability. Therefore, to effectively capture these dynamics, targeted research should include a broader range of age groups.

The last limitation of this study is sampling method use of convenience sampling as the primary method for data collection. While this approach allowed for quick and cost-effective access to participants, it may have introduced biases that limit the generalizability of the findings. The sample may not accurately represent the broader university students in Malaysia, as it could disproportionately include individuals who are more digitally literate or already inclined to use digital finance. This could skew the results by overemphasizing certain behaviours or attitudes while underrepresenting others such as those from less technologically adept or economically diverse groups. This is because convenience sampling lacks randomisation, the generalisability of the results to the broader Malaysian student population is limited.

5.5 Recommendations for Future Research

There are also recommendations for future research to address the limitations discussed above. Firstly, limitation of sample size can be addressed by incorporating a larger sample size in future research, ideally by using stratified sampling methods based on ethnicity and geographic location. In stratified sampling, the sample would be more representative of Malaysia's demographic composition which would enable the study to capture differences across different groups using this approach could be particularly useful in identifying nuanced patterns and trends that might otherwise be overlooked. Although such an approach may not always be feasible due to additional resources such as budgets and time, it is acknowledged that such an approach does require additional resources. Despite this, the importance of obtaining a more representative sample should be prioritized to enhance the generalizability and reliability in the study. This is because specific interventions have been tailored to specific demographic groups and will ultimately be more effective.

Besides, expanded theoretical frameworks in future research should incorporate additional variables to better capture this multi-faceted relationship with digital finance. As an illustration, social influence, perceived risk, and perceived trust with integrating these variables would offer a richer theoretical framework for understanding consumer spending behaviour and help digital finance providers design features that address the diverse psychological and social factors influencing spending.

Future research should emphasize engaging with a balanced representation of all age groups, with a special emphasis on university students, especially only 18-22 years and 23-27 years to overcome with limitations related to age group distribution. Through collaboration with community centers, senior organizations, and healthcare facilities serving older individuals, researchers may implement targeted outreach strategies to recruit participants from this demographic. It is also possible to provide greater insight into the unique experiences and challenges faced by older adults when it comes to financial literacy and cybersecurity knowledge by using mixed methods approaches that utilize quantitative and qualitative research approaches. When qualitative methods are employed, nuanced perspectives can be captured that may be missed in a purely quantitative study. To gain a better understanding of how age influences financial behaviors and vulnerabilities, future studies will ensure comprehensive representation across age groups and utilize diverse research methodologies. This will lead to more comprehensive findings and more effective interventions tailored specifically to the needs of different demographic groups.

Lastly, future research should address the limitations associated with improved sampling techniques. Convenience sampling by employing random sampling methods to ensure a more representative and diverse sample of university students in Malaysia. Unlike convenience sampling, which often limits the sample of individuals who are readily accessible or willing to participate, random sampling provides a more robust approach by selecting participants from a broader and more varied pool. This method increases the likelihood of capturing a more diverse range of university students across different socio-economic backgrounds, geographic locations and levels of digital literacy. By ensuring that everyone within the population has an equal chance of being selected with random sampling can yield a sample that is more reflective of the broader university students demographic with offering better understanding of their spending behaviour in relation to digital finance platforms.

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APPENDICES

Appendix 1: Ethical Approval for Research Project



UNIVERSITI TUNKU ABDUL RAHMAN DU012(A)
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Re: U/SERC/78-607/2025

6 October 2025

Dr Lim Boon Keong
Head, Department of Finance
Faculty of Accountancy and Management
Universiti Tunku Abdul Rahman
Jalan Sungai Long
Bandar Sungai Long
43000 Kajang, Selangor

Dear Dr Lim,

Ethical Approval For Research Project/Protocol

We refer to your application for ethical approval for your students' research project from Bachelor of Finance (Financial Technology) with Honours programme enrolled in course UKFN3026. We are pleased to inform you that the application has been approved under Expedited Review.

The details of the research projects are as follows:

No.	Research Title	Student's Name	Supervisor's Name	Approval Validity
1.	Exploring the Adoption of Digital Finance Among University Students in Malaysia Using the Technology	Chong Ming Fatt	Dr Agha Jahanzeb	6 October 2025 – 5 October 2026
2.	The Impact of Buy Now Pay Later (BNPL) Services on Financial Behaviour (Delinquency Rate): A Study Based on UTAR	Khoo Jia Wen	Dr Fok Kuk Fai	
3.	Exploring the Digital Finance Literacy and AI Fintech Adoption Nexus Among Malaysian Youth Using UTAUT2	Teoh Yee Xin	Dr Agha Jahanzeb	
4.	Decoding Cryptocurrency Intentions in Malaysia: A Trust-Driven TAM Model with Digital Financial Literacy as a Moderator	Chen Chloe		
5.	From Innovation to Adoption: Effects of Leveraging AI and TAM to Elevate Security, Trust, and Service Quality in Malaysia's Digital Banking	Ho Yong Yi	Ms Ung Leng Yean	
6.	The Adoption of Mobile Payment Apps Among University Students in Malaysia: The Roles of Overlapping Risk, Personalization, In-App Purchase Expectation, Campus Influence, and Ease of Use	Joshua Choy Chee Foong		
7.	Determine the Intention to Adopt a Digital Bank Among Generation Z in Malaysia	Tang Ping Yee		
8.	BNPL Lead Financial Distress Among Youngsters	Vanessa s/p Siva Balan	Dr Fok Kuk Fai	
9.	Drivers of Cryptocurrency Adoption in Malaysia Among Young Generation	Law Jun Khai	Dr Bai Quoc Huy	
10.	Factor Influencing Consumer Intention to Adopt Biometric Authentication	Ivy Lu Zi Ying	Dr Eaw Hooi Cheng	

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Website: www.utar.edu.my



No.	Research Title	Student's Name	Supervisor's Name	Approval Validity
11.	A Study of Cybersecurity Practices on User Behavior in Malaysia's Mobile Banking Services	Lee Mei Shi	Dr Eaw Hooi Cheng	6 October 2025 – 5 October 2026
12.	Investigating Young Adults' Perceptions of the Adoption of AI-Driven Investment Tools	Yap Ion Sze	Dr Sia Bik Kai	
13.	Agentic AI Attributes in Hedonic, Utilitarian, and Systematic Processes: Trust Shaping Agentic AI Robo-Advisory User Acceptance	Lee Khai Xin	Dr Tang Kin Leong	
14.	Acceptance of AI Tools in Investment Strategies: Evidence from Universiti Tunku Abdul Rahman (UTAR)	Helen Tee Xin Ye	Dr Sia Bik Kai	
15.	Antecedents of Understanding the Investors Acceptance of Artificial Intelligence	Yoong Shi Qi		
16.	Trust Level of Digital Assets Among Consumer in Malaysia	Kenneth Liew Zhe Jian	Dr Ooi Bee Chen	
17.	The Effect of Service Quality on Competitive Advantage: A Case Study of Starbucks and ZUS Coffee in Malaysia	Choo Yan Hua		
18.	Financial Literacy and the Money Management Behaviour Among Young Adults in Malaysia	Hiew Shan Yuan	Ms Salizatul Aizah Binti Ibrahim	
19.	Cryptocurrency Adoption Behaviour Among Gen Z in Malaysia: Unified Theory of Acceptance and Use of Technology	Lim Keng Kit	Dr Agha Jahanzeb	
20.	The Impact of Food Price Inflation on Household Budget Allocation in Malaysia	Foo Jia Man	Dr Ooi Bee Chen	
21.	Measuring Traditional and Digital Financial Literacy Levels Among Malaysian University Students	Jesslyn Nggu Hui Wen	Dr Bui Quoc Huy	
22.	From Intention to Action: Exploring Actual Usage Behaviour of Digital Money Management Tools Among Malaysian Youth	Song Yan Ting		
23.	Factors Influencing Acceptance of Stock and Bonds: A Behavioral Perspective	Lai Yee Jun	Dr Agha Jahanzeb	
24.	Financial Literacy Accessing Digital Financial Services Among University Students in Malaysia	Kimberly Ong Sue Ern	Mr Low Choon Wei	
25.	The Influence of Cybersecurity Awareness on Financial Fraud Prevention Among the Young Generation	Tang Xin Yi	Dr Ngoo Yee Ting	
26.	Examining the Influence of Green Financial Initiatives on the Automation and Performance Growth of Malaysia's Eco-conscious SMEs	Tan Yuki	Dr Eaw Hooi Cheng	
27.	The Role of Trust in Adoption of Digital Insurance Services in Malaysia	Lim Xian Ting	Pn Farida Bhamu Binti Mohamed Yousoof	

The conduct of this research is subject to the following:

- (1) The participants' informed consent be obtained prior to the commencement of the research;
- (2) Confidentiality of participants' personal data must be maintained; and
- (3) Compliance with procedures set out in related policies of UTAR such as the UTAR Research Ethics and Code of Conduct, Code of Practice for Research Involving Humans and other related policies/guidelines.
- (4) Written consent be obtained from the institution(s)/company(ies) in which the physical or/and online survey will be carried out, prior to the commencement of the research.

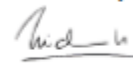
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Should the students collect personal data of participants in their studies, please have the participants sign the attached Personal Data Protection Statement for records.

Thank you.

Yours sincerely,



Professor Dr Zuraidah Abd Manaf
Chairman
UTAR Scientific and Ethical Review Committee

c.c Dean, Faculty of Accountancy and Management
 Director, Institute of Postgraduate Studies and Research

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Appendix 2: Survey Questionnaire

Exploring the Adoption of Digital Finance Among University Students in Malaysia Using the Technology Acceptance Model (TAM)

Dear respondents,

I am a second-year undergraduate student of Bachelor of finance (financial technology) with Honours at Universiti Tunku Abdul Rahman (UTAR). I am currently conducting my final year project with the topic of "Exploring the Adoption of Digital Finance Among University Students in Malaysia Using the Technology Acceptance Model (TAM)".

Kindly fill up all the questions to the best of your knowledge. This survey is expected to take approximately 5 to 10 minutes. Your responses will remain PRIVATE and CONFIDENTIAL. If you have any questions or concerns, please feel free to contact me.

Your valuable participation is really appreciated.

Name: Chong Ming Fatt

Email: 030701141621@1utar.my

Personal data Collection Notice

Please be informed that in accordance with Personal Data Protection Act 2010 (“PDPA”) which came into force on 15 November 2013, Universiti Tunku Abdul Rahman (“UTAR”) is hereby bound to make notice and require consent in relation to collection, recording, storage, usage and retention of personal information.

1. Personal data refers to any information which may directly or indirectly identify a person which could include sensitive personal data and expression of opinion. Among others it includes:

- a) Name
- b) Identity card
- c) Place of Birth
- d) Address
- e) Education History
- f) Employment History
- g) Medical History
- h) Blood type
- i) Race
- j) Religion
- k) Photo
- l) Personal Information and Associated Research Data

2. The purposes for which your personal data may be used are inclusive but not limited to:

- a) For assessment of any application to UTAR
- b) For processing any benefits and services
- c) For communication purposes
- d) For advertorial and news
- e) For general administration and record purposes
- f) For enhancing the value of education
- g) For educational and related purposes consequential to UTAR

h) For replying any responds to complaints and enquiries

i) For the purpose of our corporate governance

j) For the purposes of conducting research/ collaboration

3. Your personal data may be transferred and/or disclosed to third party and/or UTAR collaborative partners including but not limited to the respective and appointed outsourcing agents for purpose of fulfilling our obligations to you in respect of the purposes and all such other purposes that are related to the purposes and also in providing integrated services, maintaining and storing records. Your data may be shared when required by laws and when disclosure is necessary to comply with applicable laws.

4. Any personal information retained by UTAR shall be destroyed and/or deleted in accordance with our retention policy applicable for us in the event such information is no longer required.

5. UTAR is committed to ensuring the confidentiality, protection, security and accuracy of your personal information made available to us and it has been our ongoing strict policy to ensure that your personal information is accurate, complete, not misleading and updated. UTAR would also ensure that your personal data shall not be used for political and commercial purposes.

Consent:

6. By submitting or providing your personal data to UTAR, you had consented and agreed for your personal data to be used in accordance to the terms and conditions in the Notice and our relevant policy.

7. If you do not consent or subsequently withdraw your consent to the processing and disclosure of your personal data, UTAR will not be able to fulfill our obligations or to contact you or to assist you in respect of the purposes and/or for any other purposes related to the purpose.

Acknowledge of Notice

[] I have been notified and that I hereby understood, consented and agreed per UTAR above notice.

[] I disagree, my personal data will not be processed.

Section A: Demographic Information

Please choose one answer only for each question.

1. Gender

- Male
- Female

2. Age

- 18-22 years
- 23-27 years
- 28-32 years
- Above 33 years

3. Occupation

- Student
- Self-employed
- Employed
- Unemployed

4. Education

- Diploma/STPM/Foundation
- Undergraduate (bachelor's degree)
- Postgraduate
- Professional

5. Monthly Income

- Below RM2500
- RM2500-RM6000
- Above RM6000

6. Which mobile app do you use to make and receive payments? You can select more than one.

- Touch'n Go eWallet
- ShopeePay
- GrabPay
- Online Banking Apps
- Boost

Section B: Independent Variables (IVs)

This Section used the likert scale (Noted that: strongly disagree-1, disagree-2, neutral-3, agree-4, and strongly agree-5).

Perceived Ease of Use (PEOU)	1	2	3	4	5
Learning to use digital finance applications would be easy for me.					
I find digital finance applications easy to use.					
Interacting with digital finance applications is clear and understandable.					
It would be easy for me to become skilful at using digital finance applications.					
Perceived Usefulness (PU)	1	2	3	4	5
Using digital finance applications would enhance my effectiveness in managing finances.					
I find digital finance applications useful for making financial decisions.					
Using digital finance applications would improve my financial productivity.					
Digital finance applications would make it easier to manage my finances.					

Section C: Dependent Variable (DV)

This Section used the likert scale (Noted that: strongly disagree-1, disagree-2, neutral-3, agree-4, and strongly agree-5)

Digital Finance Usage (DFU)	1	2	3	4	5
I frequently use digital finance applications for financial transactions.					
I use digital finance applications for various financial activities.					
I spend a significant amount of time using digital finance applications.					

Section D: External Variables (EVs)

This Section used the likert scale (Noted that: strongly disagree-1, disagree-2, neutral-3, agree-4, and strongly agree-5)

Social Influence (SI)	1	2	3	4	5
People who are important to me think I should use digital finance applications.					
People who influence my behavior think I should use digital finance applications.					
People whose opinions I value prefer that I use digital finance applications.					
Perceived Risk (PR)	1	2	3	4	5
I am concerned that using digital finance applications could lead to financial loss.					
I worry that my personal information could be compromised when using digital finance applications.					
I feel that using digital finance applications could result in errors or mistakes.					
Perceived Trust (PT)	1	2	3	4	5
I trust that digital finance applications will protect my financial information.					
I believe digital finance applications are reliable for financial transactions.					
I feel confident that digital finance applications will not misuse my data.					
I trust that digital finance applications will provide accurate financial advice.					

THE END OF QUESTIONNAIRE

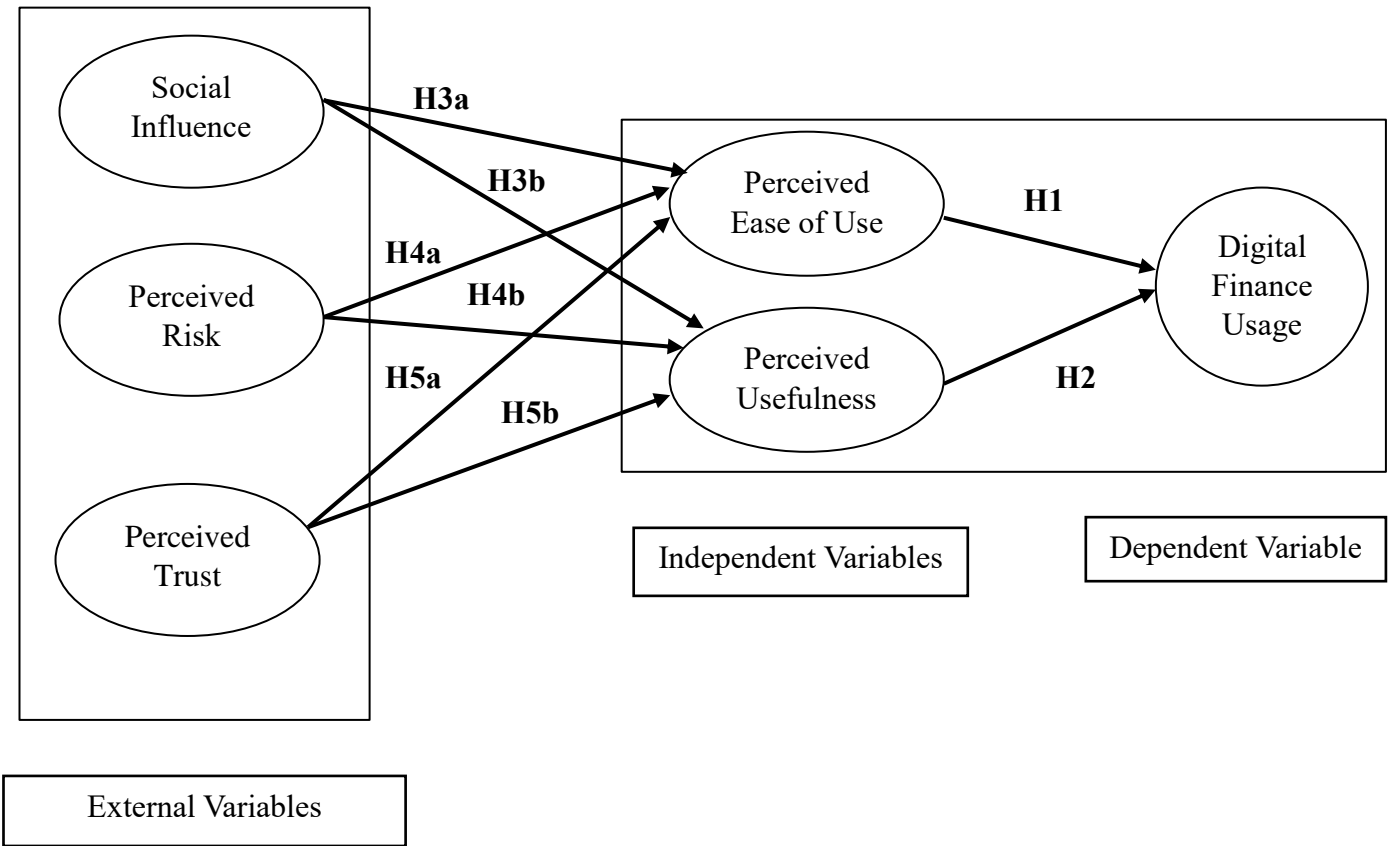
“We assure you that your personal data will be kept strictly confidential”.

Please be informed that in accordance with Personal Data Protection Act 2010 ("PDPA") which came into force on 15 November 2013, Universiti Tunku Abdul Rahmah ("Utar") is hereby bound to make noticed and require in relation to collection, recording, storage, usage, and traditional of personal information.

If you have any question regarding this questionnaire, you may contact this research at 030701141621@lutar.my

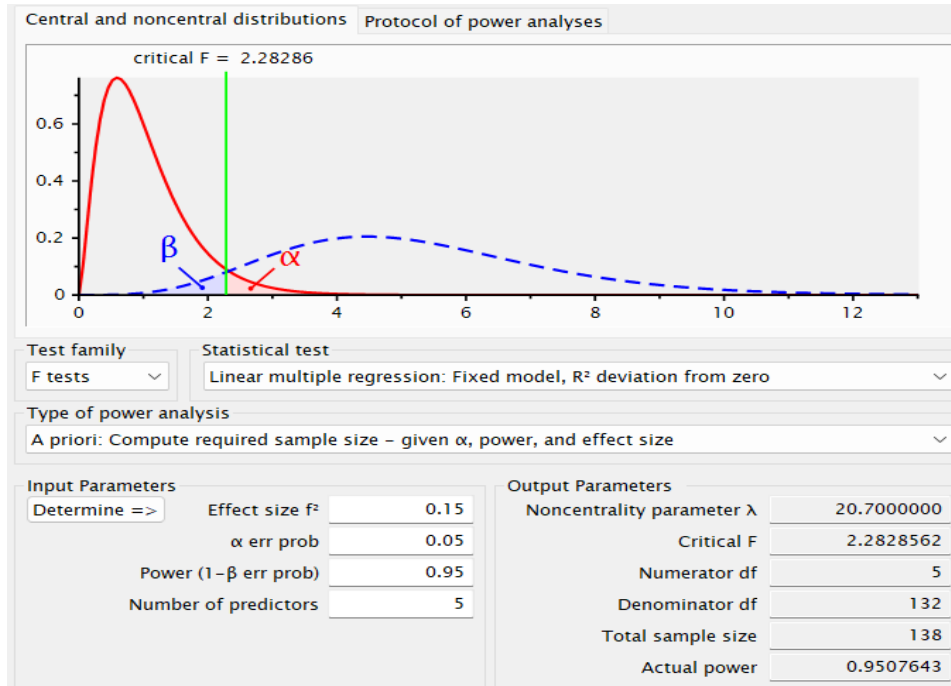
THANK YOU SO MUCH FOR SPENDING TIME TO ANSWER!

Appendix 3: Conceptual Framework of the Study



Technology Acceptance Model (TAM)

Appendix 4: Results of G*Power for Sample Size



Appendix 5: Central Tendencies Measurement

Central Tendencies Measurement of Constructs

	N	Mean	Std. Deviation
Perceived Ease of Use (PEOU) [Learning to use digital finance applications would be easy for me.]	240	4.2500	.74598
Perceived Ease of Use (PEOU) [I find digital finance applications easy to use.]	240	4.2792	.78238
Perceived Ease of Use (PEOU) [Interacting with digital finance applications is clear and understand able.]	240	4.2583	.72604
Perceived Ease of Use (PEOU) [It would be easy for me to become skilful at using digital finance applications.]	240	4.2250	.77040
Perceived Usefulness (PU) [Using digital finance applications would enhance my effectiveness in managing finances.]	240	4.2417	.72604
Perceived Usefulness (PU) [I find digital finance applications useful for making financial decisions.]	240	4.2542	.70709
Perceived Usefulness (PU) [Using digital finance applications would improve my financial productivity.]	240	4.2250	.71986
Perceived Usefulness (PU) [Digital finance applications would make it easier to manage my finance.]	240	4.2958	.72607

Digital Finance Usage (DFU) [I frequently use digital finance applications for financial transactions.]	240	4.2458	.73892
Digital Finance Usage (DFU) [I use digital finance applications for various financial activities.]	240	4.2583	.72025
Digital Finance Usage (DFU) [I spend a significant amount of time using digital finance applications.]	240	4.2500	.74598
Social Influence (SI) [People who are important to me think should use digital finance applications.]	240	4.1958	.74259
Social Influence (SI) [People who influence my behavior think I should use digital finance applications.]	240	4.1833	.75416
Social Influence (SI) [People whose opinions I value prefer that I use digital finance applications.]	240	4.2000	.76097
Perceived Risk (PR) [I am concerned that using digital finance applications could lead to financial loss.]	240	4.1667	.72991
Perceived Risk (PR) [I worry that my personal information could be compromised when using digital finance applications.]	240	4.2375	.70105
Perceived Risk (PR) [I feel that using digital finance applications could result in errors or mistakes.]	240	4.1875	.74475

Perceived Trust (PT) [I trust that digital finance applications will protect my financial information.]	240	4.2458	.71005
Perceived Trust (PT) [I believe digital finance applications are reliable for financial transactions.]	240	4.2625	.72164
Perceived Trust (PT) [I feel confident that digital finance applications will not miss my data.]	240	4.2542	.70709
Perceived Trust (PT) [I trust that digital finance applications will provide accurate financial advice.]	240	4.2875	.72942
Valid N (listwise)	240		

Appendix 6: Reliability Test

PEOU

Reliability Statistics	
Cronbach's Alpha	N of Items
.778	4

PU

Reliability Statistics	
Cronbach's Alpha	N of Items
.761	4

DFU

Reliability Statistics	
Cronbach's Alpha	N of Items
.804	3

SI

Reliability Statistics	
Cronbach's Alpha	N of Items
.766	3

PR

Reliability Statistics	
Cronbach's Alpha	N of Items
.725	3

PT

Reliability Statistics	
Cronbach's Alpha	N of Items
.718	4

Appendix 7: Result of Outer Loadings

	DFU	PEOU	PR	PT	PU	SI
DFU1	0.843					
DFU2	0.836					
DFU3	0.862					
PEOU1		0.819				
PEOU2		0.796				
PEOU3		0.716				
PEOU4		0.756				
PR1			0.805			
PR2			0.728			
PR3			0.864			
PT1				0.729		
PT2				0.735		
PT3				0.791		
PT4				0.689		
PU1					0.775	
PU2					0.730	
PU3					0.795	
PU4					0.751	
SI1						0.808
SI2						0.853
SI3						0.816

Appendix 8: Construct Reliability and Validity

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
DFU	0.804	0.805	0.884	0.718
PEOU	0.777	0.799	0.855	0.597
PR	0.724	0.762	0.842	0.642
PT	0.719	0.723	0.826	0.543
PU	0.761	0.763	0.848	0.583
SI	0.766	0.766	0.865	0.682

Appendix 9: Result of Heterotrait Monotrait ratio (HTMT)

	DFU	PEOU	PR	PT	PU	SI
DFU						
PEOU	0.315					
PR	0.247	0.404				
PT	0.405	0.348	0.590			
PU	0.620	0.464	0.424	0.624		
SI	0.222	0.278	0.363	0.396	0.488	

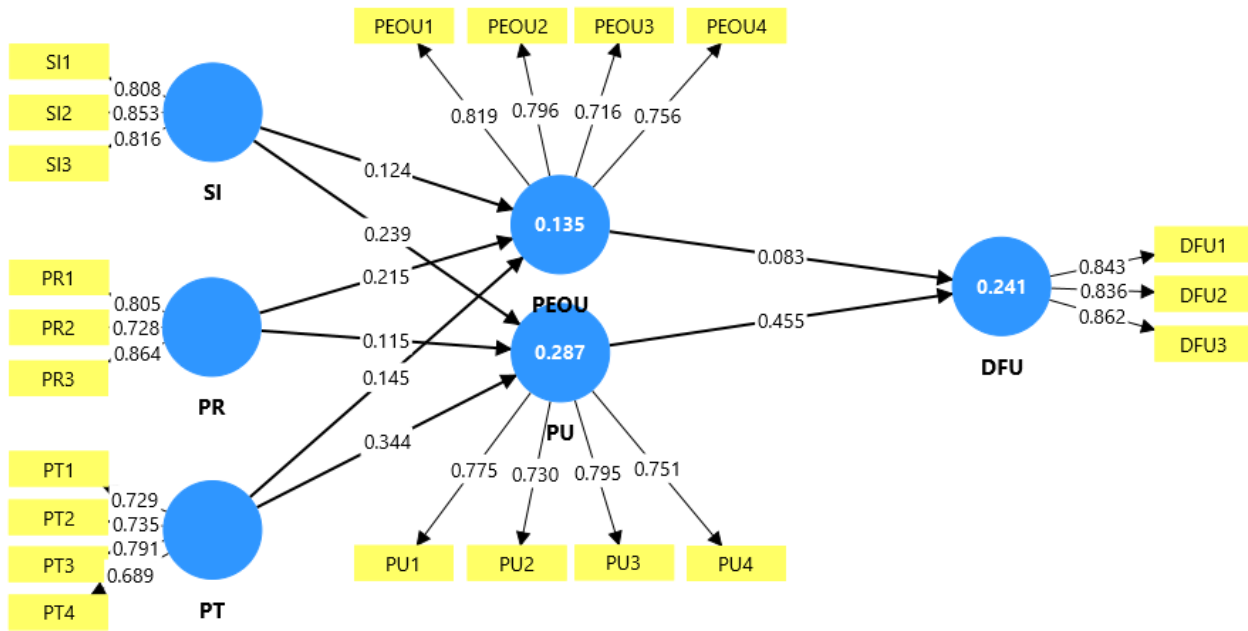
Appendix 10: Result of Fornell-Lacker Criterion

	DFU	PEOU	PR	PT	PU	SI
DFU	0.847					
PEOU	0.250	0.773				
PR	0.184	0.312	0.801			
PT	0.306	0.275	0.429	0.737		
PU	0.485	0.368	0.329	0.465	0.763	
SI	0.174	0.227	0.279	0.299	0.374	0.826

Appendix 11: Multicollinearity Test

	VIF
DFU1	1.659
DFU2	1.736
DFU3	1.825
PEOU1	1.580
PEOU2	1.746
PEOU3	1.428
PEOU4	1.444
PR1	1.514
PR2	1.322
PR3	1.498
PT1	1.322
PT2	1.358
PT3	1.484
PT4	1.290
PU1	1.480
PU2	1.392
PU3	1.593
PU4	1.443
SI1	1.455
SI2	1.766
SI3	1.582

Appendix 12: Original Structural Model



Appendix 13: Result of Path Coefficient for original model

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (O/STDEV)	P values
PEOU -> DFU	0.083	0.085	0.061	1.367	0.172
PR -> PEOU	0.215	0.216	0.074	2.916	0.004
PR -> PU	0.115	0.116	0.063	1.815	0.070
PT -> PEOU	0.145	0.150	0.070	2.085	0.037
PT -> PU	0.344	0.349	0.065	5.326	0.000
PU -> DFU	0.455	0.457	0.064	7.140	0.000
SI -> PEOU	0.124	0.125	0.066	1.872	0.061
SI -> PU	0.239	0.238	0.061	3.949	0.000

Appendix 14: Results of Coefficients of Determination (R²)

	R-square	R-square adjusted
DFU	0.241	0.235
PEOU	0.135	0.124
PU	0.287	0.278

Appendix 15: F-Square

	DFU	PEOU	PR	PT	PU	SI
DFU						
PEOU	0.008					
PR		0.042			0.015	
PT		0.019			0.130	
PU	0.236					
SI		0.016				0.071

Appendix 16: Cross-Validated Predictive Ability Test (CVPAT) Results

Indicator	Construct	Q² predict	PLS- SEM_RMSE	LM_RMSE (Benchmark)	Result (PLS- SEM vs. LM)
DFU1	DFU	0.060	0.718	0.736	Better
DFU2	DFU	0.074	0.694	0.709	Better
DFU3	DFU	0.051	0.729	0.734	Better
PEOU1	PEOU	0.117	0.702	0.715	Better
PEOU2	PEOU	0.046	0.766	0.786	Better
PEOU3	PEOU	0.014	0.722	0.734	Better
PEOU4	PEOU	0.071	0.744	0.757	Better
PU1	PU	0.194	0.652	0.664	Better
PU2	PU	0.128	0.662	0.676	Better
PU3	PU	0.176	0.654	0.667	Better
PU4	PU	0.099	0.691	0.706	Better

Appendix 17: Model Fit

	Saturated model	Estimated model
SRMR	0.068	0.075
d_ULS	1.071	1.295
d_G	0.341	0.350
Chi-square	503.068	508.060
NFI	0.707	0.704



UNIVERSITI TUNKU ABDUL RAHMAN
FACULTY OF ACCOUNTANCY AND MANAGEMENT
UNDERGRADUATE RESEARCH PROJECT

Research Project Assessment Form – Report

Project Title: Exploring the Adoption of Digital Finance Among University Students in Malaysia Using the Technology Acceptance Model (TAM)

Name of Student: Chong Ming Fatt

Student ID: 2105604

Marking Rubrics for Report (60%)

No	Criteria	Excellent (8 - 10 marks)	Good (5 - 7 marks)	Fair (3 - 4 marks)	Poor (0 - 2 marks)	Marks
1	Title and Abstract	Clear, concise, and informative; abstract summarizes all key elements effectively.	Title and abstract are clear but may miss some key elements.	Title and abstract are somewhat unclear or incomplete.	Title and abstract are unclear and do not summarize key elements.	
2	Introduction	Comprehensive background and context; clearly stated research question /hypothesis.	Adequate background; some context missing; research question /hypothesis is stated.	Background and context are vague; research question /hypothesis is unclear.	Background and context are missing or inadequate; research question /hypothesis is absent.	
3	Literature Review	Extensive review, critical analysis, and synthesis of relevant literature.	Adequate review with some analysis of relevant literature.	Limited review with minimal analysis of relevant literature.	Inadequate or no review of relevant literature.	
4	Problem Statement & Objectives	A clear, specific, and well-defined research problem was identified, including its significance and relevance. Clearly defined, specific, and measurable objectives.	Clearly stated problem, but may lack specificity or clarity in its significance. Objectives are stated but may lack specificity or measurability.	Problem statement is present but lacks clarity, specificity, or relevance. Objectives are vague or not well-defined.	The problem statement is unclear or missing. Objectives are absent or unclear.	

5	Methodology	Detailed, appropriate methods with clear rationale and feasibility.	Methods are outlined but some details or rationale may be lacking.	Methods are mentioned but lack clarity or rationale.	Methods are unclear, inappropriate, or not stated.	
6	Results	Results are clearly presented, well organized, and thoroughly analyzed.	Results are presented but may lack organization or depth of analysis.	Results are unclear or poorly organized, with limited analysis.	Results are absent, unclear, or inadequately analyzed.	
7	Discussion	Insightful interpretation of results, connects to literature, discusses reasons for the findings.	Interpretation of results is present but may lack depth, some connection to literature.	Limited interpretation of results, minimal connection to literature.	Interpretation of results is absent or unclear, no connection to literature.	
8	Conclusion	Comprehensive conclusion with discussions on implications supported by findings. Suggests future research.	Conclusion is present with key points somewhat summarized. Discussions on implications somewhat supported by findings. Suggests future research.	Weak conclusion, does not effectively summarize findings or suggest future research. Implications irrelevant to findings.	Conclusion is absent or very weak.	
9	Writing Quality	Excellent writing, free from errors, clear and professional.	Writing is clear but contains some errors or lacks professionalism.	Writing is unclear in parts, contains errors, and lacks professionalism.	Writing is unclear, contains numerous errors, and is unprofessional.	
10	References	Extensive and relevant references, properly formatted.	References are relevant but formatting is inconsistent.	Few references, some may be irrelevant or improperly formatted.	References are absent, irrelevant, or improperly formatted.	
	Total					/100
	Final					/60

1st Examiner (Supervisor) / 2nd Examiner **

Remarks:

Name: _____

Date: _____

Signature: _____

** Delete whichever not applicable.